**Appendix J**

Biological Surveys

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# INVASIVE PLANT AND NOXIOUS WEED SURVEY REPORT

## SOUTHERN CALIFORNIA EDISON

## SANTA BARBARA COUNTY RELIABILITY PROJECT (SBCRP)

## SANTA BARBARA AND VENTURA COUNTIES, CALIFORNIA

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# EXECUTIVE SUMMARY

Invasive plant and noxious weed surveys were conducted by Garcia and Associates (GANDA) in the spring and summer of 2014 for Southern California Edison's (SCE) Santa Barbara County Reliability Project (Project) in Santa Barbara and Ventura counties, California. Invasive plant and noxious weed surveys were conducted to establish the presence/absence of invasive plants within the Project Area.

This study presents the results of the invasive plant and noxious weed surveys and mapping conducted in May and July 2014 for the Project, including Segments 1, 2, 3A, 3B, 4, the "Getty Tap", existing access and spur roads, proposed new spur roads, yards, and other facilities (Project Area). Weed surveys were conducted throughout the Project Area for those plants that are listed by the California Department of Food and Agriculture (CDFA) as noxious in California. Surveys within Los Padres National Forest (LPNF) jurisdictional areas focused on invasive plant species that are considered species of concern by the LPNF.

Prior to conducting field surveys in the LPNF, a list of invasive plant species was obtained from the LPNF botanist. The invasive plant list includes species from all LPNF Ranger Districts that have been determined to cause economic or environmental harm. Eight invasive plant species were documented in areas under LPNF jurisdiction within the Project Area:

- Italian thistle (*Carduus pycnocephalus*),
- tocalote (*Centaurea melitensis*),
- poison hemlock (*Conium maculatum*),
- Cape ivy (*Delairea odorata*),
- fennel (*Foeniculum vulgare*),
- tree tobacco (*Nicotiana glauca*),
- fountain grass (*Pennisetum setaceum*), and
- castor bean (*Ricinus communis*).

Prior to conducting field surveys within the overall Project Area, a list of noxious weed species was developed, which included CDFA-listed noxious weed species that have the potential to occur within the Project Area. A total of 12 noxious weed species was documented in the Project Area during 2014 surveys:

- bladder-flower (*Araujia sericifera*),
- animated oat (*Avena sterilis*),
- onionweed (*Asphodelus fistulosus*),
- Italian thistle (*Carduus pycnocephalus* ssp. *pycnocephalus*),
- yellow star-thistle (*Centaurea solstitialis*),
- bindweed (*Convolvulus arvensis*),
- artichoke thistle (*Cynara cardunculus*),
- Bermuda grass (*Cynodon dactylon*),
- devil's thorn (*Emex spinosa*),

- wavy-leaved gaura (*Oenothera sinuosa*),
- Russian thistle (*Salsola tragus*), and
- puncture vine (*Tribulus terrestris*).

# 1.0 INTRODUCTION

This report documents the results of the invasive plant and noxious weed surveys performed in May and July of 2014 by Garcia and Associates (GANDA) for the SCE Santa Barbara County Reliability Project (SBCRP) (Project), located in the southeastern Santa Barbara County and northwestern Ventura County, California (Appendix A; Figure 1—Project Vicinity Map). Invasive plant and noxious weed surveys were conducted to establish the presence/absence of invasive plants and noxious weeds within the Project Area and to support development of a Weed Management Plan for the Project.

# 2.0 PROJECT DESCRIPTION

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

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

The Project includes the following physical elements:

- Reconstruction of the existing 66-kV subtransmission facilities primarily within existing utility rights-of-way (ROW) between the existing Santa Clara Substation in Ventura County and the existing Carpinteria Substation in Santa Barbara County.
- Installation of marker balls on overhead wire where determined to be necessary.

- Modification of subtransmission and substation equipment within the existing Carpinteria Substation, Casitas Substation, and Santa Clara Substation.
- Replacement of line protection relays within existing substation equipment rooms or cabinets at the Getty Substation, Goleta Substation, Ortega Substation, and Santa Barbara Substation.
- Installation of telecommunications facilities to connect the Project to SCE's existing telecommunications system for the protection, monitoring and control of subtransmission and substation equipment. Installation of new telecommunications facilities along Segments 1, 2, and 4 and at the Carpinteria Substation, Casitas Substation, Santa Clara Substation, and Ventura Substation[1].
- Transfer of distribution lines (and third-party infrastructure as necessary) to subtransmission structures along Segment 3A.
- Removal of subtransmission infrastructure in Segments 1 and 2.

# 3.0 ENVIRONMENTAL SETTING

The Project is located in the southeastern Santa Barbara County and northwestern Ventura County, between 1 and 6 miles inland of the coastline (Appendix A; Figure 2—Project Area Map). The majority of the Project Area is located on private lands, with the exception of several tower sites and associated access and spurs roads located within the Santa Barbara Front, a geographical unit of land under the jurisdiction of the Los Padres National Forest (LPNF), owned by the U.S. Forest Service (USFS).

Elevations within the Project Area range from approximately 30 feet above sea level (ASL) near the Carpinteria Substation to approximately 1,800 feet ASL along portions of Segment 3B, near Rincon Peak. Temperatures in the area average 50 to 71° F, with an average annual temperature of 60° F. Average rainfall ranges from 15.4 to 17.7 inches (BioResource Consultants 2012). The east-west orientation of the mountains, combined with the distinct Mediterranean/marine climate, results in a unique botanic zone and mix of species. Predominately north- or south-facing slopes are dominated by alternating bands of sedimentary rock formations, with chaparral habitats at higher elevations and coastal scrub habitat and oak woodlands at lower elevations. Noxious weed infestations, ruderal species, and escaped cultivars occur throughout the vicinity of the Project, especially in grazed or disturbed areas and along road corridors.

The Project crosses the headwaters of multiple small streams and creeks that flow through agricultural and urban areas before reaching the Pacific Ocean, and is located in lower gradient

[1] The Project also includes additional minor substation and telecommunications work at the Getty Substation, Goleta Substation, Ortega Substation, Santa Barbara Substation, and Ventura Substation; this work would be conducted exclusively on substation property, and thus would have no impact to biological resources. Therefore, this work is not addressed further in this report.

reaches of the Santa Clara River and Ventura River watersheds, including Cañada Larga, which is a tributary to the Ventura River. While groundwater and surface water sources have been extensively developed for domestic and agricultural uses throughout the area, these riparian corridors contrast sharply with an otherwise dry landscape. Landslides are prone to occur in areas of steep, unstable terrain, and the area has a history of large and sometimes devastating wildland fire events. Land uses in the immediate vicinity of the Project Area are dominated by agriculture (cattle grazing and orchards) and "open-space" areas covered by natural vegetation communities, with low-density residential development and commercial areas (nurseries and row crops) scattered through Segments 3A, 3B, and 4 (BioResource Consultants 2012).

### 3.1 Vegetation Types and Plant Communities

A biological reconnaissance survey was conducted in February and March 2012, to characterize and map the vegetation present in the Project Area according to the vegetation's dominant species and to evaluate the potential of the habitats to support special-status plant and wildlife species (BioResource Consultants 2012). The Project Area consists of several vegetation types including chaparral, coastal sage scrub, woodland, grassland, and non-native habitats. Within these vegetation types, 19 plant communities were observed and characterized (BioResource Consultants 2012). Table 1 summarizes the vegetation types and plant communities mapped within the Project Area during the 2012 surveys.

## Table 1. Plant Communities Mapped within the Project Area.

| Plant Community Name | Class Code | Segment (s) of Occurrence* | Acreage within Survey Area** |
|---|---|---|---|
| **Chaparral Types** | **C** | | **1305** |
| Greenbark Ceanothus Chaparral | CGC | 3B, 4 | 50 |
| Toyon Chaparral | CT | 1, 2, 3B, 4 | 123 |
| Lemonade Berry Chaparral | CL | 1, 2, 3B, 4 | 236 |
| Mixed Ceanothus Chaparral | CMC | 3B, 4 | 896 |
| **Coastal Sage Scrub Types** | **S** | | **2790** |
| California Sagebrush Scrub | SCS | 1 | 221 |
| Chaparral Mallow Scrub | SCM | 1, 4 | 110 |
| Coyote Brush Scrub | SCB | 1, 2, 3B | 97 |
| Purple Sage Scrub | SPS | 1, 2, 3B, 4 | 2284 |
| Mulefat Scrub | SMF | 1 | 78 |
| **Woodland Types** | **W** | | **849** |
| Coast Live Oak Woodland | WLO | 1, 2, 3B, 4 | 808 |
| Arroyo Willow Woodland | WAW | 1, 3B, 4 | 27 |
| Southern California Black Walnut Woodland | WCBW | 3B, 4 | 5 |
| Scrub Oak Woodland | WSO | 4 | 9 |
| **Grassland Types** | **G** | | **1235** |
| California Annual Grassland | GCA | 1, 2, 3B | 1229 |
| Ruderal Grassland | GR | All | 6 |
| **Non-native Types** | **N** | | **2450** |
| Agriculture | NAG | 3A, 3B, 4 | 2211 |
| Ruderal/Disturbed | NRD | All | 103 |
| Cape Ivy Infestation | NCI | 2, 3A, 3B, 4 | 40 |
| Developed | ND | 3A, 4 | 96 |

*Segments of occurrence are based on the existing habitat maps (BioResource Consultants 2012) and observations made during the 2014 invasive plant and noxious weed surveys.

**Acreage within the survey area is based on the 2012 biological reconnaissance surveys and 2012 habitat maps (BioResource Consultants 2012).

The plant communities within the woodland, chaparral, and coastal sage scrub vegetation types are comprised primarily of native trees, shrubs, and herbaceous plant species, with the exception of previously disturbed areas or areas along existing roads. The following vegetation descriptions are limited to the plant communities within the Project Area that support invasive plants and/or noxious weed species. Vegetation descriptions were developed in part by using existing information from the 2012 botanical study of the Project Area, as well as observations made in the field during the 2014 botanical surveys. Plant communities were described in terms of dominant tree, shrub, and herbaceous vegetation composition and classified according to *A Manual of California Vegetation* (Sawyer et al. 1995) and *A Manual of California Vegetation, Second Edition* (Sawyer et al. 2009).

### 3.1.1 Grassland Types

Grassland types consist predominantly of low herbaceous and grassy vegetation that forms a continuous ground cover on open hillsides, or as understory patches below emergent shrubs, shrublands, and woodlands. Many native flowering herb/bulb species (wildflowers), as well as naturalized annual forbs and invasive exotics, are important contributors to grassland. Grasslands typically grow in well-developed, deeper, fine-textured soils on gentle slopes and flats, coastal terraces, and in disturbed sandy sites. Grasslands within the Project Area consist of two different plant communities: California annual grassland and ruderal grassland.

***California Annual Grassland***

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

Most of the non-native grasses found in the Project Area are Mediterranean in origin, germinate in the fall or early winter with the first rains, and are protected from unseasonal germination by a preference for cool temperatures. Although the introduced annual grass species have irreversibly invaded the once native perennial grass stands, they are often referred to as “naturalized”, and are often considered important GCA contributors (BioResource Consultants 2103). Within the Project Area common dominant plants in these in these communities include slender wild oat (*Avena barbata*), wild oat (*Avena fatua*), ripgut grass (*Bromus diandrus*), black mustard (*Brassica nigra*), and summer mustard (*Hirschfeldia incana*), as well as emergent California sagebrush (*Artemisia californica*), sawtooth goldenbush (*Hazardia squarrosa*), and laurel sumac

(*Malosoma laurina*) shrubs. Other characteristic non-native grass species and naturalized annual forbs typical of GCA communities include animated oat (*Avena sterilis*), cultivated oat (*Avena sativa*), soft chess (*Bromus hordeaceus*), foxtail chess (*Bromus madritensis* ssp. *madritensis*), red brome (*Bromus madritensis* ssp. *rubens*), summer barley (*Hordeum murinum* ssp. *glaucum*), rye grass (*Festuca perennis*), slender fescue (*Festuca bromoides*), red-stem filaree (*Erodium cicutarium*), tocalote (*Centaurea melitensis*), milk thistle (*Silybum marianum*), and cheeseweed (*Malva parviflora*). Associated native herb and bulb species in ground layer include blue dicks (*Dichelostemma capitatum*), clustered tarplant (*Deinandra fasciculata*), narrow-leaf milkweed (*Asclepias fascicularis*), blue-eyed grass (*Sisyrinchium bellum*), and western verbena (*Verbena lasiostachys*). GCA communities are present in Segments 1, 2, and 3B (BioResource Consultants 2012).

***Ruderal Grassland***

Ruderal grassland (GR) communities typically form due to severe human disturbance, or because the land is subject to recurrent natural disturbance. This series occurs on all topographic locations, at all elevations. GR communities are dominated by annual and perennial, non-native, pioneering, herbaceous plants that readily colonize disturbed ground. Ruderal communities may provide a certain degree of erosion control for recently graded areas, but such communities are also a threat to the native plant populations because they continually distribute invasive, highly-competitive non-native propagules into otherwise native vegetation. GR communities often intergrade with and, when left undisturbed, may undergo succession toward a more stable, and less weedy, plant community such as California annual grassland and coastal sage scrub.

Ruderal grassland associations of the Project Area include non-native grass species characteristic of the California annual grassland community described above, as well as emergent native shrubs and plants including California sagebrush, coyote brush (*Baccharis pilularis*), tenuated cliff-aster (*Malacothrix saxatilis* var. *tenuifolia*), and purple sage (*Salvia leucophylla*). These native species compete with common ruderal/invasive forbs, including: black mustard, poison hemlock (*Conium maculatum*), summer mustard, white horehound (*Marrubium vulgare*), tocalote, wild radish (*Raphanus sativus*), fennel (*Foeniculum vulgare*), milk thistle, Australian saltbush (*Atriplex semibaccata*), Russian thistle (*Salsola tragus*), and Italian thistle (*Carduus pycnocephalus* ssp. *pycnocephalus*). Ruderal grasslands are scattered throughout the Project Area and are present on all segments (BioResource Consultants 2012).

### 3.1.2 Non-Native Types

Non-native type assemblages are generally in areas that have been planted with orchards or crops, landscaped, or are heavily disturbed by human activities, and are dominated by non-native or ruderal species. These areas are often monocultures, or assemblages dominated by escaped cultivars and ruderal non-native species.

### *Agricultural*

Agricultural (AG) lands are areas that have been planted with orchards or crops, or are extensively grazed by cattle. Orchard and crop areas are often monocultures with a sparse understory, generally with ruderal forbs and/or non-native grassland species such as Bermuda grass (*Cynodon dactylon*), scarlet pimpernel (*Anagallis arvensis*), knotweed (*Polygonum aviculare* ssp. *depressum*), spotted spurge (*Chamaesyce maculata*), and bindweed (*Convolvulus arvensis*). Crops grown in the Project Area include avocado (*Persea americana*), orange (*Citrus x sinensis*), lemon (*Citrus x limon*), walnut (*Juglans* sp.), cherimoya (*Annona cherimola*), guava (*Psidium* sp.), passion fruit (*Passiflora* sp.), and dragonfruit (*Hylocereus* sp.). Agricultural lands are scattered throughout the Project Area and are present on all segments (BioResource Consultants 2012).

### *Ruderal/Disturbed*

Ruderal/Disturbed (NRD) communities are present in all segments of the Project Area and include areas dominated by non-native weedy and invasive species such as black mustard, summer mustard, red-stem filaree, tocalote, Russian thistle, fennel, cheeseweed, Italian thistle, redroot pigweed (*Amaranthus retroflexus*), lamb's quarters (*Chenopodium album*), wild oats (*Avena* spp.), and brome grasses (*Bromus* spp.). Ruderal/disturbed communities are found primarily along road edges, around structures, edges of agriculture fields, and cleared areas including existing SCE lay down areas, poles, or tower pads. These communities often intergrade with the Ruderal grassland community described above.

### *Cape Ivy Infestation*

The Cape Ivy Infestation (NCI) communities in the Project Area consist of large patches of Cape ivy (*Delairea odorata*) that are blanketing areas of coast live oak woodland, arroyo willow woodland, coastal sage scrub, and chaparral. In these areas, Cape ivy is forming a solid cover over native shrubs and trees. Vines block the light, smothering and killing the native vegetation beneath and prohibiting the regeneration of most native species, leaving a monoculture stand of ivy. Cape ivy infestations were documented and mapped in Segment 4 during 2012 vegetation mapping surveys; however, additional NCI areas were observed along Segments 2, 3A, and 3B during 2014 botanical surveys.

### *Developed*

Developed (ND) areas include residential and commercial buildings and lots, and cleared, paved, or graded surfaces, generally lacking native plant assemblages. Vegetation in ND areas is predominately landscaped with non-native, ornamental species. Developed areas are present along Segments 3A and 4.

# 4.0 REGULATORY FRAMEWORK

## 4.1 Federal Regulations

***National Forest System Invasive Species Management Policy***

Forest Service Manual (FSM) 2900 provides guidance for the management of invasive species on aquatic and terrestrial areas of the National Forest System (NFS). Invasive and alien species are defined in Executive Order 13112 as follows:

Alien species: "with respect to a particular ecosystem, any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem."

Invasive species: "an alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health."

Management policy under FSM 2900 also applies to harmful plants regulated as "noxious weeds" under state or federal statute. The NFS has developed data recording protocols and requirements for invasive species surveys, inventory, and treatment activities that are required on USFS land.

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

The Land and Resource Management Plans (Plans) established by USFS for the southern California national forests describe the strategic direction at the broad program level for managing the land and its resources over the next 10 to 15 years. As stated in the LPNF Strategy, the objective of USFS threatened, endangered, proposed, candidate, and sensitive species management is to "manage habitat to move listed species toward recovery and de-listing" and to "prevent listing of proposed and sensitive species." For management of species of concern, the primary objective is to "maintain and improve habitat for fish, wildlife, and plants, including those with the following designations: game species, harvest species, management indicator species and watch list species."

The LPNF strategy includes specific measures to meet the six goals of the USFS National Strategic Plan: 1. reduce the risk from catastrophic wildland fire; 2. reduce the impacts from invasive species; 3. provide outdoor recreation opportunities; 4. help meet energy resource needs; 5. improve watershed conditions; and 6. achieve mission-related work in addition to that which supports the agency's goals.

## 4.2 State Regulations

***California Department of Food and Agriculture***

The California's Pest Prevention System (PPS) is a coordinated program of the California Department of Food and Agriculture (CDFA), County Departments of Agriculture (CDA), and the U. S. Department of Agriculture (USDA) that is supported by a set of laws, regulations, and policies and were designed to protect agriculture from damaging agricultural pests, including noxious weeds. The CDFA's and the CDA's legal basis for weed control comes from laws found in the California Food and Agricultural Code (FAC) and the California Code of Regulations (CCR). Section 5004 of the FAC defines a noxious weed as "any species of plant that is, or is liable to be, troublesome, aggressive, intrusive, detrimental, or destructive to agriculture, silviculture, or important native species, and difficult to control or eradicate."

If CDFA determines a plant to be noxious, the plant receives a rating of A, B, C, D, or Q, based on the statewide importance of the pest, the likelihood that eradication or control efforts would be successful, and the present distribution of the pest within the state. CDFA pest-rating definitions are as follows:

"A" rated weed species: A pest of known economic or environmental detriment and is either not known to be established in California or it is present in a limited distribution that allows for the possibility of eradication or successful containment. A-rated pests are prohibited from entering the state and are subject to state-enforced action involving eradication, containment, rejection, or other holding action at the state-county level.

"B" rated weed species: A pest of known economic or environmental detriment and, if present in California, it is of limited distribution. B-rated pests are eligible to enter the state if the receiving county has agreed to accept them. If found in the state, they are subject to state-endorsed holding action and eradication only to provide for containment, as when found in a nursery. They are subject to eradication, containment, suppression, control, or other holding action at the discretion of the agricultural commissioner.

"C" rated weed species: A pest of known economic or environmental detriment and, if present in California, it is usually widespread. C-rated organisms are eligible to enter the state as long as the commodities with which they are associated conform to pest cleanliness standards when found in nursery stock shipments. If found in the state, they are subject to regulations designed to retard spread or to suppress at the discretion of the individual county agricultural commissioner. There is no state-enforced action other than providing for pest cleanliness.

"D" rated weed species: An organism known to be of little or no economic or environmental detriment, to have an extremely low likelihood of weediness, or is known to be a parasite or predator. There is no state-enforced action.

"Q" rated weed species: An organism or disorder suspected to be of economic or environmental detriment, but whose status is uncertain because of incomplete identification or inadequate information.

The California State Noxious Weed List is found in CCR Section 4500. A plant that receives a pest rating also receives a "W" notation to indicate that it is included in CCR Section 4500.

### 4.3 Local Regulations

CPUC General Order No. 131-D, Section XIV. B. states that "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters."

# 5.0 METHODS

Invasive plant and noxious weed surveys and mapping were conducted from May 15 to 30, 2014 and from July 14 to 24, 2014 for Segments 1, 2, 3A, 3B, 4, the Getty Tap, existing access and spur roads, and proposed new spur roads, as well as other facilities, such as staging yards. Noxious weed species identified during the 2014 surveys were those that are state-listed on the USDA Natural Resources Conservation Service (NRCS) Plants Database as noxious weeds in California (USDA 2014). In addition, invasive plant species designated by the LPNF were also surveyed and mapped on land owned by the USFS.

## 5.1 Background Review and Data Preparation

### 5.1.1 LPNF Invasive Plant Species

Prior to conducting field surveys in the LPNF, a list of invasive plant species was obtained from the LPNF botanist. The invasive plant list includes species from all LPNF Ranger Districts that have been determined to cause economic or environmental harm. The LPNF invasive plant list, including blooming period, elevation range, and habitat type, is presented below in Table 2.

## Table 2. LPNF Invasive Plant Species List.

| Common Name *Scientific Name* | CDFA Rating | Blooming Period [a] | Elevation Range (feet) [a] | Habitat Type [b] |
|---|---|---|---|---|
| Russian knapweed (*Acroptilon repens*) | B | May–September | 0–7,500 | Fields, roadsides. |
| Eupatory (*Ageratina adenophora*) | -- | All year | 0–3,300 | Disturbed places, stream banks, canyons, hill slopes. |
| Tree of heaven (*Ailanthus altissima*) | -- | June | 0–6,200 | Disturbed areas, grassland, oak woodland, riparian habitats |
| Giant reed (*Arundo donax*) | -- | March–September | 0–5,000 | Moist places, seeps, ditch banks. |
| Cheat grass (*Bromus tectorum*) | -- | May–August | 0–11,250 | Open, disturbed areas. |
| Italian thistle (*Carduus pycnocephalus* ssp. *pycnocephalus*) | C | March–July | 0–4,000 | Roadsides, pastures, disturbed areas. |
| Smooth distaff thistle (*Carthamus creticus*) | B | June–August | 0–2,150 | Disturbed ground. |
| Purple star-thistle (*Centaurea calcitrapa*) | B | April–November | 0–3,300 | Pastures, disturbed places. |
| Tocalote (*Centaurea melitensis*) | -- | April–July | 0–7,300 | Disturbed fields, open woodland. |
| Yellow star-thistle (*Centaurea solstitialis*) | C | May–October | 0–4,300 | Roadsides, disturbed grasslands or woodlands. |
| Spotted knapweed (*Centaurea stoebe* ssp. *micranthos*) | A | July–September | 0–8,600 | Disturbed areas. |
| Bull thistle (*Cirsium vulgare*) | -- | May–October | 0–7,800 | Disturbed areas. |
| Poison hemlock (*Conium maculatum*) | -- | April–July | 0–5,000 | Moist areas, especially disturbed places. |
| Jubata grass (*Cortaderia jubata*) | -- | September–February | 0–2,650 | Disturbed sites, many habitats, especially coastal. |
| Pampas grass (*Cortaderia selloana*) | -- | September–March | 0–1,000 | Disturbed sites. |
| Cape ivy (*Delairea odorata*) | -- | November–March | 0–5,000 | Shady, more or less disturbed places, in riparian, woodland and coastal scrub. |
| Medusa head (*Elymus caput-medusae*) | C | April–July | 0–6,600 | Disturbed areas. |
| Fennel (*Foeniculum vulgare*) | -- | May–September | 0–5,300 | Roadsides, disturbed sites. |
| French broom (*Genista monspessulana*) | C | March–June | 0–3,300 | Disturbed places. |
| Perennial pepperweed (*Lepidium latifolium*) | B | June–September | 0–8,250 | Pastures, disturbed areas, fields, grasslands, meadows, stream banks, pinyon/juniper woodland, sagebrush scrub. |
| Dalmatian toadflax (*Linaria dalmatica* ssp. *dalmatica*) | A | April–September | 0–6,900 | Roadsides, fields, open areas in yellow-pine forest, pinyon/juniper woodland, sagebrush scrub. |

| Common Name *Scientific Name* | CDFA Rating | Blooming Period [a] | Elevation Range (feet) [a] | Habitat Type [b] |
|---|---|---|---|---|
| Crystalline ice plant (*Mesembryanthemum crystallinum*) | -- | March–October | 0–350 | Coastal bluffs, cliffs, disturbed ground. |
| Tree tobacco (*Nicotiana glauca*) | -- | April–August | 0–3,300 | Open, disturbed flats or slopes. |
| Kikuyu grass (*Pennisetum clandestinum*) | C, Q | All year | 0–350 | Disturbed areas. |
| Fountain grass (*Pennisetum setaceum*) | -- | March–December | 0–350 | Disturbed areas. |
| Harding grass (*Phalaris aquatica*) | -- | April–August | 0–5,600 | Disturbed areas, roadsides. |
| Castor bean (*Ricinus communis*) | -- | All year | 0–1,000 | Disturbed areas. |
| Milk thistle (*Silybum marianum*) | -- | February–June | 0–3,000 | Roadsides, pastures disturbed areas. |
| Spanish broom (*Spartium junceum*) | -- | April–June | 0–3,000 | Disturbed areas. |
| Tamarisk (*Tamarix ramosissima*) | -- | April–August | 0–6,600 | Washes, stream banks. |
| Periwinkle (*Vinca major*) | -- | March–June (January) | 0–660 | Coastal bluffs, sheltered places, especially along streambeds. |

[a] Habitat, elevation, and blooming period from *The Jepson Manual, Second Edition* (Baldwin et al. 2012).

### 5.1.2 CDFA-listed Noxious Weeds

Prior to conducting field surveys within the overall Project Area, a list of noxious weed species was developed to include CDFA-listed noxious weed species that have the potential to occur within the Project Area. This list was developed from the USDA NRCS California State-listed Noxious Weeds Database (USDA 2014). The compiled list was then refined, based on noxious weed species known to occur in the Project Area or that have the potential to occur in the Project Area based on suitable habitat and species distribution. The noxious weed list, including CDFA rating, blooming period, elevation range, and habitat type, is presented below in Table 3.

## Table 3. CDFA-listed Noxious Weeds List.

| **Common Name** ***Scientific Name*** | **CDFA Rating** | **Blooming Period a** | **Elevation Range (feet) a** | **Habitat Type [b]** |
|---|---|---|---|---|
| Bladder-flower (*Araujia sericifera*) | B | August–October | 300–1,300 | Chaparral, woodland, citrus groves. |
| Onionweed (*Asphodelus fistulosus*) | Q | March–July | 0–170 | Disturbed areas, fields. |
| Animated oat (*Avena sterilis*) | Q | March–June | 100–400 | Disturbed sites. |
| Italian thistle (*Carduus pycnocephalus* ssp. *pycnocephalus*) | C | March–July | 0–4,000 | Roadsides, pastures, disturbed areas. |
| Yellow star-thistle (*Centaurea solstitialis*) | C | May–October | 0–4,300 | Roadsides, disturbed grasslands or woodlands. |
| Bindweed (*Convolvulus arvensis*) | C | March–October | 0–8,600 | Roadsides, open areas in many plant communities. |
| Artichoke thistle (*Cynara cardunculus*) | B | April–July | 0–1,650 | Disturbed sites. |
| Bermuda grass (*Cynodon dactylon*) | C | June–August | 0–5,300 | Disturbed sites. |
| Devil's thorn (*Emex spinosa*) | Q | May–December | 0–1,650 | Dry, sandy, disturbed places. |
| Wavy-leaved gaura (*Oenothera sinuosa*) | B | June–September | 0–3,300 | Light, sandy loam of cultivation fields. |
| Russian thistle (*Salsola tragus*) | C | July–October | 0–9,250 | Disturbed places. |
| Puncture vine (*Tribulus terrestris*) | C | April–October | 0–3,300 | Dry, disturbed areas including roadsides, railways, and vacant lots. |

[a] Habitat, elevation, and blooming period from *The Jepson Manual, Second Edition* 2012.

### 5.1.3 GIS and GPS Preparation

Handheld, sub-meter GPS units were used for navigation and to collect population information in the field. Mobile GIS field data collection forms were developed for the Project using a data dictionary within Terra Sync 4.51 Professional application software that includes fields for recording a variety of attribute information within each mapped point or polygon. Attribute information in the data dictionary for LPNF invasive plant species in LPNF jurisdictional areas included all fields on the USDA Forest Service NFS Invasive Species Infestation Record Field Form (USDA 2012). Attribute information in the data dictionary for CDFA noxious weed species in the remainder of the Project Area included species code, population size, percent canopy cover, habitat type infested, infested area, surveyor initials, and date.

All data were collected as Universal Transverse Mercator (UTM) coordinates in the North American 1983 datum (NAD83), Zone 11 South, and subsequently converted to NAD83, State Plane 5. Digital copies of recently flown high-resolution geo-rectified aerial photographs (NAIP 2009) and topographic maps (ESRI 2010) were acquired for mapping efforts.

## 5.2 Field Survey Methods

### 5.2.1 Personnel and Timing

Spring and summer field surveys for noxious weeds and invasive plant species were conducted on Segments 1, 2, 3A, 3B, 4 (including LPNF jurisdictional areas), and the Getty Tap area by GANDA's botany staff from May 15 to 30, 2014 and July 14 to 24, 2014. Surveys were spaced so that the Project Area was searched at least twice, to capture the bloom periods for the majority of noxious weed species with the potential to occur in the Project Area. GANDA field personnel included Jessica Peak, Eliza Shepard, Mark Bibbo, Molly Graber, and Keir Morse.

### 5.2.2 Noxious Weed and Invasive Plant Surveys

Survey methods for noxious weeds and invasive plant species were floristic in nature, took place at appropriate times to identify weed species, and were consistent with the survey guidelines outlined in the CDFA Weed Mapping Handbook (CDFA 2002) and the USDA Forest Service NFS Data Recording Protocols and Requirements for Invasive Species Survey, Inventory, and Treatment (USDA 2012). Surveys for LPNF invasive plant species followed the NFS protocols in areas under LPNF jurisdiction (i.e., Constructs 96, 97, 101, 104, and roads leading to Constructs 107-109). Surveys for CDFA-listed noxious weeds followed CDFA mapping protocols for all areas not under the jurisdiction of LPNF with the exception of five CDFA-listed noxious weed species:(animated oat, Italian thistle, bindweed, Bermuda grass, and Russian thistle. These five species are widespread along Project roads, throughout the grasslands, agricultural areas, and ruderal/disturbed communities within the Project Area and as a result were not specifically mapped.

The surveys involved systematically searching all habitats in the Project alignment, around all proposed disturbance areas, and along roads within Project Area for noxious weeds and invasive plant species and mapping occurrences using a point and polygon mapping system. All vascular plant species observed within the Project Area were recorded (Appendix B—Vascular Plant Inventory). Plant specimens that were not positively identified in the field were further examined using a dissecting/compound microscope and appropriate botanical keys, including *The Jepson Manual, Second Edition* (Baldwin et al. 2012) and *A Flora of the Santa Barbara Region, California, Second Edition* (Smith 1998).

The surveys included a buffer of 100 feet (a 200-foot wide corridor) of the alignment, proposed disturbance areas, Project features (i.e., lay-down yards, guard structures, etc.), and Project roads. Methods for evaluating the Project Area varied depending on the potential of a location to provide habitat for weed species. Surveys were typically conducted by walking linear transects within the alignment, Project features, and along roads. Within areas with non-linear orientation (i.e., large lay-down yards, landing zones, or disturbance areas), meandering transects were walked to ensure the greatest amount of visual coverage possible.

When located, noxious weed and invasive plant populations were recorded using Trimble GeoXT or XH GPS units capable of sub-meter accuracy. For populations of LPNF invasive plants, population data were collected as polygon features only, with the smallest polygon being approximately 4 square feet, per the NFS Data Recording Protocols. For CDFA noxious weeds, populations covering greater than 0.01-acre (approximately 20 x 20 feet or larger) were collected as polygon features; populations 0.01 acre or smaller were collected as point features and the approximate square footage of each point was estimated by the surveyors. The GPS units used during field surveys contained electronic forms and a data dictionary with the attributes summarized above.

Each occurrence was assigned a two-part identification number. The first part of this identification number consists of the established CDFA or LPNF species code derived from the first two letters of the genus and specific epithet for each species, and an identifying digit as applicable (e.g., the code for *Centaurea solstitialis* is "CESO3"), and the second part is a three-digit number that refers to a specific population mapped in the Project Area (e.g., CESO-001, CESO-002, etc.).

### 5.3 Post-processing Data and Map Creation

GIS noxious weeds and invasive plant species data were managed by a GIS specialist. Field data were exported to Pathfinder software and reviewed to ensure accuracy and optimize data consistency and searchability. Maps were then created using ArcMap 9.3.1 software. The resulting maps are found in Appendix A.

# 6.0 RESULTS AND DISCUSSION

A total of 313 plant species were observed in the Project Area during 2014 surveys. Of the species observed 190 (61 percent) were native and 123 (39 percent) were non-native, naturalized, agricultural, or landscape species. A comprehensive list of vascular plant species observed in the Project Area is provided in Appendix B. Below is a summary of the distribution and abundance of LPNF invasive plant species within LPNF jurisdictional areas and CDFA-listed noxious weed species within the remainder of the Project Area, by segment.

## 6.1 LPNF Invasive Plant Species

Eight LPNF invasive plant species were observed and mapped in LPNF jurisdictional areas (i.e., Constructs 96, 97, 101, and 104, and the roads leading to Constructs 107-109). A total of 76 occurrences (approximately 1.95 acres) of LPNF invasive plants were observed and mapped in the LPNF jurisdictional areas (Appendix A; Figure 3—LPNF Invasive Plant Species Maps). Invasive plant species and their abundance and distribution within LPNF jurisdictional areas are summarized in Table 4 and depicted on Figure 3 maps in Appendix A. The complete LPNF invasive plant population data is provided in Appendix D.

Tocalote is the most widespread invasive plant observed in LPNF areas, and is present in ruderal/disturbed habitat and along almost all of the roadsides in the Project Area. Fennel is also prevalent in disturbed habitat and along roads in LPNF areas, and several Cape ivy infestations occur in chaparral habitat adjacent to existing roads.

## Table 4. Invasive Plant Species Observed in LPNF Jurisdictional Areas in 2014.

| LPNF Invasive Plant Species (species code) | Number of Occurrences | Approximate Number of Plants (Stems) Observed | Approximate Total Area* (acres) | Approximate Total Area* (sq. ft.) |
|---|---|---|---|---|
| **Construct 96** | | | | |
| Tocalote (CEME2) | 3 | 1,760 | 0.047 | 2,026 |
| Cape ivy (DEOR) | 1 | 20 | 0.016 | 698 |
| Tree tobacco (NIGL) | 5 | 28 | 0.030 | 1,315 |
| Subtotal Construct 96 | 9 | 1,808 | 0.093 | 4,039 |
| **Construct 97** | | | | |
| Tocalote (CEME2_ | 1 | 1,100 | 0.033 | 1,422 |
| Cape ivy (DEOR) | 1 | 350 (stems) | 0.099 | 4,303 |
| Fennel (FOVU) | 4 | 13 | 0.008 | 362 |
| Tree tobacco (NIGL) | 1 | 4 | 0.001 | 53 |
| Subtotal Construct 97 | 7 | 1,467 | 0.141 | 6,140 |
| **Construct 101** | | | | |
| Italian thistle (CAPY2) | 1 | 6 | 0.002 | 85 |
| Tocalote (CEME2_ | 2 | 350 | 0.046 | 1,998 |
| Cape ivy (DEOR) | 1 | 10,000 (stems) | 0.004 | 187 |
| Fennel (FOVU) | 1 | 5 | 0.001 | 47 |
| Tree tobacco (NIGL) | 1 | 1 | 0.00007 | 4 |
| Subtotal Construct 101 | 6 | 10,362 | 0.053 | 2,321 |
| **Construct 104** | | | | |
| Italian thistle (CAPY2) | 1 | 10 | 0.001 | 35 |
| Tocalote (CEME2_ | 2 | 350 | 0.082 | 3,557 |
| Cape ivy (DEOR) | 1 | 5,000 (stems) | 0.114 | 4,975 |
| Fennel (FOVU) | 1 | 50 | 0.047 | 2,051 |
| Tree tobacco (NIGL) | 1 | 5 | 0.005 | 213 |
| Subtotal Construct 104 | 6 | 5,415 | 0.249 | 10,831 |
| **USFS-Owned Roads** | | | | |
| Italian thistle (CAPY2) | 3 | 14 | 0.008 | 330 |
| Tocalote (CEME2_ | 16 | 5,554 | 0.811 | 35,333 |
| Poison hemlock (COMA) | 1 | 3 | 0.0004 | 20 |
| Cape ivy (DEOR) | 5 | 5,490 (stems) | 0.169 | 7,376 |
| Fennel (FOVU) | 10 | 165 | 0.162 | 7,056 |
| Tree tobacco (NIGL) | 4 | 16 | 0.033 | 1,436 |
| Fountain grass (PESE3) | 3 | 150 | 0.069 | 3,019 |
| Castor bean (RICO3) | 6 | 93 | 0.160 | 6,967 |
| Subtotal USFS-owned Roads | 48 | 11,485 | 1.41 | 61,537 |
| **Total** | **76** | **9,697 plants (20,840 stems)** | **1.95** | **84,868** |

*Approximate acreage within the survey area is based on polygon data (see Appendix E for LPNF invasive plant population data).

### 6.2 CDFA Noxious Weeds

Twelve (12) CDFA-listed noxious weed species were observed on non-LPNS jurisdictional areas. As previously mentioned, animated oat, Italian thistle, bindweed, Bermuda grass, and Russian thistle were not specifically mapped due to their widespread presence throughout the Project Area. Seven CDFA-listed noxious weed species were mapped within the Project Area: bladder-flower, onionweed, yellow star-thistle, artichoke thistle, devil's thorn, wavy-leaved gaura, and puncture vine. Abundance and distribution of noxious weed species mapped within the Project Area are summarized in Table 5. The complete CDFA noxious weed population data is provided in Appendix E.

A total of 94 occurrences of noxious weed species, consisting of approximately 4,919 plants, was mapped in the Project Area (excluding LPNF jurisdictional areas). The total approximate acreage of noxious weed populations in the Project Area is 4.1 acres, the majority of which were located along Project roads (Appendix A; Figure 4—CDFA Noxious Weed Maps). Yellow star-thistle is the most abundant noxious weed in the Project Area (2.86 acres) and puncture vine is also common along roads and in ruderal and developed habitat.

**Table 5. CDFA-listed Noxious Weeds Documented in the Project Area in 2014.**

| Noxious Weed Species (species code) | Number of Occurrences | Approximate Number of Plants Observed | Approximate Total Area* (acres) | Approximate Total Area* (sq. ft.) |
|---|---|---|---|---|
| **Segment 1 & Getty Tap** | | | | |
| Bladder-flower (ARSE8) | 4 | 43 | 0.482 | 21,013 |
| Artichoke thistle (CYCA) | 4 | 7 | 0.001 | 36 |
| Subtotal Segment 1 | 8 | 50 | 0.483 | 21,049 |
| **Segment 3A** | | | | |
| Onionweed (ASFI2) | 1 | 25 | 0.008 | 337 |
| Wavy-leaved gaura (OESI) | 1 | 1 | 0.000 | 5 |
| Puncture vine (TRTE) | 55 | 936 | 0.584 | 25,445 |
| Subtotal Segment 3A | 57 | 962 | 0.592 | 25,787 |
| **Segment 3B** | | | | |
| Yellow star-thistle (CESO3) | 2 | 3 | 0.000 | 4 |
| **Segment 4** | | | | |
| Onionweed (ASFI2) | 2 | 354 | 0.155 | 6,749 |
| Yellow star-thistle (CESO3) | 10 | 3,503 | 2.860 | 124,589 |
| Devil's thorn (EMSP) | 1 | 1 | 0.000 | 6 |
| Puncture vine (TRTE) | 14 | 46 | 0.012 | 517 |
| Subtotal Segment 4 | 27 | 3,904 | 3.027 | 131,861 |
| **Total** | **94** | **4,919** | **4.102** | **178,701** |

*Approximate acreage within the survey area is based on point and polygon data (see Appendix F for CDFA noxious weed population data).

**Segment 1 & Getty Tap:** The habitat in Segment 1 consists primarily of coastal sage scrub vegetation and grasslands, with scattered oak woodlands in canyons and along ridge tops. Ruderal and California annual grasslands in Segment 1 are dominated by non-native annual grasses (i.e., *Avena* spp., *Bromus* spp., *Hordeum* spp., etc.) and weedy forbs such as black mustard, summer mustard, tocalote, milk thistle, and red-stem filaree. Vegetation in and along existing roads in Segment 1 is also dominated by weedy species such as Russian thistle, fennel, and Italian thistle.

Occurrences of two noxious weed species, bladder-flower and artichoke thistle were documented in Segment 1. Artichoke thistle populations were small, limited to a few individuals, and were present in disturbed grassland habitat along roads. Four bladder-flower infestations were observed and mapped in scrub habitat, engulfing stands of blue elderberry shrubs (Appendix C—Site Photographs).

**Segment 2:** This segment of the Project consists of dense oak and walnut woodlands, with scrub and chaparral habitat scattered throughout, and grassland habitat along the eastern end. No noxious weeds were mapped within Segment 2 during 2014 surveys; however, widespread weeds such as Italian thistle, tocalote, summer mustard, black mustard, and non-native annual grasses are present along access roads and in grasslands on Segment 2.

**Segment 3A:** The majority of the habitat along Segment 3A is agricultural land (e.g., avocado orchards) and developed and ruderal areas along Highway 192. Weedy forbs and grasses such as fennel, castor bean, bindweed, and Bermuda grass are common throughout the agricultural and ruderal areas along this segment. Three noxious weed species (onionweed, wavy-leaved gaura, and puncture vine) were documented along the roadsides in Segment 3A. The most common noxious weed observed in Segment 3A was puncture vine (55 occurrences; 936 plants), all of which were along the edges of Highway 192.

**Segment 3B:** Habitats in Segment 3B include oak woodland, chaparral, coastal sage scrub, grassland, agricultural, ruderal/disturbed, and developed habitats. Grasslands in Segment 3B are highly disturbed and are dominated by non-native annual grasses, black mustard, summer mustard, and tocalote. Road edges are also dominated by weedy species such as Russian thistle, Italian thistle, fennel, and poison hemlock. Noxious weed species mapped in this segment are limited to two occurrences of yellow star-thistle, consisting of three plants, on the east end of Segment 3B, near Construct 61.

**Segment 4:** Similar to Segment 3B, habitat diversity in Segment 4 is also high and consists of woodland, chaparral, scrub, agricultural, grassland, developed, and ruderal/disturbed habitats. Road edges and orchards in Segment 4 have frequent occurrences of weedy species such as Russian thistle, Italian thistle, tocalote, bindweed, Bermuda grass, fennel, and poison hemlock. In addition, numerous Cape ivy infestations have also been documented in the scrub and chaparral habitats of this segment (Bio Resources 2012).

Three of the four noxious weed species documented in Segment 4 during 2014 surveys (onionweed, puncture vine, and devil's thorn) are located along roads and in agricultural and ruderal/disturbed areas. These populations are small and limited to areas of high disturbance.

Ten occurrences of yellow star-thistle, consisting of approximately 3,500 plants, were documented near Constructs 84, 85, and 86 (Appendix A; Figure 4—CDFA Noxious Weed Maps; Appendix C—Site Photographs). These occurrences total approximately 2.9 acres and are present along roads and within ruderal/disturbed areas. Yellow star-thistle is uncommon within the Segment 4 and is essentially limited to these 10 occurrences.

# 7.0 REFERENCES


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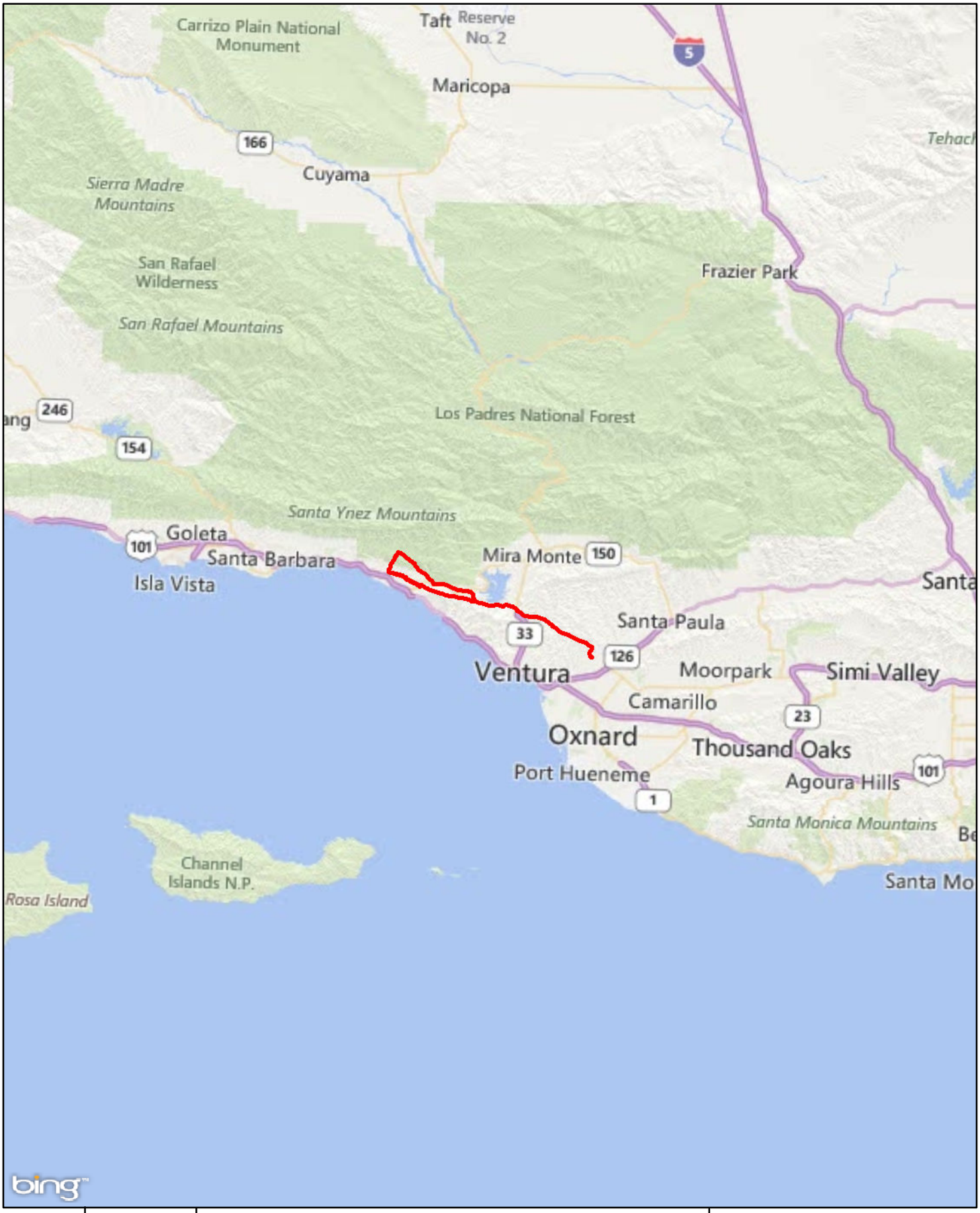
# APPENDIX A
# PROJECT MAPS




GANDA

SBCRP

Miles 0 10

Kilometers 0 20

1:750,000

**Figure 1. Project Vicinity Map**

Santa Barbara County Reliability Project

Santa Barbara and Ventura Counties, CA

October 2014

GANDA

**SBCRP**

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

Miles: 0 – 2

Kilometers: 0 – 2

1:175,000

**Figure 2. Project Location Map**

Santa Barbara County Reliability Project

Santa Barbara and Ventura Counties, CA

October 2014

**Figure 3**
**Los Padres National Forest (LPNF)**
**Jurisdiction Overview Map**
**Santa Barbara County Reliability Project**
**Santa Barbara and Ventura Counties, CA**
**October 2014**

- Construction Site Under LPNF Jurisdiction
- Substation Location
- Los Padres National Forest Boundary
- County Boundary

**SBCRP**

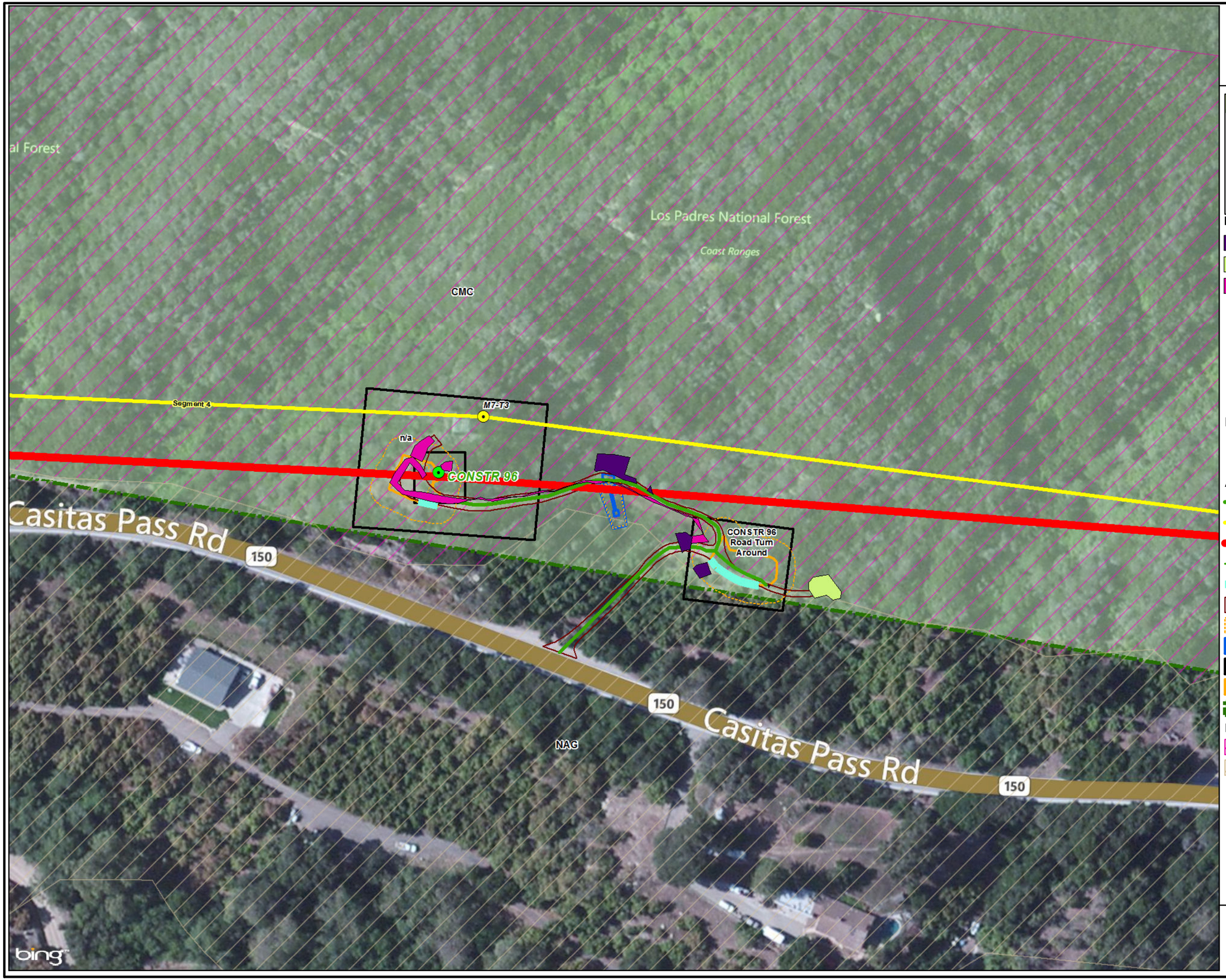
- Segment 1
- Segment 2
- Segment 3A
- Segment 3B
- Segment 4

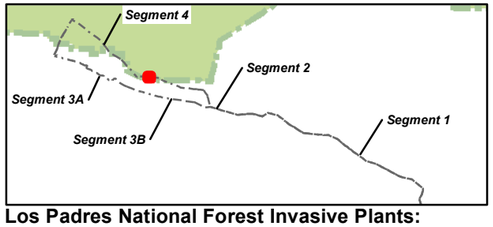
GANDA

Miles: 0 – 2
Kilometers: 0 – 2

**Figure 3**
**LPNF Invasive Plant Species Maps**
**Santa Barbara County Reliability Project**
**Santa Barbara and Ventura Counties, CA**
**October 2014**

*Map 1 of 6*




**Los Padres National Forest Invasive Plants:**

- Tree tobacco *(Nicotiana glauca)* (NIGL)
- Cape ivy *(Delairea odorata)* (DEOD)
- Tocalote *(Centaurea melitensis)* (CEME2)

**Project Features**

- Proposed Structure Locations
- Existing Structure Locations

**Access Roads Centerline**

- Existing, 4 = Heavy Improvement
- Proposed 66 kV Alignment
- Proposed OPGW Alignment
- Existing SubTrans 66 kV Lines
- Civil Erosion Control Line
- Access Roads Edge
- Disturbance Area Limit
- Civil Erosion Control Features
- Construction Disturbance Areas (From TPD)
- Grading Limits
- Los Padres National Forest Boundary

**Habitat (BioResource Consultants 2012)**

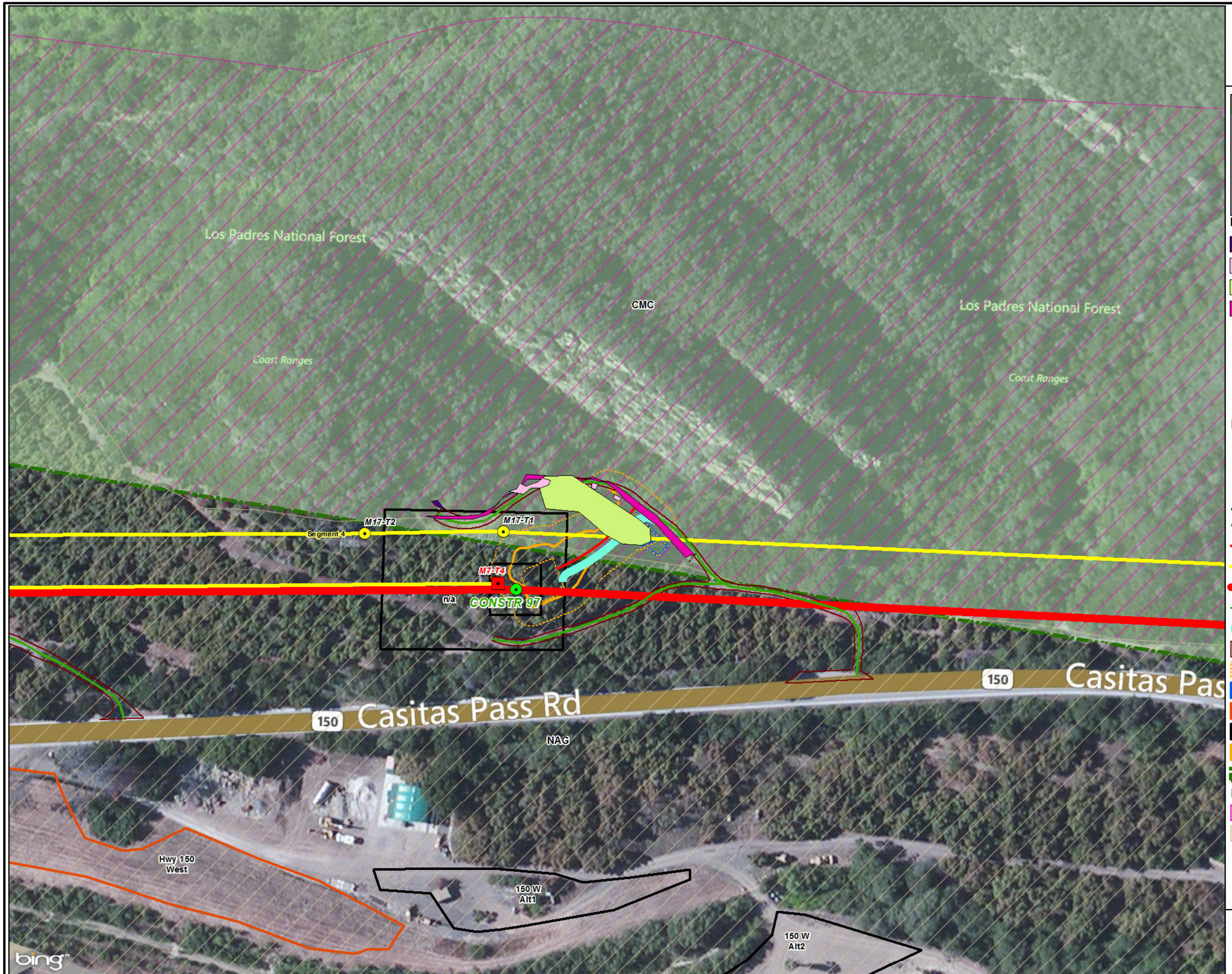
- CMC: Mixed Ceanothus Chaparral
- NAG: Agriculture

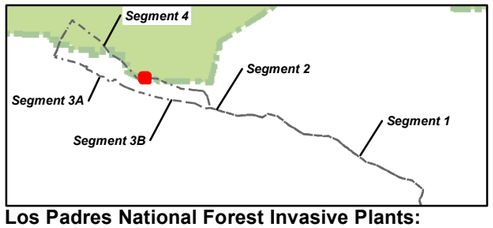
GANDA

Feet: 0 – 100
Meters: 0 – 50
1 inch = 100 feet

**Figure 3**
**LPNF Invasive Plant Species Maps**
**Santa Barbara County Reliability Project**
**Santa Barbara and Ventura Counties, CA**
**October 2014**

*Map 2 of 6*




**Los Padres National Forest Invasive Plants:**

- Tree tobacco *(Nicotiana glauca)* (NIGL)
- Fennel *(Foeniculum vulgare)* (FOVU)
- Cape ivy *(Delairea odorata)* (DEOD)
- Tocalote *(Centaurea melitensis)* (CEME2)

**Project Features**

- Proposed Structure Locations
- Existing Structure Locations
- Potential Structures To Be Removed

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- New, 5 = Design Road
- Proposed 66 kV Alignment
- Proposed OPGW Alignment
- Existing SubTrans 66 kV Lines
- Civil Erosion Control Line
- Access Roads Edge
- Disturbance Area Limit
- Civil Erosion Control Features
- Construction Material Yards
- Construction Disturbance Areas (From TPD)
- Grading Limits
- Los Padres National Forest Boundary

**Habitat (BioResource Consultants 2012)**

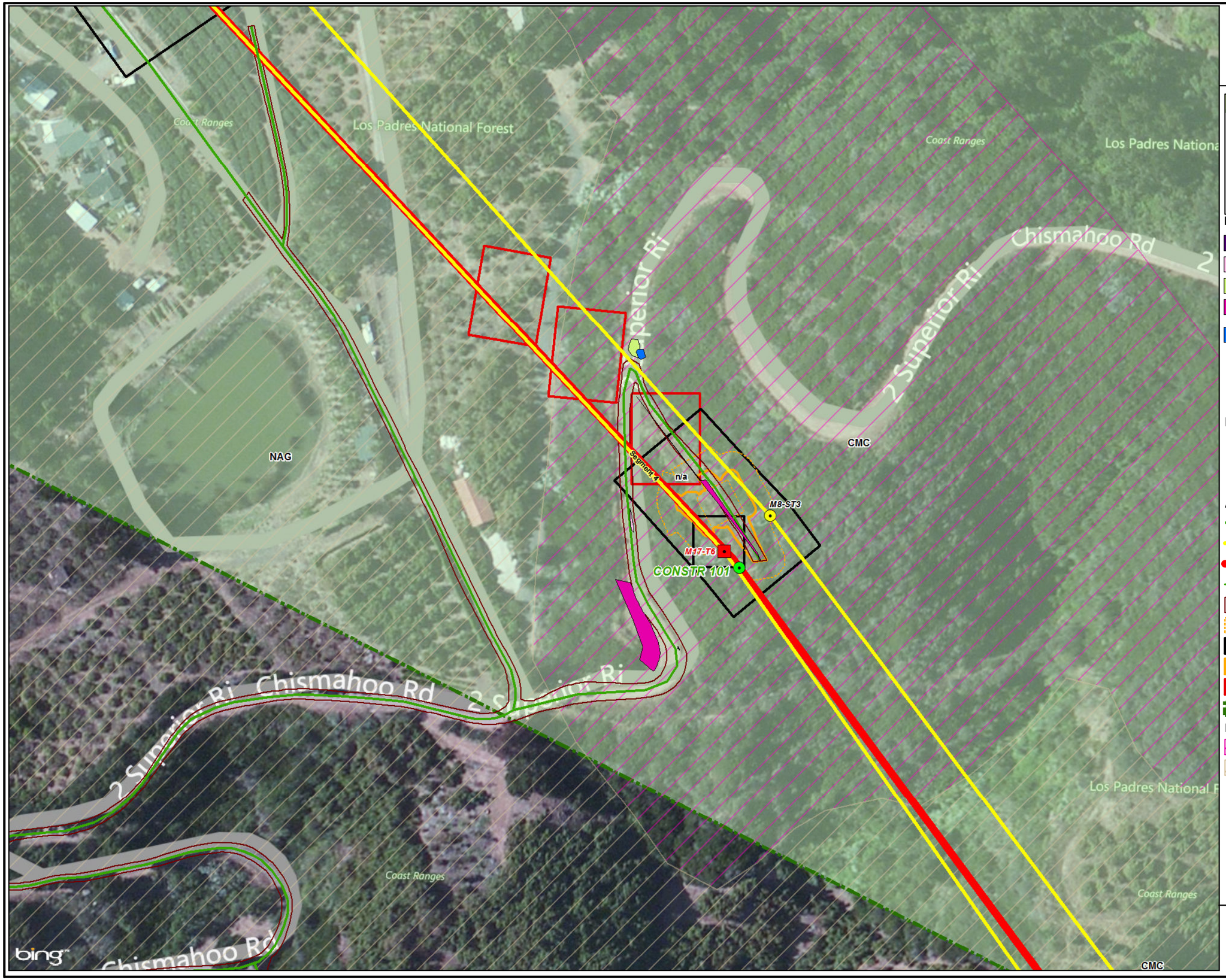
- CMC: Mixed Ceanothus Chaparral
- NAG: Agriculture

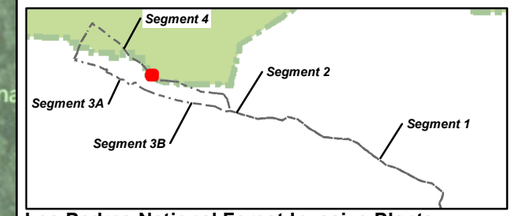
GANDA

Feet: 0 – 100
Meters: 0 – 50
1 inch = 100 feet

**Figure 3**
**LPNF Invasive Plant Species Maps**
**Santa Barbara County Reliability Project**
**Santa Barbara and Ventura Counties, CA**
**October 2014**

*Map 3 of 6*




**Los Padres National Forest Invasive Plants:**

- Tree tobacco *(Nicotiana glauca)* (NIGL)
- Fennel *(Foeniculum vulgare)* (FOVU)
- Cape ivy *(Delairea odorata)* (DEOD)
- Tocalote *(Centaurea melitensis)* (CEME2)
- Italian thistle *(Carduus pycnocephalus* ssp. *pycnocephalus)* (CAPY2)

**Project Features**

- Proposed Structure Locations
- Existing Structure Locations
- Potential Structures To Be Removed

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- Proposed 66 kV Alignment
- Proposed OPGW Alignment
- Existing SubTrans 66 kV Lines
- Access Roads Edge
- Disturbance Area Limit
- Construction Disturbance Areas (From TPD)
- Grading Limits
- Guard Structures
- Los Padres National Forest Boundary

**Habitat (BioResource Consultants 2012)**

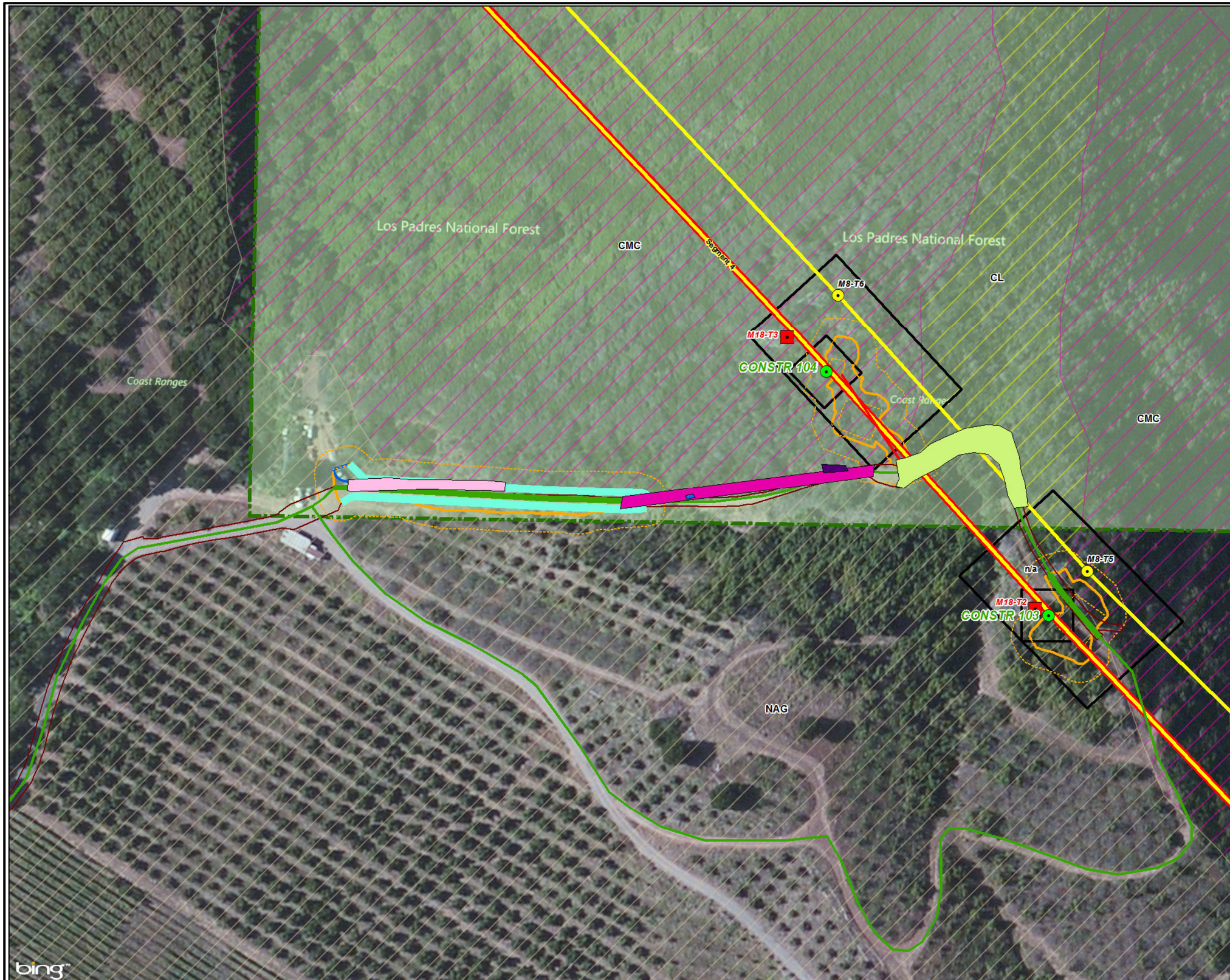
- CMC: Mixed Ceanothus Chaparral
- NAG: Agriculture

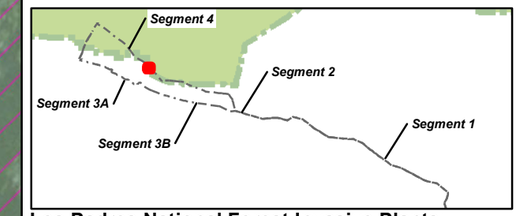
GANDA

Feet 0 100
Meters 0 50
1 inch = 100 feet

**Figure 3**
**LPNF Invasive Plant Species Maps**
**Santa Barbara County Reliability Project**
**Santa Barbara and Ventura Counties, CA**
**October 2014**

*Map 4 of 6*




**Los Padres National Forest Invasive Plants:**

- Tree tobacco *(Nicotiana glauca)* (NIGL)
- Fennel *(Foeniculum vulgare)* (FOVU)
- Cape ivy *(Delairea odorata)* (DEOD)
- Tocalote *(Centaurea melitensis)* (CEME2)
- Italian thistle *(Carduus pycnocephalus* ssp. *pycnocephalus)* (CAPY2)

**Project Features**

- Proposed Structure Locations
- Existing Structure Locations
- Potential Structures To Be Removed

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- Existing, 5 = Design Road
- New, 5 = Design Road
- Proposed 66 kV Alignment
- Proposed OPGW Alignment
- Existing SubTrans 66 kV Lines
- Civil Erosion Control Line
- Access Roads Edge
- Disturbance Area Limit
- Civil Erosion Control Features
- Construction Disturbance Areas (From TPD)
- Grading Limits
- Los Padres National Forest Boundary

**Habitat (BioResource Consultants 2012)**

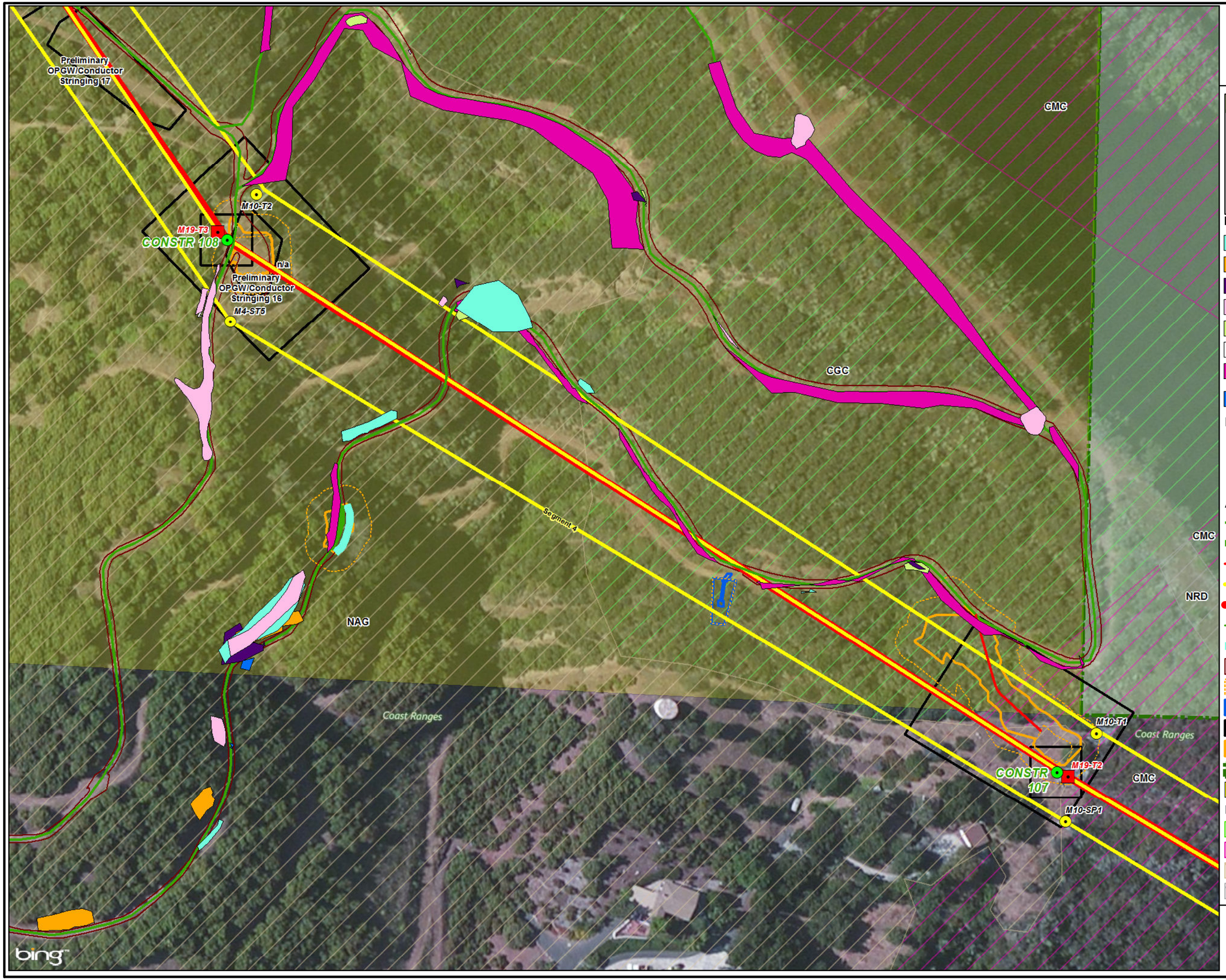
- CL: Lemonadeberry Chaparral
- CMC: Mixed Ceanothus Chaparral
- NAG: Agriculture

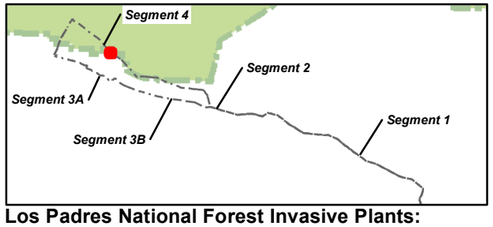
GANDA

Feet: 0 – 100
Meters: 0 – 50
1 inch = 100 feet

**Figure 3**
**LPNF Invasive Plant Species Maps**
**Santa Barbara County Reliability Project**
**Santa Barbara and Ventura Counties, CA**
**October 2014**

*Map 5 of 6*




**Los Padres National Forest Invasive Plants:**

- Castor bean *(Ricinus communis)* (RICO3)
- Fountain grass *(Pennisetum setaceum)* (PESE3)
- Tree tobacco *(Nicotiana glauca)* (NIGL)
- Fennel *(Foeniculum vulgare)* (FOVU)
- Cape ivy *(Delairea odorata)* (DEOD)
- Poison hemlock *(Conium maculatum)* (COMA2)
- Tocalote *(Centaurea melitensis)* (CEME2)
- Italian thistle *(Carduus pycnocephalus* ssp. *pycnocephalus)* (CAPY2)

**Project Features**

- Proposed Structure Locations
- Existing Structure Locations
- Potential Structures To Be Removed

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- Existing, 5 = Design Road
- New, 5 = Design Road
- Proposed 66 kV Alignment
- Proposed OPGW Alignment
- Existing SubTrans 66 kV Lines
- Civil Erosion Control Line
- Access Roads Edge
- Disturbance Area Limit
- Civil Erosion Control Features
- Construction Disturbance Areas (From TPD)
- Grading Limits
- Los Padres National Forest Boundary
- USA Owned Roads

**Habitat (BioResource Consultants 2012)**

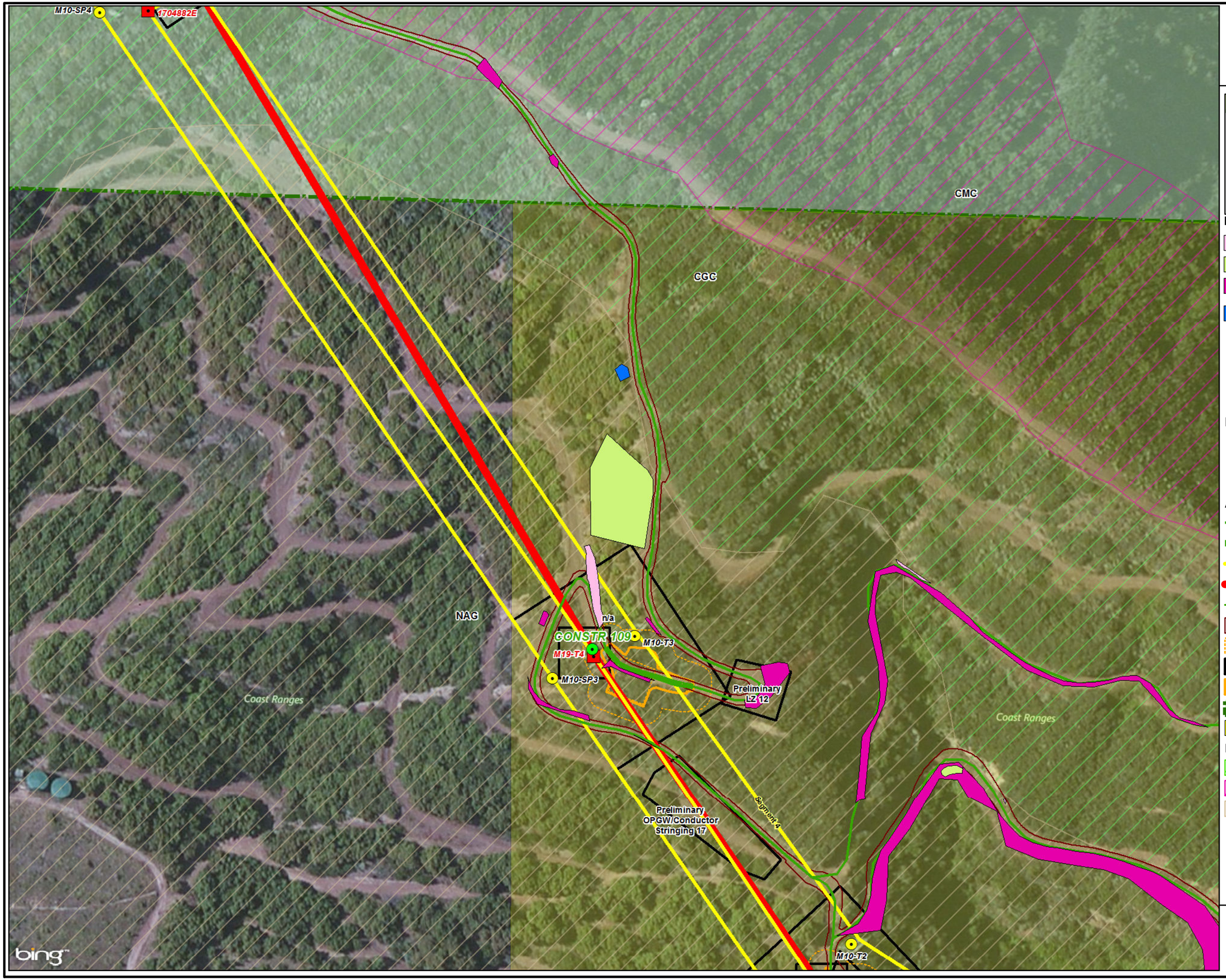
- CGC: Greenbark Ceanothus Chaparral
- CMC: Mixed Ceanothus Chaparral
- NAG: Agriculture
- NRD: Ruderal/Disturbed

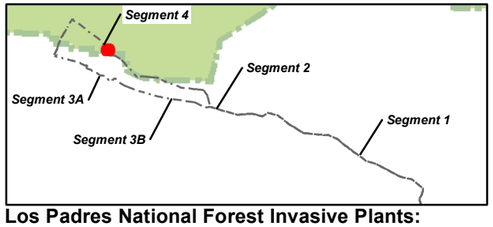
GANDA

Feet 0 100
Meters 0 50
1 inch = 100 feet

**Figure 3**
**LPNF Invasive Plant Species Maps**
**Santa Barbara County Reliability Project**
**Santa Barbara and Ventura Counties, CA**
**October 2014**

*Map 6 of 6*




**Los Padres National Forest Invasive Plants:**

- Fennel *(Foeniculum vulgare)* (FOVU)
- Cape ivy *(Delairea odorata)* (DEOD)
- Tocalote *(Centaurea melitensis)* (CEME2)
- Italian thistle *(Carduus pycnocephalus* ssp. *pycnocephalus)* (CAPY2)

**Project Features**

- Proposed Structure Locations
- Existing Structure Locations
- Potential Structures To Be Removed

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- Existing, 5 = Design Road
- Proposed 66 kV Alignment
- Proposed OPGW Alignment
- Existing SubTrans 66 kV Lines
- Access Roads Edge
- Disturbance Area Limit
- Construction Disturbance Areas (From TPD)
- Grading Limits
- Los Padres National Forest Boundary
- USA Owned Roads

**Habitat (BioResource Consultants 2012)**

- CGC: Greenbark Ceanothus Chaparral
- CMC: Mixed Ceanothus Chaparral
- NAG: Agriculture

GANDA

Feet 0 100

Meters 0 50

1 inch = 100 feet

**Figure 4**
**California Department of Food and Agriculture (CDFA) Noxious Weed Overview Map**
**Santa Barbara County Reliability Project**
**Santa Barbara and Ventura Counties, CA**
**October 2014**

Substation Location
Map Page
Los Padres National Forest Boundary
County Boundary

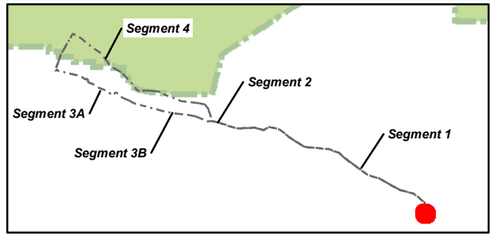
**SBCRP**

Segment 1
Segment 2
Segment 3A
Segment 3B
Segment 4

GANDA

Miles 0 2
Kilometers 0 2

**Figure 4**
**California Department of Food and Agriculture (CDFA) Noxious Weed Maps**
**Santa Barbara County Reliability Project**
**Santa Barbara and Ventura Counties, CA**
**October 2014**




**CDFA-listed Noxious Weed Species**

Bladderflower *(Araujia sericifera)* (ARSE8)

**Project Features**

**Access Roads Centerline**

Existing, 3 = Medium Improvement

Existing 230 kV

**Habitat (BioResource Consultants 2012)**

GR: Ruderal Grassland

NAG: Agriculture

SPS: Purple Sage Scrub

GANDA

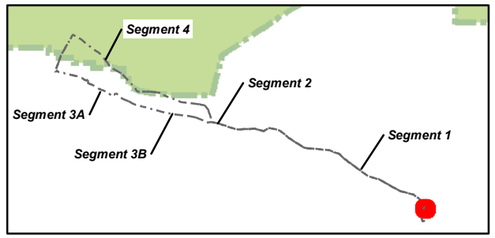
Feet 0 100

Meters 0 50

1 inch = 100 feet

**Figure 4**
**California Department of Food and Agriculture (CDFA) Noxious Weed Maps**
**Santa Barbara County Reliability Project**
**Santa Barbara and Ventura Counties, CA**
**October 2014**

*Map 2 of 22*




**CDFA-listed Noxious Weed Species Point**

- Bladderflower *(Araujia sericifera)* (ARSE8)

**CDFA-listed Noxious Weed Species**

- Bladderflower *(Araujia sericifera)* (ARSE8)

**Project Features**

- Foundation to Be Removed
- Existing Structure Locations

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- Proposed 66 kV Alignment
- Proposed OPGW Alignment
- Existing SubTrans 66 kV Lines
- Existing 230 kV
- Construction Disturbance Areas (From TPD)

**Habitat (BioResource Consultants 2012)**

- GCA: California Annual Grassland
- NAG: Agriculture
- SPS: Purple Sage Scrub

GANDA

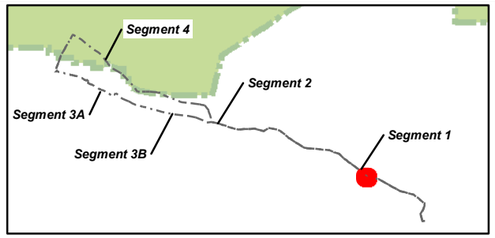
Feet: 0 – 100

Meters: 0 – 50

1 inch = 100 feet

**Figure 4**
**California Department of Food and Agriculture (CDFA) Noxious Weed Maps**
**Santa Barbara County Reliability Project**
**Santa Barbara and Ventura Counties, CA**
**October 2014**

*Map 3 of 22*




**CDFA-listed Noxious Weed Species Point**

- Artichoke thistle *(Cynara cardunculus)* (CYCA)

**Project Features**

- Existing Structure Locations

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- Proposed 66 kV Alignment
- Proposed OPGW Alignment
- Existing SubTrans 66 kV Lines
- Existing 230 kV

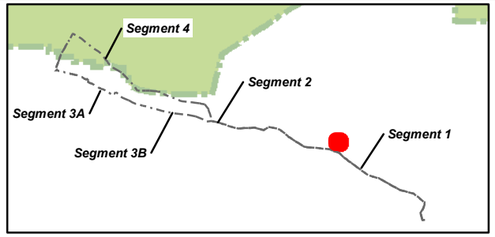
**Habitat (BioResource Consultants 2012)**

- SPS: Purple Sage Scrub

GANDA

Feet: 0 – 100
Meters: 0 – 50
1 inch = 100 feet

**Figure 4**
**California Department of Food and Agriculture (CDFA) Noxious Weed Maps**
**Santa Barbara County Reliability Project**
**Santa Barbara and Ventura Counties, CA**
**October 2014**




**CDFA-listed Noxious Weed Species Point**

- Artichoke thistle *(Cynara cardunculus)* (CYCA)

**Project Features**

**Access Roads Centerline**

- Existing, 3 = Medium Improvement

**Habitat (BioResource Consultants 2012)**

- GCA: California Annual Grassland
- NAG: Agriculture
- SMF: Mulefat Scrub
- SPS: Purple Sage Scrub
- WLO: Coast Live Oak Woodland

GANDA

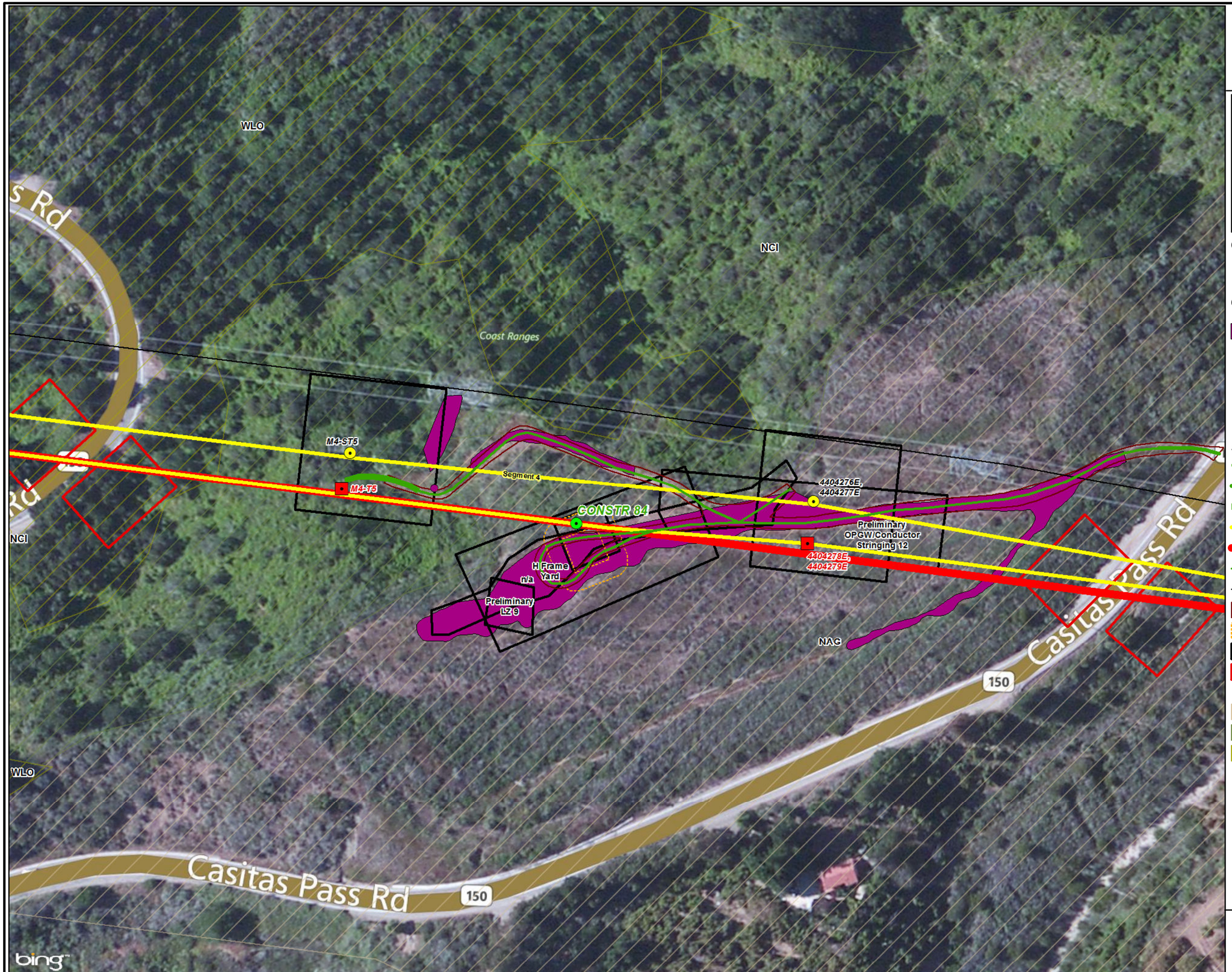
0 100 Feet

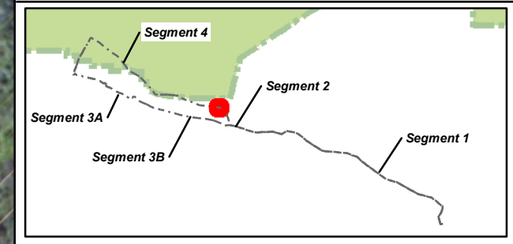
0 50 Meters

1 inch = 100 feet

**Figure 4**
**California Department of Food and Agriculture (CDFA) Noxious Weed Maps**
**Santa Barbara County Reliability Project**
**Santa Barbara and Ventura Counties, CA**
**October 2014**






**CDFA-listed Noxious Weed Species Point**

- Yellow star thistle *(Centaurea solstitialis)* (CESO3)

**CDFA-listed Noxious Weed Species**

- Yellow star thistle *(Centaurea solstitialis)* (CESO3)

**Project Features**

- Proposed Structure Locations
- Existing Structure Locations
- Potential Structures To Be Removed

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- Existing, 4 = Heavy Improvement
- Existing, 5 = Design Road
- Proposed 66 kV Alignment
- Proposed OPGW Alignment
- Existing SubTrans 66 kV Lines
- Existing 230 kV
- Access Roads Edge
- Disturbance Area Limit
- Construction Disturbance Areas (From TPD)
- Guard Structures

**Habitat (BioResource Consultants 2012)**

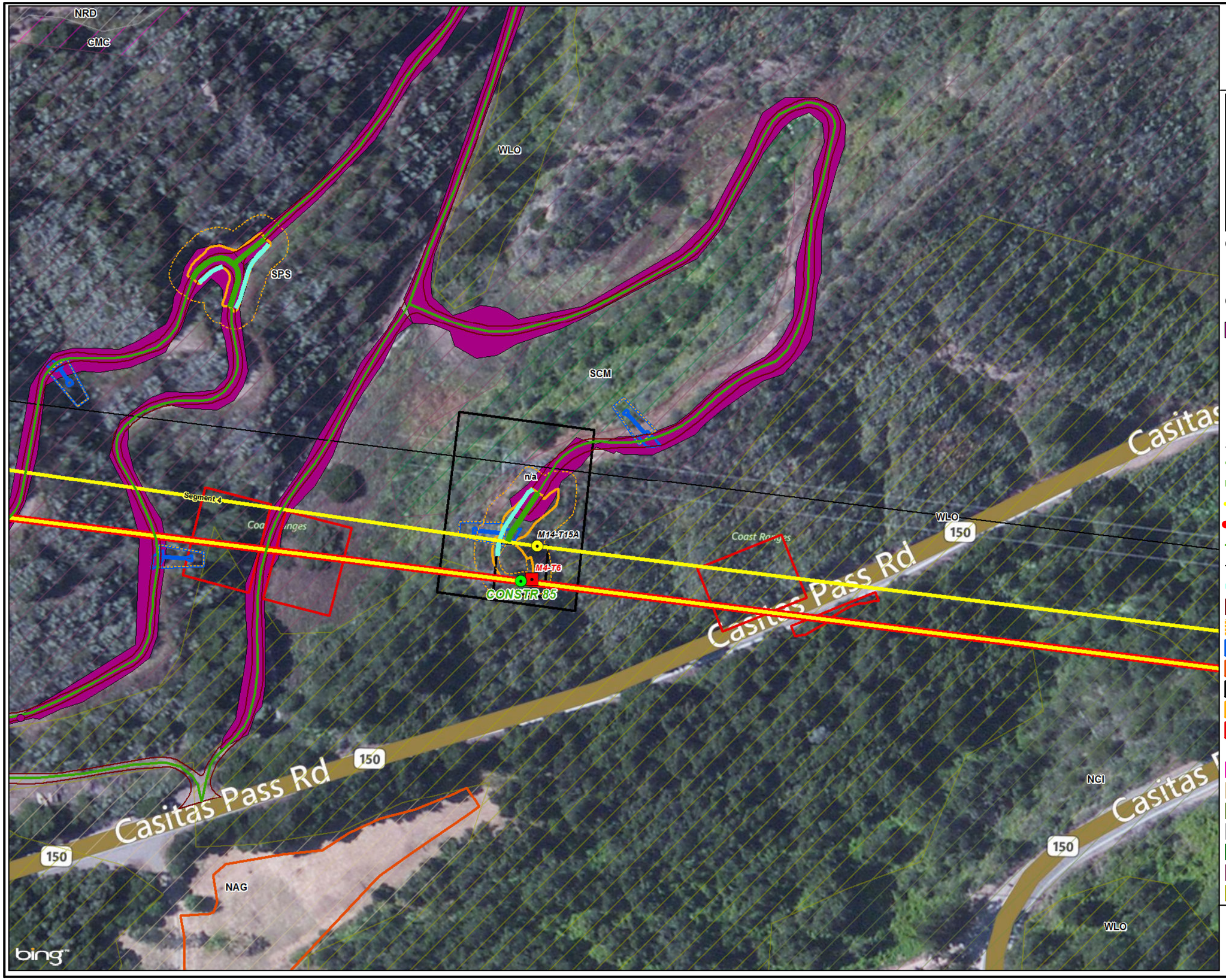
- NAG: Agriculture
- NCI: Cape Ivy Infestation
- WLO: Coast Live Oak Woodland

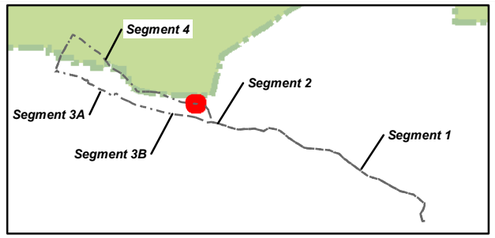
GANDA

Feet: 0 – 100
Meters: 0 – 50
1 inch = 100 feet

**Figure 4**
**California Department of Food and Agriculture (CDFA) Noxious Weed Maps**
**Santa Barbara County Reliability Project**
**Santa Barbara and Ventura Counties, CA**
**October 2014**






**CDFA-listed Noxious Weed Species Point**

- Yellow star thistle *(Centaurea solstitialis)* (CESO3)

**CDFA-listed Noxious Weed Species**

- Yellow star thistle *(Centaurea solstitialis)* (CESO3)

**Project Features**

- Proposed Structure Locations
- Existing Structure Locations
- Potential Structures To Be Removed

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- Existing, 5 = Design Road
- Proposed 66 kV Alignment
- Proposed OPGW Alignment
- Existing SubTrans 66 kV Lines
- Existing 230 kV
- Civil Erosion Control Line
- Access Roads Edge
- Disturbance Area Limit
- Civil Erosion Control Features
- Construction Material Yards
- Construction Disturbance Areas (From TPD)
- Grading Limits
- Guard Structures

**Habitat (BioResource Consultants 2012)**

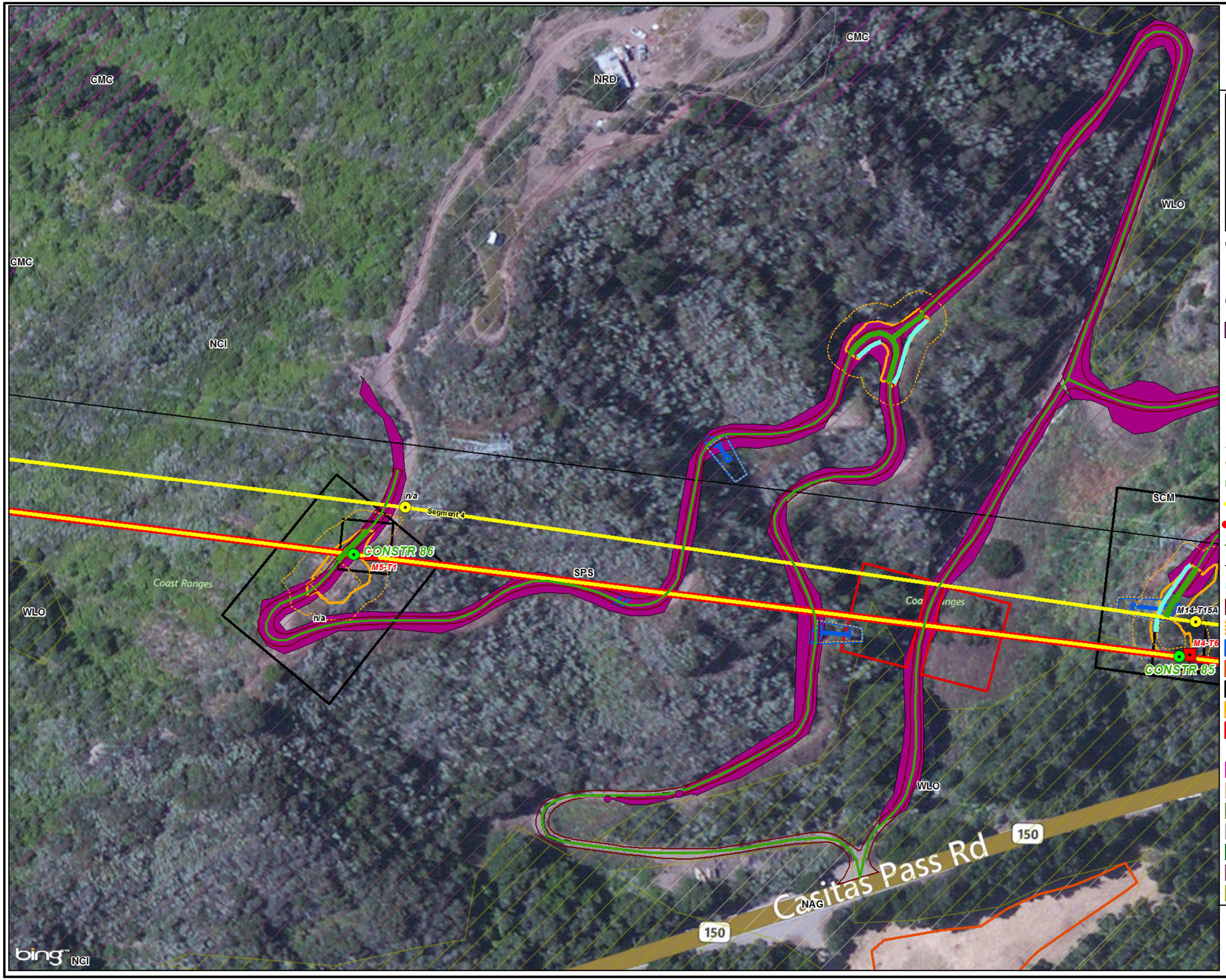
- CMC: Mixed Ceanothus Chaparral
- NAG: Agriculture
- NCI: Cape Ivy Infestation
- NRD: Ruderal/Disturbed
- SCM: Chaparral Mallow Scrub
- SPS: Purple Sage Scrub
- WLO: Coast Live Oak Woodland

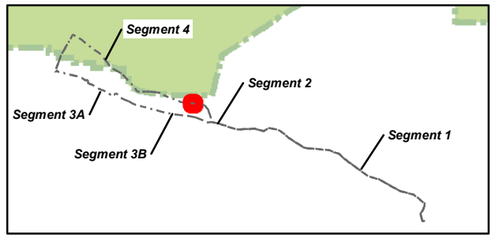
GANDA

Feet: 0 – 100
Meters: 0 – 50
1 inch = 100 feet

**Figure 4**
**California Department of Food and Agriculture (CDFA) Noxious Weed Maps**
**Santa Barbara County Reliability Project**
**Santa Barbara and Ventura Counties, CA**
**October 2014**






**CDFA-listed Noxious Weed Species Point**

- Yellow star thistle *(Centaurea solstitialis)* (CESO3)

**CDFA-listed Noxious Weed Species**

- Yellow star thistle *(Centaurea solstitialis)* (CESO3)

**Project Features**

- Proposed Structure Locations
- Existing Structure Locations
- Potential Structures To Be Removed

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- Existing, 5 = Design Road
- Proposed 66 kV Alignment
- Proposed OPGW Alignment
- Existing SubTrans 66 kV Lines
- Existing 230 kV
- Civil Erosion Control Line
- Access Roads Edge
- Disturbance Area Limit
- Civil Erosion Control Features
- Construction Material Yards
- Construction Disturbance Areas (From TPD)
- Grading Limits
- Guard Structures

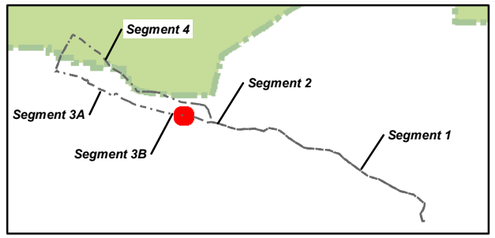
**Habitat (BioResource Consultants 2012)**

- CMC: Mixed Ceanothus Chaparral
- NAG: Agriculture
- NCI: Cape Ivy Infestation
- NRD: Ruderal/Disturbed
- SCM: Chaparral Mallow Scrub
- SPS: Purple Sage Scrub
- WLO: Coast Live Oak Woodland

GANDA

Feet: 0 – 100
Meters: 0 – 50
1 inch = 100 feet

**Figure 4**
**California Department of Food and Agriculture (CDFA) Noxious Weed Maps**
**Santa Barbara County Reliability Project**
**Santa Barbara and Ventura Counties, CA**
**October 2014**




**CDFA-listed Noxious Weed Species Point**

- Yellow star thistle *(Centaurea solstitialis)* (CESO3)

**Project Features**

- Proposed Structure Locations
- Existing Structure Locations
- Potential Structures To Be Removed

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- Existing, 5 = Design Road
- Proposed 66 kV Alignment
- Existing SubTrans 66 kV Lines
- Civil Erosion Control Line
- Access Roads Edge
- Disturbance Area Limit
- Construction Disturbance Areas (From TPD)
- Grading Limits

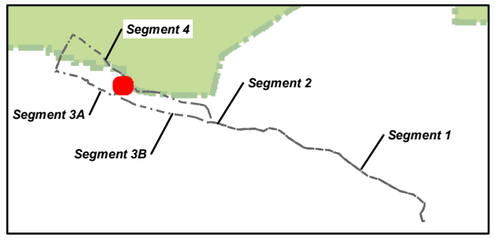
**Habitat (BioResource Consultants 2012)**

- CL: Lemonadeberry Chaparral
- CT: Toyon Chaparral
- SPS: Purple Sage Scrub
- WLO: Coast Live Oak Woodland

GANDA

Feet: 0 – 100
Meters: 0 – 50
1 inch = 100 feet

**Figure 4**
**California Department of Food and Agriculture (CDFA) Noxious Weed Maps**
**Santa Barbara County Reliability Project**
**Santa Barbara and Ventura Counties, CA**
**October 2014**




**CDFA-listed Noxious Weed Species Point**

- Puncture vine *(Tribulus terrestris)* (TRTE)

**Project Features**

- Existing Structure Locations
- Potential Structures To Be Removed

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- Proposed 66 kV Alignment
- Existing SubTrans 66 kV Lines
- Construction Disturbance Areas (From TPD)

**Habitat (BioResource Consultants 2012)**

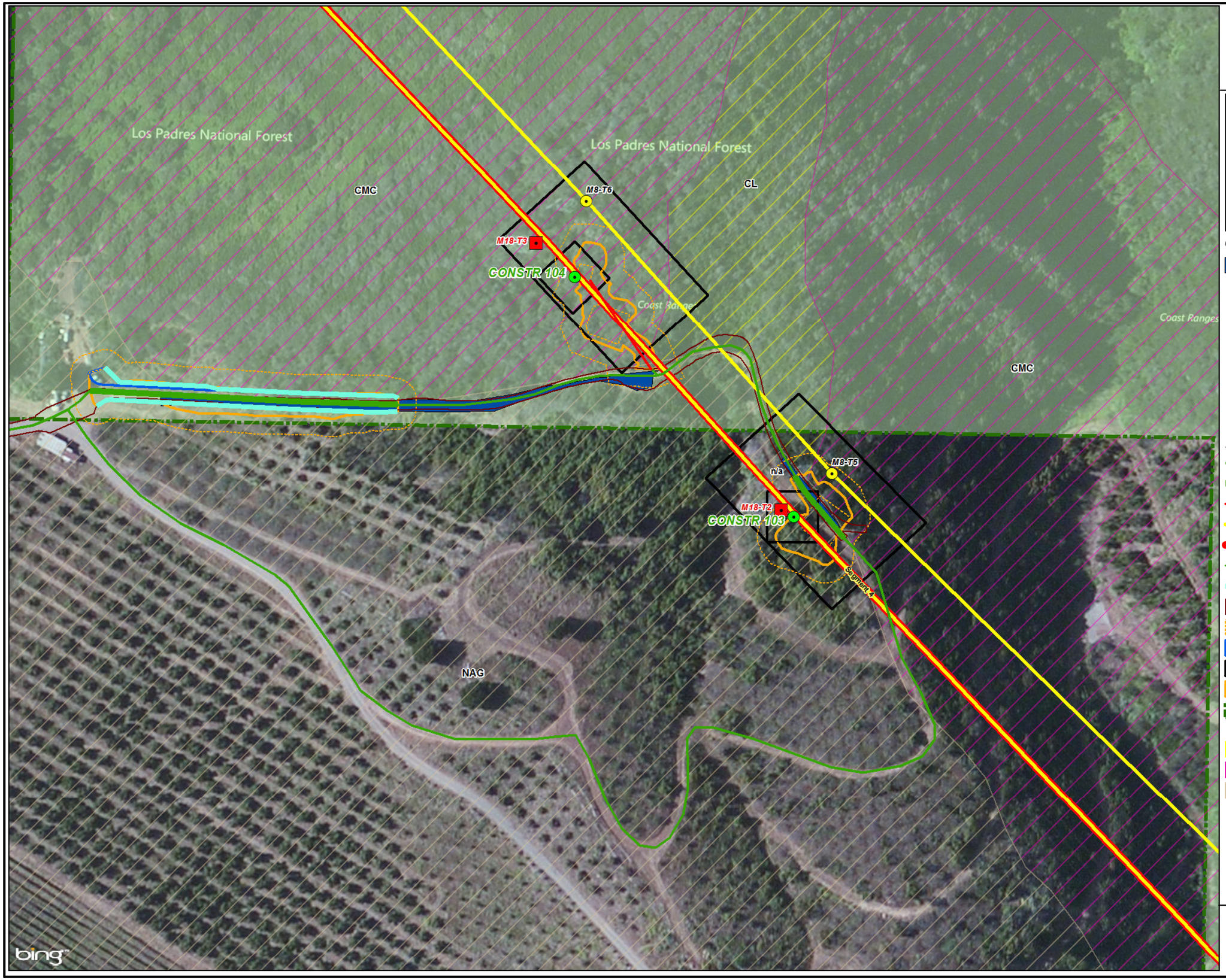
- NAG: Agriculture
- SPS: Purple Sage Scrub
- WLO: Coast Live Oak Woodland

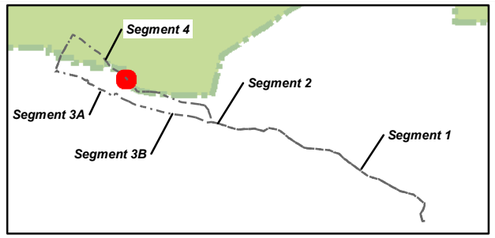
GANDA

Feet: 0 – 100
Meters: 0 – 50
1 inch = 100 feet

**Figure 4**
**California Department of Food and Agriculture (CDFA) Noxious Weed Maps**
**Santa Barbara County Reliability Project**
**Santa Barbara and Ventura Counties, CA**
**October 2014**






**CDFA-listed Noxious Weed Species**

- Onionweed *(Asphodelus fistulosus)* (ASFI2)

**Project Features**

- Proposed Structure Locations
- Existing Structure Locations
- Potential Structures To Be Removed

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- Existing, 5 = Design Road
- New, 5 = Design Road
- Proposed 66 kV Alignment
- Proposed OPGW Alignment
- Existing SubTrans 66 kV Lines
- Civil Erosion Control Line
- Access Roads Edge
- Disturbance Area Limit
- Civil Erosion Control Features
- Construction Disturbance Areas (From TPD)
- Grading Limits
- Los Padres National Forest Boundary

**Habitat (BioResource Consultants 2012)**

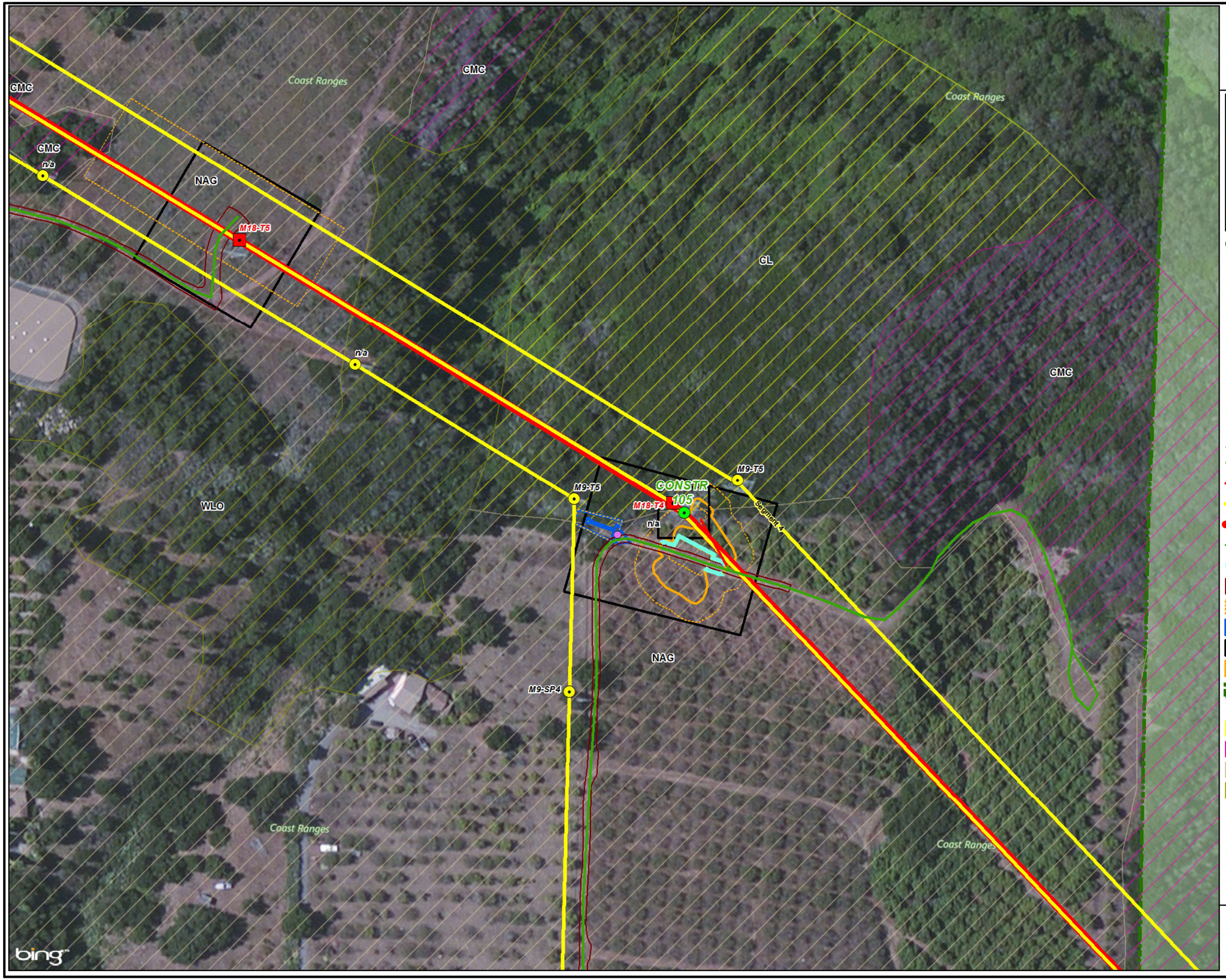
- CL: Lemonadeberry Chaparral
- CMC: Mixed Ceanothus Chaparral
- NAG: Agriculture

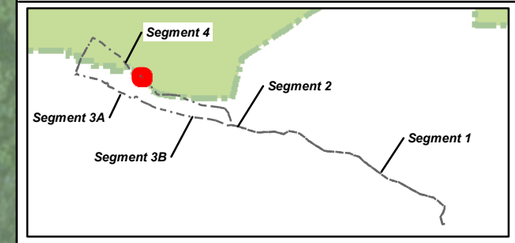
GANDA

Feet: 0 – 100
Meters: 0 – 50
1 inch = 100 feet

**Figure 4**
**California Department of Food and Agriculture (CDFA) Noxious Weed Maps**
**Santa Barbara County Reliability Project**
**Santa Barbara and Ventura Counties, CA**
**October 2014**






**CDFA-listed Noxious Weed Species Point**

- Puncture vine *(Tribulus terrestris)* (TRTE)

**Project Features**

- Proposed Structure Locations
- Existing Structure Locations
- Potential Structures To Be Removed

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- New, 5 = Design Road
- Proposed 66 kV Alignment
- Proposed OPGW Alignment
- Existing SubTrans 66 kV Lines
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- Civil Erosion Control Features
- Construction Disturbance Areas (From TPD)
- Grading Limits
- Los Padres National Forest Boundary

**Habitat (BioResource Consultants 2012)**

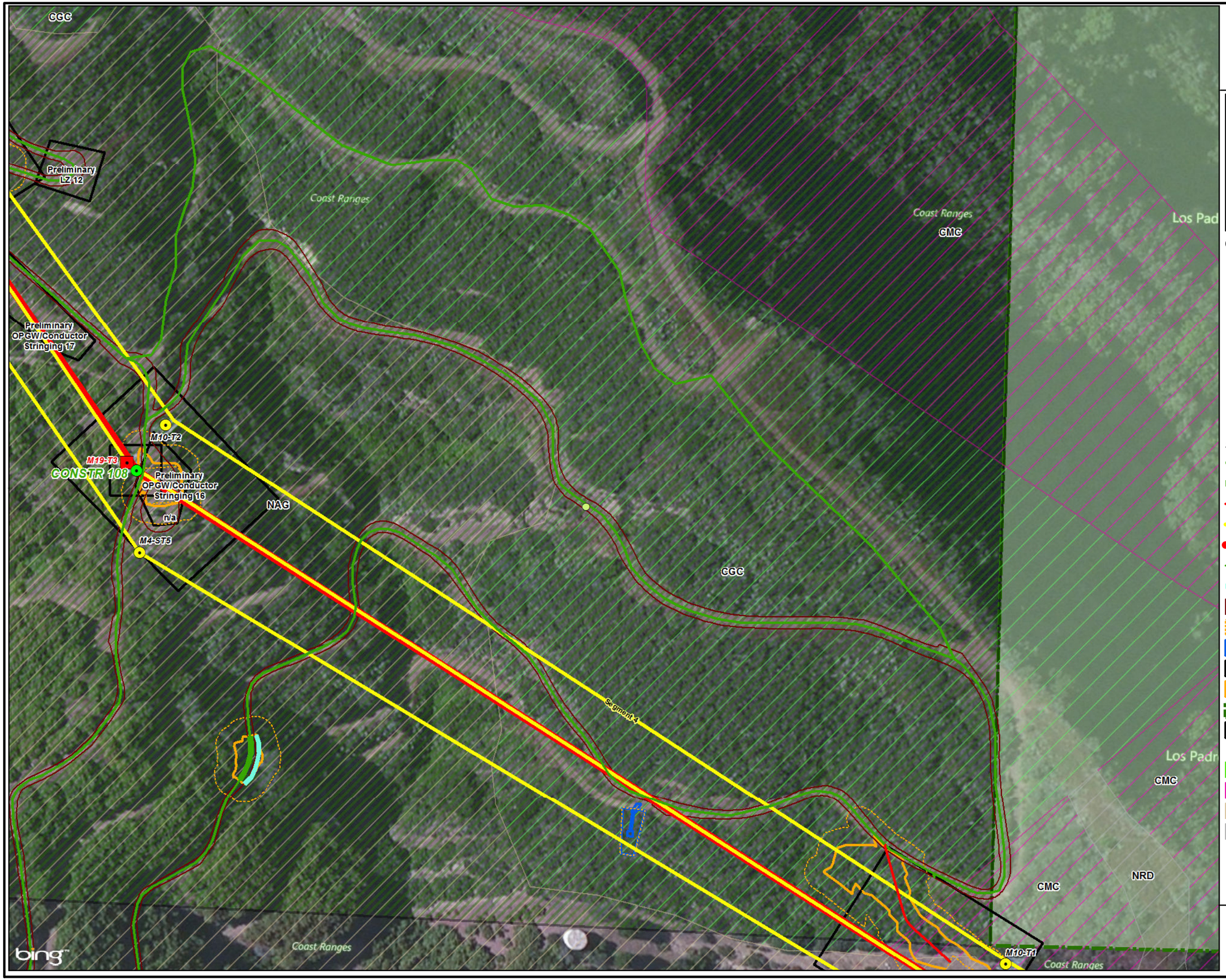
- CL: Lemonadeberry Chaparral
- CMC: Mixed Ceanothus Chaparral
- NAG: Agriculture
- WLO: Coast Live Oak Woodland

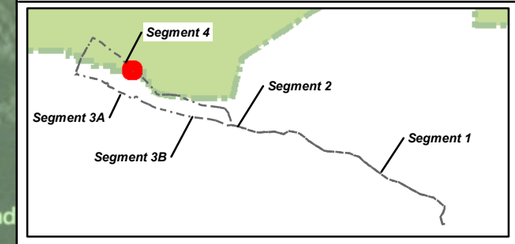
GANDA

Feet 0 100
Meters 0 50
1 inch = 100 feet

**Figure 4**
**California Department of Food and Agriculture (CDFA) Noxious Weed Maps**
**Santa Barbara County Reliability Project**
**Santa Barbara and Ventura Counties, CA**
**October 2014**

*Map 12 of 22*




**CDFA-listed Noxious Weed Species Point**

- Devil's thorn *(Emex spinosa)* (EMSP)

**Project Features**

- Proposed Structure Locations
- Existing Structure Locations
- Potential Structures To Be Removed

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- Existing, 5 = Design Road
- New, 5 = Design Road
- Proposed 66 kV Alignment
- Proposed OPGW Alignment
- Existing SubTrans 66 kV Lines
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- Construction Disturbance Areas (From TPD)
- Grading Limits
- Los Padres National Forest Boundary
- USA Owned Roads

**Habitat (BioResource Consultants 2012)**

- CGC: Greenbark Ceanothus Chaparral
- CMC: Mixed Ceanothus Chaparral
- NAG: Agriculture
- NRD: Ruderal/Disturbed

GANDA

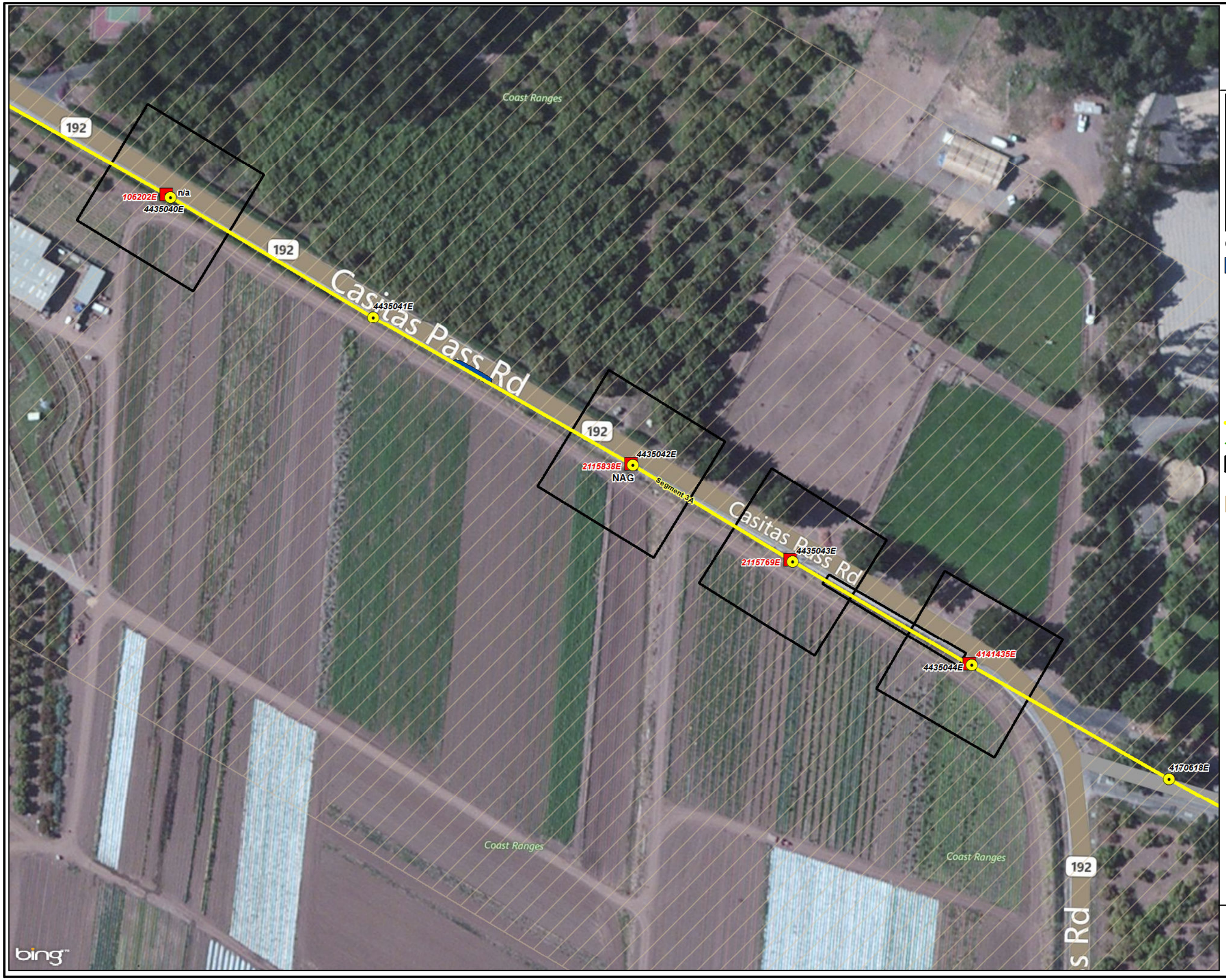
Feet 0 100

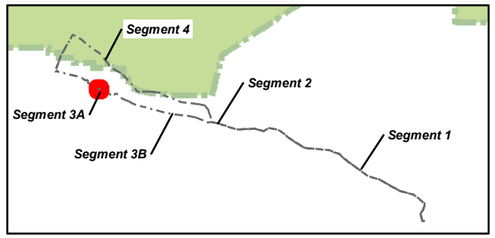
Meters 0 50

1 inch = 100 feet

**Figure 4**
**California Department of Food and Agriculture (CDFA) Noxious Weed Maps**
**Santa Barbara County Reliability Project**
**Santa Barbara and Ventura Counties, CA**
**October 2014**

*Map 13 of 22*




**CDFA-listed Noxious Weed Species**

Onionweed *(Asphodelus fistulosus)* (ASFI2)

**Project Features**

- Existing Structure Locations
- Potential Structures To Be Removed
- Proposed 66 kV Alignment
- Existing SubTrans 66 kV Lines
- Construction Disturbance Areas (From TPD)

**Habitat (BioResource Consultants 2012)**

- NAG: Agriculture

GANDA

Feet: 0 – 100
Meters: 0 – 50
1 inch = 100 feet

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**Santa Barbara County Reliability Project**
**Santa Barbara and Ventura Counties, CA**
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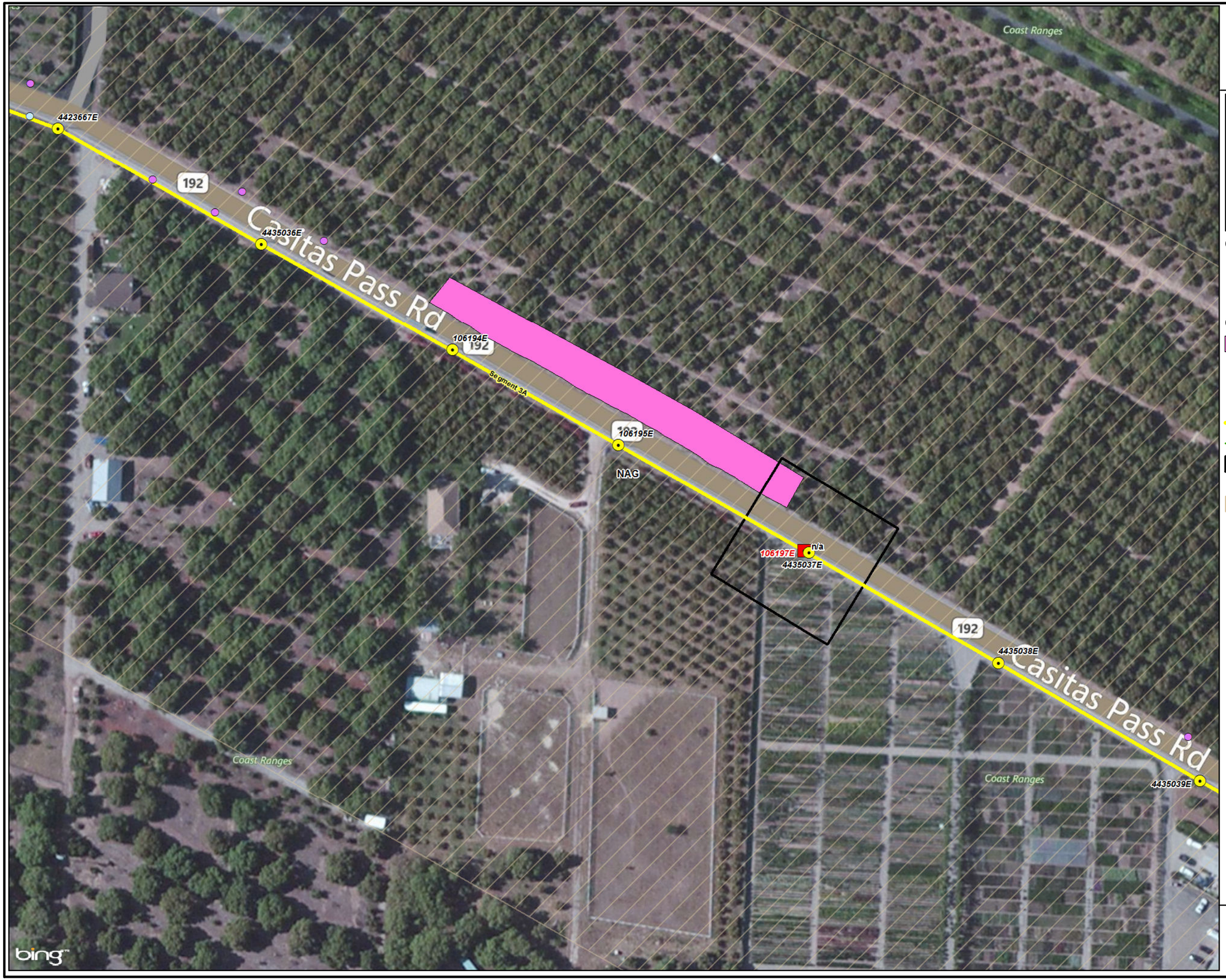


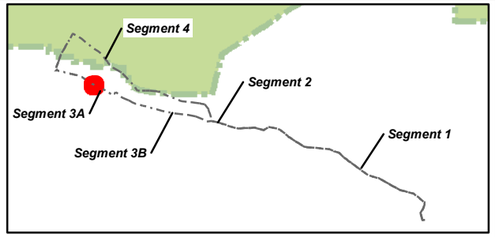


**CDFA-listed Noxious Weed Species Point**

- Puncture vine *(Tribulus terrestris)* (TRTE)
- Wavy-leaved gaura *(Oenothera sinuosa)* (OESI)

**CDFA-listed Noxious Weed Species**

- Puncture vine *(Tribulus terrestris)* (TRTE)

**Project Features**

- Existing Structure Locations
- Potential Structures To Be Removed
- Proposed 66 kV Alignment
- Existing SubTrans 66 kV Lines
- Construction Disturbance Areas (From TPD)

**Habitat (BioResource Consultants 2012)**

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GANDA

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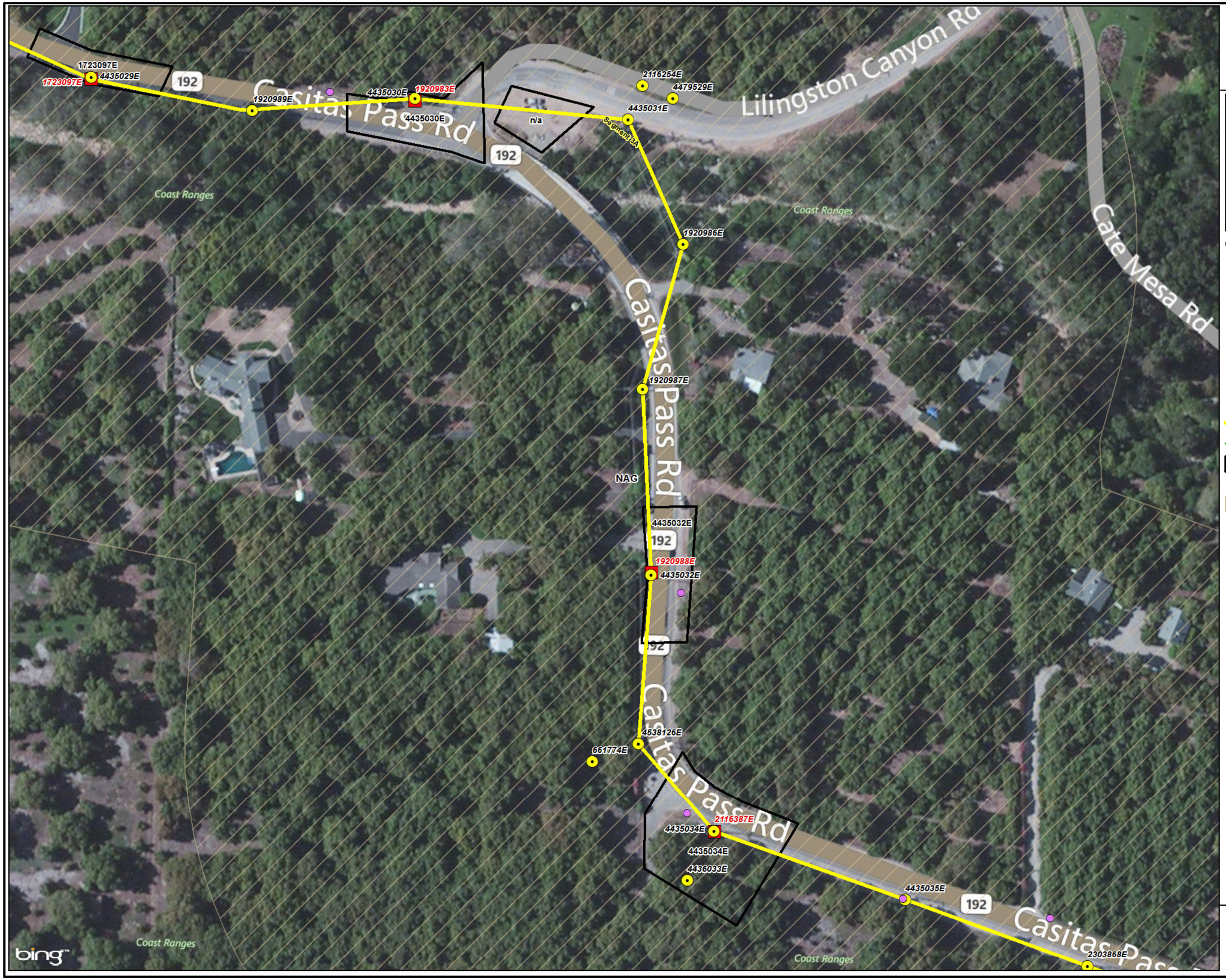
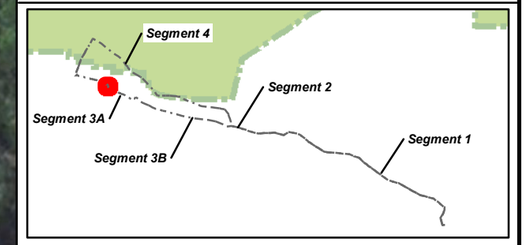
**Santa Barbara and Ventura Counties, CA**
**October 2014**






**CDFA-listed Noxious Weed Species Point**

- Puncture vine *(Tribulus terrestris)* (TRTE)

**Project Features**

- Existing Structure Locations
- Potential Structures To Be Removed
- Proposed 66 kV Alignment
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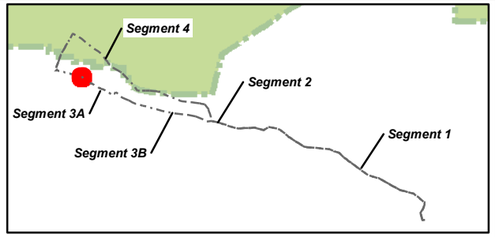


**CDFA-listed Noxious Weed Species Point**

- Puncture vine *(Tribulus terrestris)* (TRTE)

**CDFA-listed Noxious Weed Species**

- Puncture vine *(Tribulus terrestris)* (TRTE)

**Project Features**

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- Potential Structures To Be Removed
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**Habitat (BioResource Consultants 2012)**

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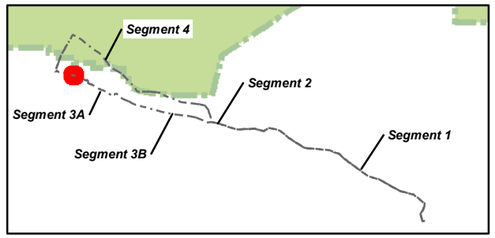


**CDFA-listed Noxious Weed Species Point**

Puncture vine *(Tribulus terrestris)* (TRTE)

**CDFA-listed Noxious Weed Species**

Puncture vine *(Tribulus terrestris)* (TRTE)

**Project Features**

Existing Structure Locations

Proposed 66 kV Alignment

Existing SubTrans 66 kV Lines

**Habitat (BioResource Consultants 2012)**

NAG: Agriculture

GANDA

Feet 0 100

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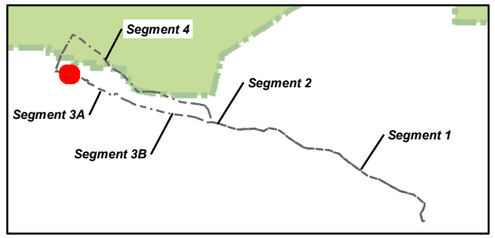


**CDFA-listed Noxious Weed Species Point**

- Puncture vine *(Tribulus terrestris)* (TRTE)

**CDFA-listed Noxious Weed Species**

- Puncture vine *(Tribulus terrestris)* (TRTE)

**Project Features**

- Existing Structure Locations
- Proposed 66 kV Alignment
- Existing SubTrans 66 kV Lines

**Habitat (BioResource Consultants 2012)**

- NAG: Agriculture
- ND: Developed

GANDA

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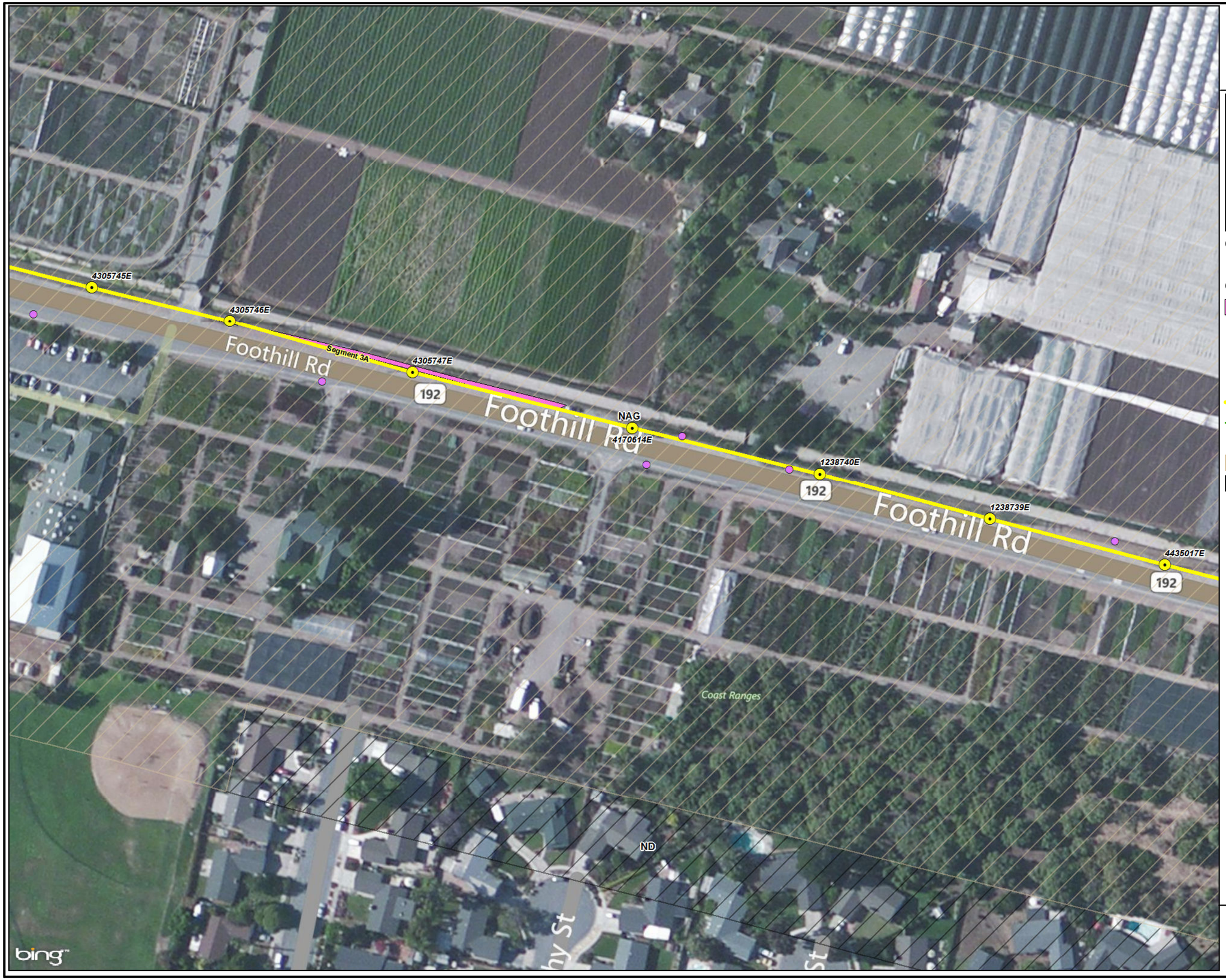


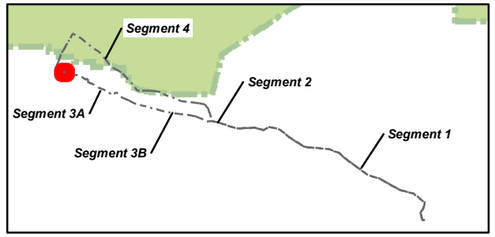


**CDFA-listed Noxious Weed Species Point**

Puncture vine *(Tribulus terrestris)* (TRTE)

**CDFA-listed Noxious Weed Species**

Puncture vine *(Tribulus terrestris)* (TRTE)

**Project Features**

Existing Structure Locations

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Existing SubTrans 66 kV Lines

**Habitat (BioResource Consultants 2012)**

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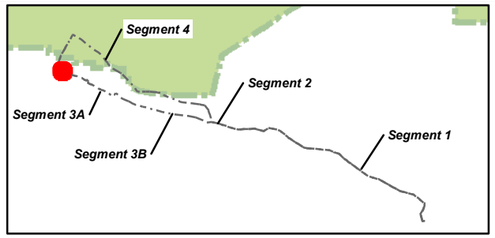


**CDFA-listed Noxious Weed Species Point**

- Puncture vine *(Tribulus terrestris)* (TRTE)

**Project Features**

- Existing Structure Locations
- Proposed 66 kV Alignment
- Existing SubTrans 66 kV Lines
- Construction Disturbance Areas (From TPD)

**Habitat (BioResource Consultants 2012)**

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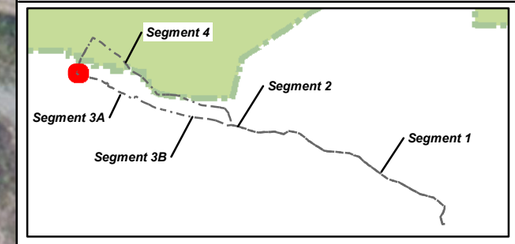


**CDFA-listed Noxious Weed Species Point**

- Puncture vine *(Tribulus terrestris)* (TRTE)

**CDFA-listed Noxious Weed Species**

- Puncture vine *(Tribulus terrestris)* (TRTE)

**Project Features**

- Substation Location
- Proposed Structure Locations
- Existing Structure Locations
- Potential Structures To Be Removed

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- Proposed 66 kV Alignment
- Proposed OPGW Alignment
- Existing SubTrans 66 kV Lines
- Access Roads Edge
- Disturbance Area Limit
- Construction Material Yards
- Construction Disturbance Areas (From TPD)

**Habitat (BioResource Consultants 2012)**

- NAG: Agriculture
- ND: Developed

GANDA

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Meters 0 50

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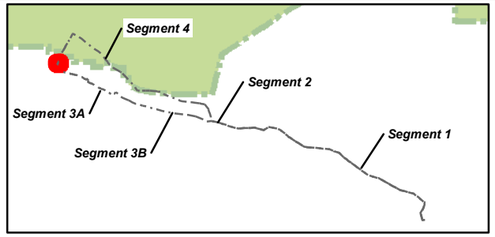


**CDFA-listed Noxious Weed Species Point**

- Puncture vine *(Tribulus terrestris)* (TRTE)

**Project Features**

- Proposed Structure Locations
- Potential Structures To Be Removed

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- Proposed 66 kV Alignment
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**Habitat (BioResource Consultants 2012)**

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GANDA

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# APPENDIX B
# VASCULAR PLANT INVENTORY

| Family | *Scientific Name* | Common Name |
|---|---|---|
| | **FERNS AND FERN-ALLIES** | |
| **Dryopteridaceae** | | |
| | *Dryopteris arguta* | coastal wood fern |
| **Equisetaceae** | | |
| | *Equisetum arvense* | scouring rush |
| | *Equisetum telmateia* ssp. *braunii* | giant horsetail |
| **Polypodiaceae** | | |
| | *Polypodium californicum* | California polypody |
| **Pteridaceae** | | |
| | *Adiantum jordanii* | California maiden-hair |
| | *Pellaea andromedifolia* | coffee fern |
| | *Pentagramma triangularis* ssp. *triangularis* | goldenback fern |
| | *Pteridium aquilinum* | western brackenfern |
| | **GYMNOSPERMS** | |
| **Cupressaceae** | | |
| | *Hesperocyparis macrocarpa*** | Monterey cypress |
| | **ANGIOSPERMS - Dicots** | |
| **Adoxaceae** | | |
| | *Sambucus nigra* ssp. *caerulea* | blue elderberry |
| **Aizoaceae** | | |
| | *Carpobrotus chilensis*** | sea fig |
| | *Carpobrotus edulis*** | Hottentot fig |
| **Amaranthaceae** | | |
| | *Amaranthus blitoides* | procumbent pigweed |
| | *Amaranthus deflexus** | large-fruit pigweed |
| | *Amaranthus retroflexus** | redroot pigweed |
| **Anacardiaceae** | | |
| | *Malosma laurina* | laurel sumac |
| | *Rhus integrifolia* | lemonade berry |
| | *Rhus ovata* | sugarbush |
| | *Schinus molle** | Peruvian pepper tree |
| | *Toxicodendron diversilobum* | poison oak |
| **Annonaceae** | | |
| | *Annona cherimola* | cherimoya |
| **Apiaceae** | | |
| | *Anthriscus caucalis* | bur-chervil |
| | *Apiastrum angustifolium* | mock parsley, wild celery |
| | *Conium maculatum** | poison hemlock |
| | *Daucus carota* | Queen Anne's lace |
| | *Daucus pusillus* | rattlesnake weed |
| | *Foeniculum vulgare** | wild fennel |
| | *Sanicula crassicaulis* | Pacific sanicle |
| | ***Sanicula hoffmannii*** | **Hoffman's snakeroot** |
| | *Tauschia hartwegii* | Hartweg's umbrellawort |
| | *Torilis arvensis** | hedge parsley |
| | *Torilis nodosa** | rattlesnake plant |
| | *Yabea microcarpa* | false carrot |
| **Apocynaceae** | | |
| | *Araujia sericifera** | bladder-flower |
| | *Asclepias fascicularis* | narrow-leaf milkweed |
| **Araliaceae** | | |
| | *Hedera helix** | English ivy |
| **Asparagaceae** | | |
| | *Asparagus asparagoides** | African asparagus fern |
| **Asteraceae** | | |
| | *Achillea millefolium* var. *millefolium* | white yarrow |
| | *Acourtia microcephala* | sacapellote |
| | *Ageratina adenophora* | sticky snakeroot |
| | *Agoseris grandiflora* | large-flowered agoseris |

| Family | *Scientific Name* | Common Name |
|---|---|---|
| | *Ambrosia psilostachya* var. *californica* | ragweed, western ambrosia |
| | *Artemisia californica* | California sagebrush |
| | *Artemisia douglasiana* | mugwort |
| | *Baccharis pilularis* | coyote brush |
| | ***Baccharis plummerae* ssp. *plummerae*** | **Plummer's baccharis** |
| | *Baccharis salicifolia* ssp. *salicifolia* | mulefat |
| | *Bidens pilosa** | common beggar-ticks |
| | *Brickellia californica* | California brickellbush |
| | *Carduus pycnocephalus* ssp. *pycnocephalus** | Italian thistle |
| | *Centaurea melitensis** | tocalote |
| | *Centaurea solstitialis** | yellow star-thistle |
| | *Cirsium vulgare** | bull thistle |
| | *Corethrogyne filaginifolia* | sandaster |
| | *Cynara cardunculus** | artichoke thistle |
| | *Deinandra fasciculata* | clustered tarplant |
| | *Delairea odorata** | Cape ivy |
| | *Dimorphotheca ecklonis*** | African daisy |
| | *Encelia californica* | California bush sunflower |
| | *Erigeron bonariensis** | flax-leaved horseweed |
| | *Erigeron canadensis* | horseweed |
| | *Erigeron foliosus* var. *foliosus* | slender fleabane |
| | *Eriophyllum confertiflorum* var. *confertiflorum* | golden yarrow |
| | *Glebionis coronaria** | garland, crown daisy |
| | *Hazardia squarrosa* var. *obtusa* | sawtooth goldenbush |
| | *Helminthotheca echioides** | bristly ox-tongue |
| | *Holocarpha heermannii* | Heermann's tarweed |
| | *Hypochaeris glabra** | smooth cat's-ear |
| | *Isocoma menziesii* var. *menziesii* | coast goldenbush |
| | *Lactuca serriola** | prickly wild lettuce |
| | *Lepidospartum squamatum* | scale-broom |
| | *Logfia filaginoides* | California cottonrose |
| | *Logfia gallica** | daggerleaf cottonrose |
| | *Madia gracilis* | slender tarplant |
| | *Malacothrix saxatilis* var. *tenuifolia* | tenuated cliff-aster |
| | *Matricaria discoidea** | rayless chamomile |
| | *Pseudognaphalium californicum* | California cudweed |
| | *Rafinesquia californica* | California chicory |
| | *Senecio vulgaris** | common groundsel |
| | *Silybum marianum** | milk thistle |
| | *Sonchus asper* ssp. *asper** | spiny sowthistle |
| | *Sonchus oleraceus** | common sowthistle |
| | *Stephanomeria cichoriacea* | chicoryleaf wire-lettuce |
| | *Symphyotrichum chilense* | California aster |
| | *Symphyotrichum greatae* | Greata's aster |
| | *Urospermum picroides** | prickly goldenfleece |
| | *Venegasia carpesioides* | canyon sunflower |
| | *Xanthium spinosum* | spiny cocklebur |
| | *Xanthium strumarium* | cocklebur |
| **Boraginaceae** | | |
| | *Cryptantha intermedia* var. *intermedia* | common cryptantha |
| | *Cryptantha muricata* | pointed cryptantha |
| | *Heliotropium curassavicum* var. *oculatum* | seaside heliotrope, alkali heliotrope |
| | *Emmenanthe penduliflora* var. *penduliflora* | whispering bells |
| | *Eucrypta chrysanthemifolia* | eucrypta |
| | *Pectocarya linearis* ssp. *ferocula* | slender pectocarya |
| | *Phacelia cicutaria* | caterpillar phacelia |
| | *Phacelia grandiflora* | giant-flowered phacelia |
| | *Phacelia viscida* var. *albiflora* | white phacelia |
| | *Pholistoma auritum* var. *auritum* | fiesta flower |
| **Brassicaceae** | | |
| | *Brassica nigra** | black mustard |
| | *Brassica tournefortii** | Saharan mustard |

| Family | *Scientific Name* | Common Name |
|---|---|---|
| | *Capsella bursa-pastoris** | shepherd's purse |
| | *Hirschfeldia incana** | wild mustard |
| | *Lepidium draba** | heart-podded hoary cress |
| | *Lobularia maritima** | sweet alyssum |
| | *Nasturtium officinale* | watercress |
| | *Raphanus sativus** | wild radish |
| | *Sisymbrium altissimum* * | tumble mustard |
| | *Sisymbrium irio** | London rocket |
| | *Sisymbrium orientale** | Oriental hedge mustard |
| **Cactaceae** | | |
| | *Cylindropuntia prolifera* | coast cholla |
| | *Hylocereus* sp.** | dragonfruit |
| | *Opuntia littoralis* | coast prickly pear |
| **Caprifoliaceae** | | |
| | *Lonicera hispidula* | pink honeysuckle |
| | *Lonicera interrupta* | chapparal honeysuckle |
| | *Lonicera subspicata* var. *denudata* | southern honeysuckle |
| | ***Lonicera subspicata* var. *subspicata*** | **Santa Barbara honeysuckle** |
| | *Symphoricarpos albus* var. *laevigatus* | common snowberry |
| | *Symphoricarpos mollis* | creeping snowberry |
| **Caryophyllaceae** | | |
| | *Polycarpon tetraphyllum* var. *tetraphyllum* | four-leaved allseed |
| | *Silene gallica** | windmill pink |
| | *Silene laciniata* ssp. *laciniata* | cardinal catchfly |
| | *Spergularia marina* | sand spurry |
| | *Stellaria media** | chickweed |
| **Chenopodiaceae** | | |
| | *Atriplex lentiformis* ssp. *breweri* | Brewer's big saltbush |
| | *Atriplex semibaccata** | Australian saltbush |
| | *Bassia hyssopifolia** | five horn bassia, fivehook bassia |
| | *Chenopodium album** | lamb's quarters |
| | *Chenopodium californicum* | California goosefoot, soaproot |
| | *Chenopodium murale** | nettle-leaf goosefoot |
| | *Emex spinosa** | devils thorn |
| | *Kochia scoparia** | summer cypress |
| | *Salsola tragus** | Russian thistle, tumbleweed |
| **Convolvulaceae** | | |
| | *Calystegia macrostegia* ssp. *cyclostegia* | coast morning-glory |
| | *Calystegia occidentalis* | western morning glory |
| | *Convolvulus arvensis** | bindweed |
| | *Cuscuta subinclusa* | canyon dodder |
| **Crassulaceae** | | |
| | *Dudleya lanceolata* | lanceleaf liveforever |
| **Cucurbitaceae** | | |
| | *Cucurbita foetidissima* | buffalo gourd, calabazilla |
| | *Marah macrocarpa* | California man-root |
| **Ericaceae** | | |
| | *Arctostaphylos glandulosa* ssp. *mollis* | Santa Ynez Mountains manzanita |
| | *Comarostaphylis diversifolia* ssp. *planifolia* | flat leaf summer holly |
| **Euphorbiaceae** | | |
| | *Croton setigerus* | turkey-mullein |
| | *Euphorbia albomarginata* | rattlesnake spurge |
| | *Euphorbia maculata** | spotted spurge |
| | *Euphorbia peplus** | petty spurge |
| | *Euphorbia prostrata** | prostrate sandmat |
| | *Ricinus communis** | castor bean |
| **Fabaceae** | | |
| | *Acmispon americanus* var. *americanus* | Spanish clover |
| | *Acmispon glaber* var. *glaber* | deerweed |
| | *Acmispon maritimus* var. *maritimus* | hosackia |
| | *Astragalus trichopodus* var. *phoxus* | antisell three-pod milkvetch |
| | *Lathyrus vestitus* var. *vestitus* | Pacific peavine |

| Family | *Scientific Name* | Common Name |
|---|---|---|
| | *Lotus corniculatus** | bird's-foot trefoil |
| | *Lupinus bicolor* | miniature lupine |
| | *Lupinus longifolius* | long-leaved bush lupine |
| | *Lupinus succulentus* | fleshy lupine |
| | *Medicago polymorpha** | burclover |
| | *Melilotus albus** | white sweetclover |
| | *Melilotus indicus** | sourclover |
| | *Robinia pseudoacacia** | black locust |
| | *Vicia sativa** | spring vetch |
| | *Vicia villosa** | hairy vetch |
| **Fagaceae** | | |
| | *Quercus agrifolia* var. *agrifolia* | coast live oak |
| | *Quercus berberidifolia* | scrub oak |
| | ***Quercus dumosa*** | **Nuttall's scrub oak** |
| **Geraniaceae** | | |
| | *Erodium botrys** | longbeak stork's bill |
| | *Erodium cicutarium** | redstem filaree |
| | *Erodium moschatum** | whitestem filaree |
| | *Geranium dissectum** | cutleaf geranium |
| | *Geranium robertianum** | Robert geranium |
| **Grossulariaceae** | | |
| | *Ribes amarum* | bitter gooseberry |
| | *Ribes californicum* | hillside gooseberry |
| | *Ribes malvaceum* var. *malvaceum* | chaparral currant |
| | *Ribes speciosum* | fucshia-flowered gooseberry |
| **Juglandaceae** | | |
| | ***Juglans californica*** | **Southern California black walnut** |
| **Lamiaceae** | | |
| | *Clinopodium douglasii* | yerba buena |
| | *Marrubium vulgare** | horehound |
| | *Salvia columbariae* | chia |
| | *Salvia leucophylla* | purple sage |
| | *Salvia mellifera* | black sage |
| | *Salvia spathacea* | hummingbird sage |
| | *Stachys bullata* | hedge nettle |
| **Lauraceae** | | |
| | *Persea americana*** | avocado |
| | *Umbellularia californica* | California bay laurel |
| **Malvaceae** | | |
| | *Lantana montevidensis** | trailing lantana |
| | *Malacothamnus fasciculatus* var. *fasciculatus* | chaparral mallow |
| | *Malva parviflora** | cheeseweed |
| | *Sidalcea malviflora* ssp. *californica* | California globe mallow |
| **Montiaceae** | | |
| | *Claytonia perfoliata* ssp. *perfoliata* | miner's lettuce |
| **Myrsinaceae** | | |
| | *Anagallis arvensis** | scarlet pimpernel |
| **Myrtaceae** | | |
| | *Eucalyptus globulus*** | blue gum |
| | *Psidium* sp. ** | guava |
| **Nyctaginaceae** | | |
| | *Mirabilis laevis* var. *crassifolia* | California four o'clock |
| **Oleaceae** | | |
| | *Fraxinus velutina* | velvet ash |
| **Onagraceae** | | |
| | *Clarkia unguiculata* | elegant clarkia |
| | *Epilobium canum* ssp. *canum* | California fuschia |
| | *Eremothera boothii* ssp. *decorticans* | Booth's sun cup |
| | *Oenothera sinuosa** | wavy-leaved guara |
| | *Oenothera xenogaura** | scented guara |
| **Orobanchaceae** | | |
| | *Castilleja affinis* ssp. *affinis* | coast paintbrush |

| Family | *Scientific Name* | Common Name |
|---|---|---|
| | *Cordylanthus rigidus* ssp. *Rigidus* | stiff-branch bird's beak |
| **Oxalidaceae** | | |
| | *Oxalis corniculata** | creeping wood sorrel |
| | *Oxalis pes-caprae** | Bermuda buttercup |
| **Paeoniaceae** | | |
| | *Paeonia californica* | California peony |
| **Papaveraceae** | | |
| | *Eschscholzia californica* | California poppy |
| | *Romneya coulteri*** | Matilija poppy |
| **Passifloraceae** | | |
| | *Passiflora* sp. ** | passionfruit |
| **Phrymaceae** | | |
| | *Mimulus aurantiacus* var. *aurantiacus* | sticky monkeyflower |
| **Plantaginaceae** | | |
| | *Collinsia heterophylla* | chinese houses |
| | *Keckiella cordifolia* | heart-leaved bush penstemon |
| | *Kickxia elatine** | sharp-leaf fluellin |
| | *Plantago erecta* | California plantain |
| | *Plantago lanceolata** | English plantain |
| **Platanaceae** | | |
| | *Platanus racemosa* | western sycamore |
| **Plumbaginaceae** | | |
| | *Limonium californicum* | western marsh-rosemary |
| **Polemoniaceae** | | |
| | *Navarretia mitracarpa* | mitrefruit pincushionplant |
| **Polygalaceae** | | |
| | ***Polygala cornuta* var. *fishiae*** | **Fish's milkwort** |
| **Polygonaceae** | | |
| | *Eriogonum cinereum* | coastal buckwheat |
| | *Eriogonum elongatum* var. *elongatum* | longstem buckwheat |
| | *Eriogonum fasciculatum* var. *foliolosum* | leafy California buckwheat |
| | *Eriogonum parvifolium* | seacliff buckwheat (**confirm ID**) |
| | *Polygonum aviculare* ssp. *depressum** | knotweed |
| | *Rumex crispus** | curly dock |
| | *Pterostegia drymarioides* | fairy bowties |
| **Portulacaceae** | | |
| | *Portulaca oleracea** | common purslane |
| **Ranunculaceae** | | |
| | *Clematis ligusticifolia* | virgin’s bower |
| **Rhamnaceae** | | |
| | *Ceanothus cuneatus* var. *cuneatus* | buckbrush |
| | *Ceanothus megacarpus* var. *megacarpus* | bigpod ceanothus |
| | *Ceanothus oliganthus* | hoary ceanothus |
| | *Ceanothus spinosus* | greenbark ceanothus |
| | *Ceanothus thyrsiflorus* var. *thyrsiflorus* | blueblossom |
| | *Rhamnus crocea* | redberry |
| | *Rhamnus ilicifolia* | hollyleaf redberry |
| **Rosaceae** | | |
| | *Adenostoma fasciculatum* | chamise |
| | *Cercocarpus betuloides* var. *betuloides* | birchleaf mountain mahogany |
| | *Heteromeles arbutifolia* | toyon |
| | *Holodiscus discolor* | oceanspray |
| | *Prunus ilicifolia* | hollyleaf cherry |
| | *Rosa californica* | California wildrose |
| | *Rubus ursinus* | Pacific blackberry |
| **Rubiaceae** | | |
| | *Galium angustifolium* ssp. *angustifolium* | chaparral bedstraw |
| | *Galium aparine* | common bedstraw |
| | *Galium porrigens* | climbing bedstraw |
| **Rutaceae** | | |
| | *Citrus x limon*** | lemon |
| | *Citrus x sinensis*** | orange |

| Family | *Scientific Name* | Common Name |
|---|---|---|
| **Salicaceae** | | |
| | *Populus fremontii* | Fremont's cottonwood |
| | *Populus trichocarpa* | black cottonwood |
| | *Salix exigua* | sandbar willow |
| | *Salix lasiolepis* | arroyo willow |
| | *Salix laevigata* | red willow |
| **Scrophulariaceae** | | |
| | *Scrophularia californica* | California figwort |
| **Simaroubaceae** | | |
| | *Ailanthus altissima** | Tree of heaven |
| **Solanaceae** | | |
| | *Datura wrightii* | jimson weed |
| | *Nicotiana glauca** | tree tobacco |
| | *Solanum americanum* | white nightshade |
| | *Solanum douglasii* | Douglas' nightshade |
| | *Solanum xanti* | chaparral nightshade |
| **Tamaricaceae** | | |
| | *Tamarix aphylla** | athel |
| | *Tamarix ramosissima** | saltcedar |
| **Urticaceae** | | |
| | *Urtica dioica* ssp. *holosericea* | hoary nettle |
| | *Urtica urens* | dwarf nettle |
| **Verbenaceae** | | |
| | *Lantana camara*** | lantana |
| | *Verbena lasiostachys* | western verbena |
| **Viscaceae** | | |
| | *Phoradendron leucarpum* ssp. *tomentosum* | Pacific mistletoe |
| **Vitaceae** | | |
| | *Vitis californica* | California wild grape |
| **Zygophyllaceae** | | |
| | *Tribulus terrestris** | puncture vine |
| | **ANGIOSPERMS- Monocots** | |
| **Agavaceae** | | |
| | *Chlorogalum pomeridianum* var. *pomeridianum* | soap plant |
| **Arecaceae** | | |
| | *Phoenix canariensis*** | Canary Island palm |
| **Asphodelaceae** | | |
| | *Asphodelus fistulosus** | onion weed |
| **Iridaceae** | | |
| | *Sisyrinchium bellum* | western blue-eyed-grass |
| **Juncaceae** | | |
| | *Juncus patens* | spreading rush |
| **Liliaceae** | | |
| | *Calochortus albus* | white globe lily |
| | ***Calochortus catalinae*** | **Catalina mariposa lily** |
| | *Calochortus clavatus* var. *pallidus* | club-haired mariposa lily |
| | ***Lilium humboldtii* ssp. *ocellatum*** | **ocellated Humboldt lily** |
| **Poaceae** | | |
| | *Avena barbata** | slender wild oats |
| | *Avena fatua** | wild oats |
| | *Avena sativa** | cultivated oat |
| | *Avena sterilis** | animated oat |
| | *Brachypodium distachyon** | shortfoot brachypodium |
| | *Bromus carinatus* | California brome |
| | *Bromus catharticus* var. *catharticus** | rescue grass |
| | *Bromus diandrus** | ripgut brome |
| | *Bromus hordeaceus** | soft chess |
| | *Bromus madritensis* ssp. *madritensis** | foxtail chess |
| | *Bromus madritensis* ssp. *rubens** | red brome |
| | *Bromus sterilis** | poverty brome |

| Family | *Scientific Name* | Common Name |
|---|---|---|
| | *Chloris virgata** | feather finger grass |
| | *Cynodon dactylon** | Bermuda grass |
| | *Distichlis spicata* | salt grass |
| | *Echinochloa crus-galli** | barnyard grass |
| | *Elymus condensatus* | giant wild-rye |
| | *Eragrostis* sp. | love grass |
| | *Festuca bromoides** | slender fescue |
| | *Festuca perennis** | Italian rye |
| | *Gastridium phleoides* | nit grass |
| | *Hordeum marinum* ssp. *gussoneanum** | Mediterranean barley |
| | *Hordeum murinum* ssp. *glaucum** | summer barley |
| | *Lamarckia aurea** | goldentop |
| | *Melica imperfecta* | California melic |
| | *Muhlenbergia microsperma* | littleseed muhly |
| | *Paspalum dilatatum** | dallis grass |
| | *Pennisetum setaceum** | fountaingrass |
| | *Phalaris aquatica** | harding grass |
| | *Schismus arabicus** | Arabian grass |
| | *Stipa cernua* | nodding needle grass |
| | *Stipa lepida* | foothill needle grass |
| | *Stipa miliaceum** | smilo grass |
| | *Stipa pulchra* | purple needle grass |
| | *Triticum aestivum** | wheat |
| **Strelitziaceae** | | |
| | *Strelitzia reginae*** | bird-of-paradise |
| **Themidaceae** | | |
| | *Bloomeria crocea* var. *crocea* | goldenstars |
| | *Dichelostemma capitatum* ssp. *capitatum* | blue dicks |

Notes: Scientific nomenclature follows *The Jepson Manual: Vascular Plants of California, Second Edition* , Baldwin et al. (2012).
Species in bold type are listed as rare, threatened, or endangered by the California Native Plant Society (CNPS 2014).
An "*" indicates non-native species which have become naturalized or persist without cultivation.
An "**" indicates non-native species which been planted as landscaping or is an agricultural crop plant.

# APPENDIX C
# SITE PHOTOGRAPHS

**Photograph 1.** View of bladder-flower vines engulfing coastal sage scrub habitat. Photograph taken in Segment 1, July 2014.

**Photographs 2 and 3.** Representative view of bladder-flower in bloom and in fruit. Photographs taken in Segment 1, July 2014.

**Photograph 4.** View of yellow star-thistle near Construct 84. Photograph taken in Segment 4, July 2014.

**Photograph 5.** View of yellow star-thistle infestation throughout lay down area adjacent to Construct 84. Photograph taken in Segment 4, July 2014.

# APPENDIX D
# LPNF INVASIVE PLANT POPULATION DATA

# Invasive Plant Species Population Data for Los Padres National Forest Jurisdictional Areas
## Santa Barbara County Reliability Project, Santa Barbara and Ventura Counties, California

| Infestation ID | Date | Project Name | Ownership | Proclaimed Forest | Examiner | Target Species Code | Life form | Scientific Name | Common Name | % Infested | Infested Area (acres) | Infested Area (Sq. Ft.) | Density | Density UOM | Population Size | Count Type | Count UOM | Lifestage | Distribution | Phenology | Canopy Cover Set | Cover Code | Canopy Cover % | Horizontal Distance to Water | Vertical Distance to Water | Associated Species | Elevation (meters) | Aspect-Cardinal Dir. | % Slope | Slope Position | Soil Texture | Plant Community | Dominant Codominant Species | Region | National Forest | District | State | County | USGS Quad Number | USGS Quad Name | Forest Quad Number | Forest Quad Name | Meridian | Township/ Range | Section | Easting | Northing |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R5LOSPADRESSB_SBCRP_CAPY2_001 | 7/14/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Mark Bibbo | CAPY2 | FB | Carduus pycnocephalus | Italian thistle | 20 | 0.0044 | 193.79 | 2 | Square feet | 5 | Actual | Individuals | N/A | Scattered even | F3 | Daubenmire | 2 | 5.1-25% | N/A | N/A | Ricinus communis , Nicotiana glauca, Bromus diandrus | 175 | s | 25 | BS | CL | Agriculture | Persea americana | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 23 | 273151.329 | 3810781.925 |
| R5LOSPADRESSB_SBCRP_CAPY2_002 | 7/14/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Mark Bibbo | CAPY2 | FB | Carduus pycnocephalus | Italian thistle | 2 | 0.0029 | 124.76 | 2 | Square feet | 5 | Actual | Individuals | N/A | Clumpy | F3 | Daubenmire | 1 | 1.1-5% | N/A | N/A | Calystegia sp., Malva parviflora | 172 | s-sw | 30 | BS | CL | Agriculture | Persea americana | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 23 | 273225.1368 | 3810431.943 |
| R5LOSPADRESSB_SBCRP_CAPY2_003 | 7/14/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Molly Graber | CAPY2 | FB | Carduus pycnocephalus | Italian thistle | 1 | 0.0003 | 11.15 | 1 | Square feet | 4 | Actual | Plants | N/A | Scattered patchy | F4 | Daubenmire | T | 0-1% | N/A | N/A | Bromus diandrus, Foeniculum vulgare | 177 | WSW | 60 | SU | CL | Agriculture | Persea americana | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 23 | 273219.998 | 3810404.625 |
| R5LOSPADRESSB_SBCRP_CAPY2_004 | 7/15/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Mark Bibbo | CAPY2 | FB | Carduus pycnocephalus | Italian thistle | 1 | 0.0019 | 84.77 | 1 | Square feet | 6 | Actual | Plants | N/A | Scattered patchy | F4 | Daubenmire | 1 | 1.1-5% | N/A | N/A | Hirschfeldia incana, Malacothrix saxatilis var. tenuifolia, Bromus madritensis | 161 | s-sw | 10 | BS | CL | Roadside; Lemonade berry Chaparral | Rhus integrifolia, Artemisia californica | 5 | Los Padres | Santa Barbara | CA | Ventura | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 25 | 275087.5176 | 3809038.837 |
| R5LOSPADRESSB_SBCRP_CAPY2_005 | 7/23/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Jessica Peak | CAPY2 | FB | Carduus pycnocephalus | Italian thistle | 1 | 0.0008 | 34.94 | 0.5 | Square feet | 10 | Actual | Plants | N/A | Clumpy | F3 | Daubenmire | T | 0-1% | N/A | N/A | Hirschfeldia incana, Bromus madritensis, Avena barbata, Bromus diandrus | 167 | ssw | 5-10 | SH | CL | Roadside; Lemonade berry Chaparral | Rhus integrifolia, Ceanothus cuneatus | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 25 | 274448.6639 | 3809597.983 |
| R5LOSPADRESSB_SBCRP_CEME2_001 | 7/14/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Mark Bibbo | CEME2 | FB | Centaurea melitensis | tocalote | 2 | 0.0201 | 873.40 | 4 | Square feet | 45 | Estimate | Individuals | N/A | Clumpy | F4 | Daubenmire | 1 | 1.1-5% | N/A | N/A | Bromus madritensis, Isocoma menzsiesii | 184 | s | 10 | BS | CL | Roadside; Greenbark Ceanothus Chaparral | Rhus ovata, Ceanothus cuneatus | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 23 | 273365.4049 | 3810486.869 |
| R5LOSPADRESSB_SBCRP_CEME2_002 | 7/14/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Molly Graber | CEME2 | FB | Centaurea melitensis | tocalote | 1 | 0.0287 | 1251.72 | 1 | Square feet | 4 | Actual | Plants | N/A | Linear | F4 | Daubenmire | T | 0-1% | N/A | N/A | Salsola tragus, Bromus diandrus, Bromus madritensis | 242 | S | 20 | SU | L | Roadside; Greenbark Ceanothus Chaparral | Rhus integrifolia, Ceanothus cuneatus, Eriogonum fasciculatum | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 23 | 273316.0689 | 3810541.844 |
| R5LOSPADRESSB_SBCRP_CEME2_003 | 7/14/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Mark Bibbo | CEME2 | FB | Centaurea melitensis | tocalote | 2 | 0.0084 | 364.37 | 2 | Square feet | 100 | Estimate | Individuals | N/A | Clumpy | F4 | Daubenmire | 1 | 1.1-5% | N/A | N/A | Bromus madritensis, Ricinus communis, Delairea odorata | 180 | s | 30 | BS | CL | Roadside | Sambucus nigra | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 23 | 273106.7285 | 3810882.486 |
| R5LOSPADRESSB_SBCRP_CEME2_004 | 7/14/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Molly Graber | CEME2 | FB | Centaurea melitensis | tocalote | 1 | 0.0023 | 99.38 | 3 | Square feet | 40 | Estimate | Plants | N/A | Linear | F4 | Daubenmire | T | 0-1% | N/A | N/A | Salsola tragus, Brassica nigra | 285 | WNW | 45 | SU | L | Roadside; Mixed Ceanothus Chaparral | Eriogonum fasciculatum, Artemisia californica, Adenostoma fasciculatum | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 23 | 273128.3695 | 3810853.03 |
| R5LOSPADRESSB_SBCRP_CEME2_005 | 7/14/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Molly Graber | CEME2 | FB | Centaurea melitensis | tocalote | 1 | 0.0017 | 75.79 | 1 | Square feet | 10 | Estimate | Plants | N/A | Linear | F4 | Daubenmire | T | 0-1% | N/A | N/A | Salsola tragus, Brassica nigra | 285 | WNW | 45 | SU | L | Roadside; Mixed Ceanothus Chaparral | Eriogonum fasciculatum, Artemisia californica, Adenostoma fasciculatum | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 23 | 273161.4668 | 3810696.823 |
| R5LOSPADRESSB_SBCRP_CEME2_006 | 7/14/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Molly Graber | CEME2 | FB | Centaurea melitensis | tocalote | 1 | 0.0246 | 1071.27 | 1 | Square feet | 20 | Estimate | Plants | N/A | Linear | F4 | Daubenmire | T | 0-1% | N/A | N/A | Brassica nigra | 285 | W | 45 | BS | L | Agriculture | Rhus integrifolia, Ceanothus cuneatus | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 23 | 273200.6238 | 3810677.525 |
| R5LOSPADRESSB_SBCRP_CEME2_007 | 7/14/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Molly Graber | CEME2 | FB | Centaurea melitensis | tocalote | 10 | 0.0050 | 218.70 | 3 | Square feet | 300 | Estimate | Plants | N/A | Scattered even | F4 | Daubenmire | 1 | 1.1-5% | N/A | N/A | Brassica nigra, Acmispon glaber | 249 | SSW | 15 | SU | L | Agriculture | Rhus integrifolia, Ceanothus cuneatus | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 23 | 273152.3359 | 3810681.539 |
| R5LOSPADRESSB_SBCRP_CEME2_008 | 7/14/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Molly Graber | CEME2 | FB | Centaurea melitensis | tocalote | 30 | 0.0024 | 103.07 | 10 | Square feet | 300 | Estimate | Plants | N/A | Scattered even | F4 | Daubenmire | 2 | 5.1-25% | N/A | N/A | Brassica nigra, Acmispon glaber | 249 | W | 20 | SU | L | Agriculture | Rhus integrifolia, Ceanothus cuneatus, Malacothamnus fasciculatus | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 23 | 273124.9337 | 3810699.307 |
| R5LOSPADRESSB_SBCRP_CEME2_009 | 7/14/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Molly Graber | CEME2 | FB | Centaurea melitensis | tocalote | 1 | 0.0080 | 348.77 | 1 | Square feet | 25 | Estimate | Plants | N/A | Linear | F4 | Daubenmire | T | 0-1% | N/A | N/A | Brassica nigra, Acmispon glaber | 239 | NW | 45 | SU | L | Agriculture | Ceanothus cuneatus, Artemisia californica | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 23 | 273129.1706 | 3810669.908 |
| R5LOSPADRESSB_SBCRP_CEME2_010 | 7/14/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Molly Graber | CEME2 | FB | Centaurea melitensis | tocalote | 1 | 0.0004 | 15.56 | 1 | Square feet | 150 | Estimate | Plants | N/A | Linear | F4 | Daubenmire | T | 0-1% | N/A | N/A | Brassica nigra, Acmispon glaber | 239 | S | 30 | SU | L | Agriculture | Ceanothus cuneatus, Artemisia californica, Eriogonum fasciculatum | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 23 | 273158.8059 | 3810658.251 |
| R5LOSPADRESSB_SBCRP_CEME2_011 | 7/14/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Molly Graber | CEME2 | FB | Centaurea melitensis | tocalote | 20 | 0.0931 | 4054.10 | 5 | Square feet | 250 | Estimate | Plants | N/A | Linear | F4 | Daubenmire | 1 | 1.1-5% | N/A | N/A | Brassica nigra, Acmispon glaber | 239 | SSW | 30 | SU | L | Agriculture | Sambucus nigra, Artemisia californica, Eriogonum fasciculatum | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 23 | 273263.0085 | 3810682.607 |
| R5LOSPADRESSB_SBCRP_CEME2_012 | 7/14/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Molly Graber | CEME2 | FB | Centaurea melitensis | tocalote | 15 | 0.2835 | 12350.52 | 5 | Square feet | 1700 | Estimate | Plants | N/A | Linear | F4 | Daubenmire | 1 | 1.1-5% | N/A | N/A | Hirschfeldia incana, Bromus madritensis | 242 | SSW | 70 | SU | L | Roadside; Greenbark Ceanothus Chaparral | Sambucus nigra, Artemisia californica, Eriogonum fasciculatum | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 23 | 273434.9295 | 3810560.824 |
| R5LOSPADRESSB_SBCRP_CEME2_013 | 7/14/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Molly Graber | CEME2 | FB | Centaurea melitensis | tocalote | 2 | 0.2622 | 11420.85 | 220 | Square feet | 1000 | Estimate | Plants | N/A | Linear | F4 | Daubenmire | 1 | 1.1-5% | N/A | N/A | Salsola tragus, Bromus diandrus, Bromus madritensis | 242 | S | 45 | SU | L | Roadside; Greenbark Ceanothus Chaparral | Sambucus nigra, Artemisia californica, Eriogonum fasciculatum | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 23 | 273300.4659 | 3810610.563 |
| R5LOSPADRESSB_SBCRP_CEME2_014 | 7/14/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Molly Graber | CEME2 | FB | Centaurea melitensis | tocalote | 1 | 0.0109 | 473.90 | 3 | Square feet | 1100 | Estimate | Plants | N/A | Linear | F4 | Daubenmire | 1 | 1.1-5% | N/A | N/A | Salsola tragus, Bromus diandrus, Bromus madritensis | 242 | S | 30 | SU | L | Roadside; Greenbark Ceanothus Chaparral | Rhus integrifolia, Ceanothus cuneatus, Eriogonum fasciculatum | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 23 | 273499.5485 | 3810503.959 |
| R5LOSPADRESSB_SBCRP_CEME2_015 | 7/14/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Molly Graber | CEME2 | FB | Centaurea melitensis | tocalote | 2 | 0.0431 | 1876.59 | 4 | Square feet | 400 | Estimate | Plants | N/A | Linear | F4 | Daubenmire | T | 0-1% | N/A | N/A | Salsola tragus, Bromus diandrus, Hirschfeldia incana | 242 | NNW | 60 | SU | L | Roadside; Greenbark Ceanothus Chaparral | Rhus integrifolia, Ceanothus cuneatus, Malosoma laurina | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 23 | 273457.2179 | 3810451.512 |
| R5LOSPADRESSB_SBCRP_CEME2_016 | 7/14/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Molly Graber | CEME2 | FB | Centaurea melitensis | tocalote | 1 | 0.0169 | 735.13 | 3 | Square feet | 110 | Estimate | Plants | N/A | Linear | F4 | Daubenmire | T | 0-1% | N/A | N/A | Bromus diandrus, Hirschfeldia incana | 181 | N | 5 | SU | CL | Roadside; Greenbark Ceanothus Chaparral | Eriogonum parviflorum, Ceanothus cuneatus, Artemisia californica | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 23 | 273254.3194 | 3810484.009 |
| R5LOSPADRESSB_SBCRP_CEME2_017 | 7/15/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Mark Bibbo | CEME2 | FB | Centaurea melitensis | tocalote | 2 | 0.0326 | 1422.14 | 1 | Square feet | 150 | Estimate | Plants | N/A | Scattered patchy | F4 | Daubenmire | 1 | 1.1-5% | N/A | N/A | Bromus diandrus, Hirschfeldia incana, Bromus madritensis | 161 | s-se | 10 | BS | CL | Roadside; Lemonade berry Chaparral | Rhus integrifolia, Artemisia californica | 5 | Los Padres | Santa Barbara | CA | Ventura | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 30 | 276122.1329 | 3808537.355 |
| R5LOSPADRESSB_SBCRP_CEME2_018 | 7/15/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Eliza Shepard | CEME2 | FB | Centaurea melitensis | tocalote | 1 | 0.0357 | 1557.15 | 1 | Square feet | 200 | Estimate | Plants | N/A | Scattered patchy | F4 | Daubenmire | T | 0-1% | N/A | N/A | Rhus integrifolia, Bromus diandrus, Brassica nigra | 161 | sw | 40 | SH | L | Roadside; Lemonade berry Chaparral | Rhus ovata, Baccharis pilularis | 5 | Los Padres | Santa Barbara | CA | Ventura | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 30 | 276443.3087 | 3808488.614 |
| R5LOSPADRESSB_SBCRP_CEME2_019 | 7/15/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Molly Graber | CEME2 | FB | Centaurea melitensis | tocalote | 1 | 0.0026 | 114.43 | 5 | Square feet | 1100 | Estimate | Plants | N/A | Linear | F4 | Daubenmire | T | 0-1% | 415 | N/A | Bromus diandrus, Hirschfeldia incana, Malva parviflora | 174 | E | 60 | SH | CL | Agriculture | Rhus integrifolia, Sambucus nigra, Persea americana | 5 | Los Padres | Santa Barbara | CA | Ventura | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 30 | 276425.7967 | 3808498.376 |
| R5LOSPADRESSB_SBCRP_CEME2_020 | 7/15/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Molly Graber | CEME2 | FB | Centaurea melitensis | tocalote | 1 | 0.0081 | 354.39 | 5 | Square feet | 1500 | Estimate | Plants | N/A | Linear | F4 | Daubenmire | T | 0-1% | 450 | N/A | Bromus madritensis, Erodium cicutarium | 187 | E | 25 | SH | CL | Roadside; Mixed Ceanothus Chaparral | Ceanothus cuneatus, Malosoma laurina | 5 | Los Padres | Santa Barbara | CA | Ventura | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 30 | 276417.3157 | 3808504.26 |
| R5LOSPADRESSB_SBCRP_CEME2_021 | 7/15/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Molly Graber | CEME2 | FB | Centaurea melitensis | tocalote | 1 | 0.0374 | 1628.19 | 1 | Square feet | 10 | Actual | Plants | N/A | Scattered even | F4 | Daubenmire | T | 0-1% | 450 | N/A | Astragalus trichopodus, Acmispon glaber | 192 | E | 50 | SU | CL | Roadside; Mixed Ceanothus Chaparral | Ceanothus cuneatus, Malosoma laurina | 5 | Los Padres | Santa Barbara | CA | Ventura | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 25 | 275087.7045 | 3808947.188 |
| R5LOSPADRESSB_SBCRP_CEME2_022 | 7/15/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Molly Graber | CEME2 | FB | Centaurea melitensis | tocalote | 10 | 0.0085 | 369.74 | 2 | Square feet | 250 | Estimate | Plants | N/A | Scattered even | F4 | Daubenmire | T | 0-1% | 450 | N/A | Erodium cicutarium | 189 | S | 50 | SH | CL | Roadside; Mixed Ceanothus Chaparral | Ceanothus cuneatus, Malosoma laurina, Juglans californica | 5 | Los Padres | Santa Barbara | CA | Ventura | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 25 | 275113.952 | 3808988.713 |
| R5LOSPADRESSB_SBCRP_CEME2_023 | 7/23/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Jessica Peak | CEME2 | FB | Centaurea melitensis | tocalote | 15 | 0.0008 | 34.28 | 1 | Square feet | 50 | Estimate | Plants | N/A | Scattered patchy | F3 | Daubenmire | 2 | 5.1-25% | N/A | N/A | Bromus diandrus, Hirschfeldia incana, Marrubium vulgare | 180 | ssw | 15-20 | BS | CL | Roadside; Lemonade berry Chaparral | Rhus integrifolia, Delairea odorata | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 25 | 274543.0272 | 3809613.622 |

# Invasive Plant Species Population Data for Los Padres National Forest Jurisdictional Areas
## Santa Barbara County Reliability Project, Santa Barbara and Ventura Counties, California

| Infestation ID | Date | Project Name | Ownership | Proclaimed Forest | Examiner | Target Species Code | Life form | Scientific Name | Common Name | % Infested | Infested Area (acres) | Infested Area (Sq. ft.) | Density | Density UOM | Population Size | Count Type | Count UOM | Lifestage | Distribution | Phenology | Canopy Cover Set | Cover Code | Canopy Cover % | Horizontal Distance to Water | Vertical Distance to Water | Associated Species | Elevation (meters) | Aspect-Cardinal Dir. | % Slope | Slope Position | Soil Texture | Plant Community | Dominant Codominant Species | Region | National Forest | District | State | County | USGS Quad Number | USGS Quad Name | Forest Quad Number | Forest Quad Name | Meridian | Township/ Range | Section | Easting | Northing |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R5LOSPADRESSB_SBCRP_CEME2_024 | 7/23/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Jessica Peak | CEME2 | FB | Centaurea melitensis | tocalote | 5 | 0.0809 | 3523.01 | 0.5 | Square feet | 300 | Estimate | Plants | N/A | Scattered patchy | F3 | Daubenmire | 1 | 1.1-5% | N/A | N/A | Avena barbata, Bromus diandrus, Hirschfeldia incana, Bromus madritensis | 184 | ssw | 5-10 | SH | CL | Roadside; Lemonade berry Chaparral | Rhus integrifolia, Ceanothus cuneatus, Eriogonum parviflorum | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 25 | 274467.2865 | 3809601.199 |
| R5LOSPADRESSB_SBCRP_COMA2_001 | 7/14/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Jessica Peak | COMA2 | FB | Conium maculatum | poison hemlock | <1 | 0.0005 | 20.23 | 0.25 | Square feet | 3 | Actual | Plants | N/A | Scattered patchy | F1 | Daubenmire | T | 0-1% | N/A | N/A | Bromus diandrus, Torillis arvensis, Stipa miliaceum | 212 | SW | 1-5 | SH | CL | Agriculture | Atremisia californica, Persea americana, Hazardia squarrosa | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 23 | 273209.347 | 3810549.64 |
| R5LOSPADRESSB_SBCRP_DEOR_001 | 7/14/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Molly Graber | DEOR | VI | Delairea odorata | Cape ivy | 75 | 0.0008 | 33.50 | 50 | Square feet | 5000 | Estimate | Stems | N/A | Scattered even | F1 | Daubenmire | 4 | 50.1-75% | N/A | N/A | Torillis arvensis, Brassica nigra | 285 | WNW | 45 | BS | L | Agriculture | Persea americana | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 23 | 273358.4658 | 3810589.141 |
| R5LOSPADRESSB_SBCRP_DEOR_002 | 7/14/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Mark Bibbo | DEOR | VI | Delairea odorata | Cape ivy | 30 | 0.0044 | 193.59 | 10 | Square feet | 40 | Estimate | Stems | N/A | Scattered patchy | F2 | Daubenmire | 3 | 25.1-50% | N/A | N/A | Eriogonum parviflorum, Ceanothus cuneatus | 214 | w-sw | 15 | TS | CL | Roadside; Greenbark Ceanothus Chaparral | Eriogonum parviflorum, Malacothamnus fasciculatus | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 23 | 273261.8161 | 3810648.282 |
| R5LOSPADRESSB_SBCRP_DEOR_003 | 7/14/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Mark Bibbo | DEOR | VI | Delairea odorata | Cape ivy | 50 | 0.0051 | 224.11 | 20 | Square feet | 200 | Estimate | Stems | N/A | Scattered even | F1 | Daubenmire | 3 | 25.1-50% | N/A | N/A | Salsola tragus, Bromus madritensis, Hirschfeldia incana | 215 | s | 45 | BS | CL | Roadside; Greenbark Ceanothus Chaparral | Malacothamnus fasciculatus, Sambucus nigra | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 23 | 273450.0064 | 3810464.705 |
| R5LOSPADRESSB_SBCRP_DEOR_004 | 7/14/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Mark Bibbo | DEOR | VI | Delairea odorata | Cape ivy | 75 | 0.0088 | 383.48 | 25 | Square feet | 50 | Estimate | Stems | N/A | Scattered patchy | F1 | Daubenmire | 4 | 50.1-75% | N/A | N/A | Nicotiana glauca, Bromus madritensis | 184 | s | 30 | BS | CL | Roadside; Greenbark Ceanothus Chaparral | Ceanothus cuneatus | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 23 | 273300.4524 | 3810550.814 |
| R5LOSPADRESSB_SBCRP_DEOR_005 | 7/14/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Mark Bibbo | DEOR | VI | Delairea odorata | Cape ivy | 80 | 0.1502 | 6541.71 | 20 | Square feet | 200 | Estimate | Stems | N/A | Scattered even | F2 | Daubenmire | 5 | 75.1-95% | N/A | N/A | Sambucus nigra, Malosoma laurina, Ricinus communis | 180 | s-se | 20 | BS | CL | Roadside; Greenbark Ceanothus Chaparral | Juglans californica, Elymus condensatus, Eriogonum parviflorum | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 23 | 273150.3766 | 3810740.465 |
| R5LOSPADRESSB_SBCRP_DEOR_006 | 7/15/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Mark Bibbo | DEOR | VI | Delairea odorata | Cape ivy | 60 | 0.0043 | 187.08 | 12 | Square feet | 10000+ | Estimate | Stems | N/A | Scattered patchy | F4 | Daubenmire | 4 | 50.1-75% | N/A | N/A | Rhus integrifolia, Artemisia californica | 161 | s-sw | 10 | BS | CL | Roadside; Lemonade berry Chaparral | Rhus integrifolia, Artemisia californica | 5 | Los Padres | Santa Barbara | CA | Ventura | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 25 | 275085.2966 | 3809040.886 |
| R5LOSPADRESSB_SBCRP_DEOR_007 | 7/15/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Jessica Peak | DEOR | VI | Delairea odorata | Cape ivy | 40 | 0.0988 | 4303.72 | 25 | Square feet | 350+ | Estimate | Stems | N/A | Clumpy | F1 | Daubenmire | 4 | 50.1-75% | 420ft | N/A | Sambucus nigra, Rhus integrifolia | 148 | se | 10 | BS | CL | Agriculture | Sambucus nigra, Rhus integrifolia, Juglans californica | 5 | Los Padres | Santa Barbara | CA | Ventura | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 30 | 276119.5457 | 3808538.153 |
| R5LOSPADRESSB_SBCRP_DEOR_008 | 7/15/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Jessica Peak | DEOR | VI | Delairea odorata | Cape ivy | 25 | 0.0160 | 698.21 | 5 | Square feet | 20 | Estimate | Stems | N/A | Clumpy | F1 | Daubenmire | 3 | 25.1-50% | 450ft | N/A | Rhamnus crocea, Ceanothus oliganthus | 176 | s | 10 | BS | CL | Roadside; Mixed Ceanothus Chaparral | Rhamnus crocea, Ceanothus oliganthus, Juglans californica | 5 | Los Padres | Santa Barbara | CA | Ventura | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 30 | 276552.4382 | 3808457.504 |
| R5LOSPADRESSB_SBCRP_DEOR_009 | 7/23/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Eliza Shepard | DEOR | FB | Delairea odorata | Cape ivy | 10 | 0.1142 | 4975.04 | | Square feet | +5000 | Estimate | Stems | N/A | Scattered patchy | F1 | Daubenmire | 2 | 5.1-25% | N/A | N/A | Rhus ovata, Quercus agrifolia | 178 | ssw | 30 | BS | C | Roadside; Lemonade berry Chaparral | Rhus ovata, Ceanothus cuneatus | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 25 | 274541.4472 | 3809610.836 |
| R5LOSPADRESSB_SBCRP_FOVU_001 | 7/14/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Mark Bibbo | FOVU | FB | Foeniculum vulgare | fennel | 2 | 0.0193 | 839.23 | 1 | Square feet | 20 | Actual | Individuals | N/A | Clumpy | F4 | Daubenmire | T | 0-1% | N/A | N/A | Bromus diandrus, Sonchus oleraceus, Hirschfeldia incana | 175 | sw | 45 | BS | CL | Agriculture | Persea americana | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 23 | 273141.7845 | 3810710.597 |
| R5LOSPADRESSB_SBCRP_FOVU_002 | 7/14/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Mark Bibbo | FOVU | FB | Foeniculum vulgare | fennel | 1 | 0.0022 | 93.69 | 1 | Square feet | 5 | Actual | Individuals | N/A | Scattered patchy | F4 | Daubenmire | T | 0-1% | N/A | N/A | Bromus madritensis, Stipa miliaceum | 175 | sw | 0 | TS | CL | Roadside; Greenbark Ceanothus Chaparral | Malacothamnus fasciculatus, Brickellia californica, Ceanothus cuneatus | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 23 | 273248.5835 | 3810715.014 |
| R5LOSPADRESSB_SBCRP_FOVU_003 | 7/14/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Mark Bibbo | FOVU | FB | Foeniculum vulgare | fennel | 15 | 0.0151 | 657.44 | 1 | Square feet | 17 | Actual | Individuals | N/A | Scattered even | F3 | Daubenmire | 2 | 5.1-25% | N/A | N/A | Stipa miliaceum | 175 | e | 20 | BS | CL | Agriculture | Persea americana | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 23 | 273411.3952 | 3810611.369 |
| R5LOSPADRESSB_SBCRP_FOVU_004 | 7/14/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Mark Bibbo | FOVU | FB | Foeniculum vulgare | fennel | 1 | 0.0136 | 590.38 | 1 | Square feet | 7 | Actual | Plants | N/A | Scattered patchy | F4 | Daubenmire | T | 0-1% | N/A | N/A | Salsola tragus, Bromus diandrus | 239 | s | 0 | BS | CL | Roadside; Greenbark Ceanothus Chaparral | Eriogonum fasciculatum, Malacothamnus fasciculatus | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 23 | 273489.2055 | 3810513.647 |
| R5LOSPADRESSB_SBCRP_FOVU_005 | 7/14/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Jessica Peak | FOVU | FB | Foeniculum vulgare | fennel | 1 | 0.0002 | 8.79 | 0.5 | Square feet | 57 | Actual | Plants | N/A | Linear | F2 | Daubenmire | T | 0-1% | N/A | N/A | Stipa miliaceum, Torillis arvensis, Bromus diandrus | 205 | NW | 5-10 | SH | CL | Agriculture | Rhus integrifolia, Persea americana | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 23 | 273279.6874 | 3810637.843 |
| R5LOSPADRESSB_SBCRP_FOVU_006 | 7/14/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Molly Graber | FOVU | FB | Foeniculum vulgare | fennel | 1 | 0.0040 | 175.11 | 1 | Square feet | 4 | Actual | Plants | N/A | Linear | F4 | Daubenmire | 1 | 1.1-5% | N/A | N/A | Salsola tragus, Bromus diandrus, Bromus madritensis | 242 | S | 0 | SU | L | Roadside; Greenbark Ceanothus Chaparral | Rhus integrifolia, Ceanothus cuneatus, Eriogonum fasciculatum | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 23 | 273209.9826 | 3810554.167 |
| R5LOSPADRESSB_SBCRP_FOVU_007 | 7/14/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Mark Bibbo | FOVU | FB | Foeniculum vulgare | fennel | 1 | 0.0392 | 1705.52 | 1 | Square feet | 6 | Actual | Plants | N/A | Scattered patchy | F3 | Daubenmire | T | 0-1% | N/A | N/A | Heterotheca grandiflora, Iscoma menziesii | 210 | s | 0 | SH | CL | Roadside; Greenbark Ceanothus Chaparral | Salvia mellifera, Eriogonum parviflorum | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 23 | 273232.6044 | 3810448.244 |
| R5LOSPADRESSB_SBCRP_FOVU_008 | 7/14/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Mark Bibbo | FOVU | FB | Foeniculum vulgare | fennel | 25 | 0.0096 | 416.00 | 1 | Square feet | 1 | Actual | Plants | N/A | Clumpy | F2 | Daubenmire | 2 | 5.1-25% | N/A | N/A | Eriogonum parviflorum, Ceanothus cuneatus | 215 | sw | 30 | TS | CL | Roadside; Greenbark Ceanothus Chaparral | Ceanothus cuneatus | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 23 | 273215.5434 | 3810409.663 |
| R5LOSPADRESSB_SBCRP_FOVU_009 | 7/14/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Molly Graber | FOVU | FB | Foeniculum vulgare | fennel | 40 | 0.0555 | 2418.66 | 1 | Square feet | 6 | Actual | Plants | N/A | Scattered even | F2 | Daubenmire | 2 | 5.1-25% | N/A | N/A | Malacothamnus fasciculatus, Elymus condensatus, Toxicodendron diversilobum | 180 | WSW | 5 | TS | CL | Roadside; Greenbark Ceanothus Chaparral | Malosoma laurina, Malacothamnus fasciculatus | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 23 | 273210.5701 | 3810528.147 |
| R5LOSPADRESSB_SBCRP_FOVU_010 | 7/14/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Mark Bibbo | FOVU | FB | Foeniculum vulgare | fennel | 1 | 0.0020 | 85.50 | 1 | Square feet | 12 | Actual | Plants | N/A | | F1 | Daubenmire | T | 0-1% | N/A | N/A | Bromus diandrus | 200 | s | 45 | SH | CL | Agriculture | Persea americana | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 23 | 273386.0999 | 3810542.74 |
| R5LOSPADRESSB_SBCRP_FOVU_011 | 7/14/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Mark Bibbo | FOVU | FB | Foeniculum vulgare | fennel | 5 | 0.0015 | 65.40 | 3 | Square feet | 30 | Actual | Individuals | N/A | Scattered patchy | F2 | Daubenmire | 1 | 1.1-5% | N/A | N/A | Ricinus communis, Pennisetum setaceum, Nicotiana glauca | 175 | s | 25 | BS | CL | Agriculture | Persea americana | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 23 | 273290.9485 | 3810554.035 |
| R5LOSPADRESSB_SBCRP_FOVU_012 | 7/15/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Molly Graber | FOVU | SH | Foeniculum vulgare | fennel | 5 | 0.0066 | 287.05 | 1 | Square feet | 1 | Actual | Plants | N/A | Linear | F2 | Daubenmire | 2 | 5.1-25% | 415 | N/A | Bromus diandrus, Stipa miliaceum, Baccharis pilularis | 174 | E | 25 | SH | CL | Agriculture | Ceanothus cuneatus, Sambucus nigra, Persea americana | 5 | Los Padres | Santa Barbara | CA | Ventura | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 30 | 276098.923 | 3808545.684 |
| R5LOSPADRESSB_SBCRP_FOVU_013 | 7/15/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Molly Graber | FOVU | SH | Foeniculum vulgare | fennel | 50 | 0.0008 | 34.80 | 1 | Square feet | 8 | Actual | Plants | N/A | Linear | F2 | Daubenmire | 4 | 50.1-75% | 415 | N/A | Bromus diandrus, Stipa miliaceum, Baccharis pilularis | 174 | E | 25 | SH | CL | Agriculture | Ceanothus cuneatus, Malosoma laurina, Persea americana | 5 | Los Padres | Santa Barbara | CA | Ventura | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 30 | 276119.8605 | 3808545.784 |
| R5LOSPADRESSB_SBCRP_FOVU_014 | 7/15/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Mark Bibbo | FOVU | FB | Foeniculum vulgare | fennel | 1 | 0.0011 | 46.66 | 1 | Square feet | 5 | Actual | Plants | N/A | Clumpy | F3 | Daubenmire | T | T / 0-1% | N/A | N/A | Artemisia californica, Encelia californica, Acmispon glaber | 161 | sw | 20 | BS | CL | Roadside; Lemonade berry Chaparral | Rhus integrifolia, Artemisia californica | 5 | Los Padres | Santa Barbara | CA | Ventura | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 25 | 275084.3517 | 3808982.417 |
| R5LOSPADRESSB_SBCRP_FOVU_015 | 7/15/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Jessica Peak | FOVU | FB | Foeniculum vulgare | fennel | 25 | 0.0002 | 7.30 | 1 | Square feet | 2 | Actual | Plants | N/A | Scattered patchy | F1 | Daubenmire | T | 0-1% | 415ft | N/A | Hirschfeldia incana, Paspalum dilatatum, Bromus diandrus | 149 | se | 5 | SH | CL | Agriculture | Persea americana | 5 | Los Padres | Santa Barbara | CA | Ventura | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 30 | 276152.2788 | 3808521.372 |
| R5LOSPADRESSB_SBCRP_FOVU_016 | 7/15/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Jessica Peak | FOVU | FB | Foeniculum vulgare | fennel | 10 | 0.0008 | 33.21 | 1 | Square feet | 2 | Actual | Plants | N/A | Scattered patchy | F1 | Daubenmire | T | 0-1% | 415ft | N/A | Hirschfeldia incana, Bromus diandrus, Centaurea melitensis | 157 | se | 10 | SH | CL | Agriculture | Sambucus nigra, Elymus condensatus Malosoma laurina, | 5 | Los Padres | Santa Barbara | CA | Ventura | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 30 | 276127.5455 | 3808541.783 |
| R5LOSPADRESSB_SBCRP_FOVU_017 | 7/23/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Eliza Shepard | FOVU | FB | Foeniculum vulgare | fennel | 25 | 0.0471 | 2051.07 | 1 | Square feet | 50 | Estimate | Plants | N/A | Clumpy | F2 | Daubenmire | 2 | 5.1-25% | N/A | N/A | Rhus ovata, Ceanothus cuneatus, Avena barbata | 151 | s | 10 | SH | C | Roadside; Lemonade berry Chaparral | Rhus ovata, Salvia leucophylla | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 25 | 274360.3924 | 3809601.889 |
| R5LOSPADRESSB_SBCRP_NIGL_001 | 7/14/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Mark Bibbo | NIGL | SH | Nicotiana glauca | tree tobacco | 1 | 0.0023 | 98.32 | 1 | Square feet | 5 | Actual | Individuals | N/A | Scattered patchy | F2 | Daubenmire | T | 0-1% | N/A | N/A | Hirschfeldia incana, Salsola tragus | 214 | w-sw | 30 | FS | CL | Roadside; Greenbark Ceanothus Chaparral | Malacothamnus fasciculatus, Salvia mellifera | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 23 | 273356.2177 | 3810588.973 |
| R5LOSPADRESSB_SBCRP_NIGL_002 | 7/14/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Mark Bibbo | NIGL | SH | Nicotiana glauca | tree tobacco | 2 | 0.0014 | 63.05 | 1 | Square feet | 6 | Actual | Individuals | N/A | Scattered even | F2 | Daubenmire | 1 | 1.1-5% | N/A | N/A | Stipa miliaceum, Hirschfeldia incana, Centaurea melitensis | 181 | s | 10 | BS | CL | Roadside; Greenbark Ceanothus Chaparral | Malosoma laurina, Malacothamnus fasciculatus, Artemisia californica | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 23 | 273296.5077 | 3810560.268 |

# Invasive Plant Species Population Data for Los Padres National Forest Jurisdictional Areas
## Santa Barbara County Reliability Project, Santa Barbara and Ventura Counties, California

| Infestation ID | Date | Project Name | Ownership | Proclaimed Forest | Examiner | Target Species Code | Life form | Scientific Name | Common Name | % Infested | Infested Area (acres) | Infested Area (Sq. ft.) | Density | Density UOM | Population Size | Count Type | Count UOM | Lifestage | Distribution | Phenology | Canopy Cover Set | Cover Code | Canopy Cover % | Horizontal Distance to Water | Vertical Distance to Water | Associated Species | Elevation (meters) | Aspect-Cardinal Dir. | % Slope | Slope Position | Soil Texture | Plant Community | Dominant Codominant Species | Region | National Forest | District | State | County | USGS Quad Number | USGS Quad Name | Forest Quad Number | Forest Quad Name | Meridian | Township/ Range | Section | Easting | Northing |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R5LOSPADRESSB_SBCRP_NIGL_003 | 7/14/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Molly Graber | NIGL | SH | Nicotiana glauca | tree tobacco | 60 | 0.0013 | 57.73 | 1 | Square feet | 1 | Actual | Plants | N/A | Linear | F2 | Daubenmire | T | 0-1% | N/A | N/A | Delairea odorata, Salvia mellifer, Ceanothus cuneatus, | 184 | S | 50 | SU | CL | Roadside; Greenbark Ceanothus Chaparral | Ceanothus cuneatus, Malacothamnus fasciculatus | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 23 | 273449.6308 | 3810465.241 |
| R5LOSPADRESSB_SBCRP_NIGL_004 | 7/14/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Molly Graber | NIGL | SH | Nicotiana glauca | tree tobacco | 15 | 0.0279 | 1216.44 | 1 | Square feet | 4 | Actual | Plants | N/A | Scattered patchy | F2 | Daubenmire | 2 | 5.1-25% | N/A | N/A | Rhus integrifolia, Foeniculum vulgare, Ricinus communis | 177 | WSW | 75 | SH | CL | Agriculture | Persea americana | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 23 | 273222.2489 | 3810438.06 |
| R5LOSPADRESSB_SBCRP_NIGL_005 | 7/15/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Molly Graber | NIGL | SH | Nicotiana glauca | tree tobacco | 100 | 0.0012 | 53.28 | 1 | Square feet | 4 | Actual | Plants | N/A | Linear | F3 | Daubenmire | 2 | 5.1-25% | 415 | N/A | Ceanothus cuneatus Malosoma laurina, Artemisia californica | 174 | SSE | 60 | SH | CL | Roadside; Mixed Ceanothus Chaparral | Ceanothus cuneatus, Malosoma laurina, Persea americana | 5 | Los Padres | Santa Barbara | CA | Ventura | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 30 | 276067.6179 | 3808539.689 |
| R5LOSPADRESSB_SBCRP_NIGL_006 | 7/15/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Molly Graber | NIGL | SH | Nicotiana glauca | tree tobacco | 30 | 0.0186 | 810.61 | 1 | Square feet | 6 | Actual | Plants | N/A | Scattered even | F2 | Daubenmire | 3 | 25.1-50% | 450 | N/A | Rhus integrifolia, Salvia mellifera, Ceanothus cuneatus, | 176 | SSE | 60 | TS | CL | Roadside; Mixed Ceanothus Chaparral | Ceanothus cuneatus, Rhus integrifolia | 5 | Los Padres | Santa Barbara | CA | Ventura | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 30 | 276481.8892 | 3808498.458 |
| R5LOSPADRESSB_SBCRP_NIGL_007 | 7/15/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Molly Graber | NIGL | SH | Nicotiana glauca | tree tobacco | 15 | 0.0006 | 24.94 | 1 | Square feet | 5 | Actual | Plants | N/A | Scattered even | F2 | Daubenmire | T | 0-1% | 450 | N/A | Rhus integrifolia, Salvia mellifera, Ceanothus cuneatus | 176 | SSE | 60 | TS | CL | Roadside; Mixed Ceanothus Chaparral | Ceanothus cuneatus, Rhus integrifolia | 5 | Los Padres | Santa Barbara | CA | Ventura | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 30 | 276493.9961 | 3808490.226 |
| R5LOSPADRESSB_SBCRP_NIGL_008 | 7/15/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Mark Bibbo | NIGL | SH | Nicotiana glauca | tree tobacco | 1 | 0.0001 | 3.38 | 1 | Square feet | 1 | Actual | Plants | N/A | Scattered even | F3 | Daubenmire | T | 0-1% | N/A | N/A | Artemisia californica, Eriogonum parviflorum, Acmispon glaber | 161 | sw | 20 | BS | CL | Roadside; Lemonade berry Chaparral | Rhus integrifolia, Artemisia californica | 5 | Los Padres | Santa Barbara | CA | Ventura | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 25 | 275100.136 | 3808939.917 |
| R5LOSPADRESSB_SBCRP_NIGL_009 | 7/15/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Jessica Peak | NIGL | SH | Nicotiana glauca | tree tobacco | 20 | 0.0060 | 262.64 | 1 | Square feet | 14 | Actual | Plants | N/A | Scattered patchy | F3 | Daubenmire | 2 | 5.1-25% | 450ft | N/A | Salsola tragus, Hirschfeldia incana, Rhus integrifolia, Brickellia californica | 167 | e | 10 | BS | CL | Agriculture | Ceanothus cuneatus, Rhus integrifolia, Brickellia californica | 5 | Los Padres | Santa Barbara | CA | Ventura | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 30 | 276505.4656 | 3808473.207 |
| R5LOSPADRESSB_SBCRP_NIGL_010 | 7/15/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Jessica Peak | NIGL | SH | Nicotiana glauca | tree tobacco | 5 | 0.0049 | 213.65 | 0.5 | Square feet | 2 | Actual | Plants | N/A | Scattered patchy | F2 | Daubenmire | T | 0-1% | 450ft | N/A | Salsola tragus, Hirschfeldia incana | 169 | s | 25 | BS | CL | Agriculture | Persea americana Hirschfeldia incana, Salsola tragus | 5 | Los Padres | Santa Barbara | CA | Ventura | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 30 | 276511.4764 | 3808463.394 |
| R5LOSPADRESSB_SBCRP_NIGL_011 | 7/15/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Jessica Peak | NIGL | SH | Nicotiana glauca | tree tobacco | 0-1 | 0.0001 | 3.23 | 1 | Square feet | 1 | Actual | Plants | N/A | Clumpy | F1 | Daubenmire | 1 | 1.1-5% | 450ft | N/A | Bidens pilosa | 171 | s | 2 | SH | CL | Agriculture | Persea americana | 5 | Los Padres | Santa Barbara | CA | Ventura | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 30 | 276533.8212 | 3808458.062 |
| R5LOSPADRESSB_SBCRP_NIGL_012 | 7/23/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Jessica Peak | NIGL | SH | Nicotiana glauca | tree tobacco | 10 | 0.0049 | 213.48 | 0.5 | Square feet | 5 | Actual | Plants | N/A | Clumpy | F3 | Daubenmire | 2 | 5.1-25% | N/A | N/A | Hirschfeldia incana, Eriogonum parviflorum, Salvia mellifera | 184 | ssw | 5-10 | TS | CL | Roadside; Lemonade berry Chaparral | Rhus integrifolia, Ceanothus cuneatus, Eriogonum parviflorum | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 25 | 274496.3379 | 3809607.347 |
| R5LOSPADRESSB_SBCRP_PESE3_001 | 7/14/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Mark Bibbo | PESE3 | GR | Pennisetum setaceum | fountain grass | 5 | 0.0129 | 562.76 | 2 | Square feet | 18 | Actual | Individuals | N/A | Clumpy | G4 | Daubenmire | 1 | 1.1-5% | N/A | N/A | Stipa miliaceum, Persea americana | 175 | e | 20 | BS | CL | Agriculture | Persea americana | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 23 | 273210.3468 | 3810385.535 |
| R5LOSPADRESSB_SBCRP_PESE3_002 | 7/14/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Mark Bibbo | PESE3 | GR | Pennisetum setaceum | fountain grass | 80 | 0.0248 | 1078.80 | 5 | Square feet | 100 | Estimate | Individuals | N/A | Scattered even | G4 | Daubenmire | 5 | 75.1-95% | N/A | N/A | Persea americana, Avena barbata | 175 | se | 30 | BS | CL | Agriculture | Persea americana | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 23 | 273164.2294 | 3810345.999 |
| R5LOSPADRESSB_SBCRP_PESE3_003 | 7/14/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Molly Graber | PESE3 | GR | Pennisetum setaceum | fountain grass | 35 | 0.0316 | 1377.17 | 1 | Square feet | 32 | Actual | Plants | N/A | Scattered patchy | G3 | Daubenmire | 3 | 25.1-50% | N/A | N/A | Rhus integrifolia, Foeniculum vulgare, Avena barbata | 177 | WSW | 75 | BS | CL | Agriculture | Persea americana | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 23 | 273231.5583 | 3810444.279 |
| R5LOSPADRESSB_SBCRP_RICO3_001 | 7/14/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Mark Bibbo | RICO3 | SH | Ricinus communis | castor bean | 2 | 0.0163 | 709.61 | 1 | Square feet | 7 | Actual | Individuals | N/A | Clumpy | F4 | Daubenmire | 1 | 1.1-5% | N/A | N/A | Salsola tragus, Eriogonum parviflorum, Salvia mellifera | 180 | se | 20 | BS | CL | Roadside; Greenbark Ceanothus Chaparral | Ceanothus cuneatus | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 23 | 273266.0338 | 3810512.073 |
| R5LOSPADRESSB_SBCRP_RICO3_002 | 7/14/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Mark Bibbo | RICO3 | SH | Ricinus communis | castor bean | 5 | 0.0628 | 2736.13 | 2 | Square feet | 17 | Actual | Individuals | N/A | Scattered patchy | F3 | Daubenmire | 2 | 5.1-25% | N/A | N/A | Foeniculum vulgare, Pennisetum setaceum, Nicotiana glauca | 175 | s | 25 | BS | CL | Agriculture | Persea americana | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 23 | 273231.7942 | 3810447.54 |
| R5LOSPADRESSB_SBCRP_RICO3_003 | 7/14/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Molly Graber | RICO3 | FB | Ricinus communis | castor bean | 30 | 0.0005 | 23.89 | 2 | Square feet | 10 | Actual | Plants | N/A | Scattered patchy | F1 | Daubenmire | T | 0-1% | N/A | N/A | Hirschfeldia incana, Centaurea melitensis | 183 | SSW | 50 | SU | CL | Roadside; Greenbark Ceanothus Chaparral | Ceanothus cuneatus, Malacothamnus fasciculatus | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 23 | 273413.766 | 3810456.443 |
| R5LOSPADRESSB_SBCRP_RICO3_004 | 7/14/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Molly Graber | RICO3 | FB | Ricinus communis | castor bean | 30 | 0.0033 | 144.17 | 1 | Square feet | 10 | Actual | Plants | N/A | Scattered patchy | F1 | Daubenmire | T | 0-1% | N/A | N/A | Malacothamnus fasciculatus | 182 | W | 50 | SH | CL | Roadside; Greenbark Ceanothus Chaparral | Ceanothus cuneatus, Malacothamnus fasciculatus | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 23 | 273338.7971 | 3810525.32 |
| R5LOSPADRESSB_SBCRP_RICO3_005 | 7/14/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Molly Graber | RICO3 | SS | Ricinus communis | castor bean | 30 | 0.0718 | 3127.41 | 1 | Square feet | 45 | Actual | Plants | N/A | Scattered patchy | F3 | Daubenmire | 3 | 25.1-50% | N/A | N/A | Malacothamnus fasciculatus | 181 | WSW | 50 | SH | CL | Roadside; Greenbark Ceanothus Chaparral | Ceanothus cuneatus, Malacothamnus fasciculatus | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 23 | 273308.7153 | 3810551.725 |
| R5LOSPADRESSB_SBCRP_RICO3_006 | 7/14/2014 | Santa Barbara County Reliability Project (SBCRP) | U.S. Forest Service | Los Padres National Forest | Molly Graber | RICO3 | FB | Ricinus communis | castor bean | 1 | 0.0052 | 225.98 | 1 | Square feet | 4 | Actual | Plants | N/A | Scattered patchy | F1 | Daubenmire | T | 0-1% | N/A | N/A | Bromus diandrus, Hirschfeldia incana | 177 | WSW | 60 | SU | CL | Agriculture | Persea americana | 5 | Los Padres | Santa Barbara | CA | Santa Barbara | 2555 | White Ledge Peak | | White Ledge Peak | SBB&M | T04N R25W | 23 | 273212.8015 | 3810374.349 |

# APPENDIX E
# CDFA NOXIOUS WEED POPULATION DATA

| Date | Surveyor Initials | Plant ID | Scientific Name | Common Name | Feature Type | Population Size | % Canopy Cover | Habiat Type Infested | Infested Area (acres) | Infested Area (Sq. ft.) | Nearest Construct | Easting | Northing | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/17/2014 | MG | ARSE8-001 | Araujia sericifera | bladderflower | polygon | 25 | 5-25% | Purple Sage Scrub | 0.288 | 12,526 | 4453204E | 298776.31 | 3798739.65 | elderberry canopy |
| 7/17/2014 | MG | ARSE8-002 | Araujia sericifera | bladderflower | polygon | 15 | 5-25% | Purple Sage Scrub | 0.194 | 8,448 | Access road | 298736.6 | 3798322.04 | elderberry canopy |
| 7/17/2014 | MG | ARSE8-003 | Araujia sericifera | bladderflower | point | 1 | 1-5% | Purple Sage Scrub | 0.000 | 10 | access road | 298822.68 | 3798822.59 | |
| 7/17/2014 | MG | ARSE8-004 | Araujia sericifera | bladderflower | point | 2 | <1% | Purple Sage Scrub | 0.001 | 30 | 4453204E | 298761.94 | 3798756.66 | |
| 7/16/2014 | MB | ASFI2-001 | Asphodelus fistulosus | onionweed | polygon | 25 | 1-5% | Roadside | 0.008 | 337 | 4435041E | 272213.98 | 3808838.97 | |
| 7/23/2014 | ES | ASFI2-002 | Asphodelus fistulosus | onionweed | polygon | 350 | <1% | Lemonade berry Chaparral | 0.141 | 6,141 | Construct 104 | 274434.52 | 3809598.05 | along center and side of road |
| 7/23/2014 | JP | ASFI2-003 | Asphodelus fistulosus | onionweed | polygon | 4 | <1% | Agriculture | 0.014 | 607 | Construct 103 | 274573.13 | 3809566.07 | along road adjacent to orchard |
| 7/15/2014 | MB | CESO3-001 | Centaurea solstitial | yellow star thistle | point | 1 | 50-75% | Roadside | 0.000 | 4 | M4-T5 | 280513.09 | 3807423.34 | |
| 7/15/2014 | ES | CESO3-002 | Centaurea solstitial | yellow star thistle | point | 4 | 1-5% | Ruderal/Disturbed | 0.001 | 40 | M5-T1 | 279923 | 3807419.41 | |
| 7/15/2014 | ES | CESO3-003 | Centaurea solstitial | yellow star thistle | point | 8 | 1-5% | Ruderal/Disturbed | 0.001 | 40 | M5-T1 | 279946.94 | 3807421.25 | |
| 7/16/2014 | MB | CESO3-004 | Centaurea solstitial | yellow star thistle | point | 1 | 25-50% | Roadside | 0.000 | 2 | M5-ST7 | 279201.67 | 3806514.79 | |
| 7/16/2014 | MB | CESO3-005 | Centaurea solstitial | yellow star thistle | point | 2 | 25-50% | Roadside | 0.000 | 2 | M5-T4 | 279128.09 | 3806512.54 | |
| 7/15/2014 | ES | CESO3-006 | Centaurea solstitialis | yellow star thistle | polygon | 150 | <1% | Roadside | 0.005 | 216 | Rd to Constr 86 | 279903.47 | 3807410.63 | |
| 7/15/2014 | ES | CESO3-007 | Centaurea solstitialis | yellow star thistle | polygon | 5 | <1% | Roadside | 0.038 | 1,673 | M4-ST5 | 280515.46 | 3807442.96 | |
| 7/15/2014 | MB | CESO3-008 | Centaurea solstitialis | yellow star thistle | polygon | 35 | <1% | Roadside | 0.052 | 2,269 | Construct 84 | 280552.5 | 3807436.53 | |
| 7/15/2014 | ES | CESO3-009 | Centaurea solstitialis | yellow star thistle | polygon | 600 | <1% | Roadside | 0.911 | 39,668 | Construct 86 | 279936.41 | 3807503.15 | scattered along road and road side |
| 7/15/2014 | ES | CESO3-010 | Centaurea solstitialis | yellow star thistle | polygon | 600 | <1% | Roadside | 0.971 | 42,292 | Access road | 280136.59 | 3807581.92 | scattered along road and road side |
| 7/15/2014 | ES | CESO3-011 | Centaurea solstitialis | yellow star thistle | polygon | 100 | <1% | Roadside | 0.247 | 10,745 | Access road, Construct 85 | 280038.95 | 3807484.02 | scattered along road and road side |
| 7/15/2014 | ES | CESO3-012 | Centaurea solstitialis | yellow star thistle | polygon | 2000 | 1-5% | CA Sage. Scrub. | 0.635 | 27,642 | Construct 84 | 280607.22 | 3807402.65 | scattered along road and road side and in large open areas |
| 7/24/2014 | ES | CYCA-001 | Cynara cardunculus | artichoke thistle | point | 1 | <1% | CA Sage. Scrub. | 0.000 | 6 | access road | 291742.88 | 3804200.36 | |
| 7/24/2014 | JP | CYCA-002 | Cynara cardunculus | artichoke thistle | point | 4 | <1% | CA AnnualGrassLand | 0.000 | 20 | access road | 291803.31 | 3804197.15 | |
| 7/24/2014 | JP | CYCA-003 | Cynara cardunculus | artichoke thistle | point | 1 | <1% | CA AnnualGrassLand | 0.000 | 4 | access road | 291808.7 | 3804215.5 | |
| 7/24/2014 | JP | CYCA-004 | Cynara cardunculus | artichoke thistle | point | 1 | <1% | CA Sage. Scrub. | 0.000 | 6 | M6-T2 | 293966.14 | 3801376.04 | |
| 7/14/2014 | MB | EMSP-001 | Emex spinosa | devil's thorn | point | 1 | 1-5% | Roadside | 0.000 | 6 | M10-T2 | 273369.59 | 3810562.33 | |

| Date | Surveyor Initials | Plant ID | Scientific Name | Common Name | Feature Type | Population Size | % Canopy Cover | Habiat Type Infested | Infested Area (acres) | Infested Area (Sq. ft.) | Nearest Construct | Easting | Northing | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/16/2014 | MB | OESI-001 | Oenothera sinuosa | wavy-leaved gaura | point | 1 | 75-95% | Roadside | 0.000 | 5 | 4423667E | 271650.7 | 3809159.92 | |
| 7/15/2014 | JP | TRTE-001 | Tribulus terrestris | puncture vine | polygon | 73 | <1% | Roadside | 0.055 | 2,414 | 4423105E | 270810.43 | 3809724.36 | along hwy 192 |
| 7/15/2014 | MG | TRTE-002 | Tribulus terrestris | puncture vine | point | 1 | 25-50% | Roadside | 0.000 | 2 | CONSTR 135 | 268962.46 | 3810883.28 | |
| 7/15/2014 | MG | TRTE-003 | Tribulus terrestris | puncture vine | point | 1 | 50-75% | Roadside | 0.000 | 1 | CONSTR 135 | 268953.03 | 3810825.48 | |
| 7/15/2014 | MG | TRTE-004 | Tribulus terrestris | puncture vine | point | 1 | 50-75% | Roadside | 0.000 | 1 | CONSTR 135 | 268943.05 | 3810807.49 | |
| 7/15/2014 | MG | TRTE-005 | Tribulus terrestris | puncture vine | point | 2 | 5-25% | Roadside | 0.000 | 2 | CONSTR 137 | 268828.12 | 3810510.63 | |
| 7/15/2014 | MG | TRTE-006 | Tribulus terrestris | puncture vine | point | 1 | 50-75% | Roadside | 0.000 | 1 | CONSTR 142 | 268783.35 | 3810402.29 | |
| 7/15/2014 | MG | TRTE-007 | Tribulus terrestris | puncture vine | point | 10 | 5-25% | Developed | 0.009 | 400 | Carp Yard 2 | 269218.11 | 3810463.19 | |
| 7/15/2014 | MG | TRTE-008 | Tribulus terrestris | puncture vine | point | 1 | 25-50% | Developed | 0.000 | 20 | Carp Yard 2 | 269240.05 | 3810302.87 | |
| 7/15/2014 | JP | TRTE-009 | Tribulus terrestris | puncture vine | point | 3 | <1% | Roadside | 0.001 | 40 | CONSTR 142 | 268778.71 | 3810394.03 | |
| 7/15/2014 | JP | TRTE-010 | Tribulus terrestris | puncture vine | point | 1 | <1% | Ruderal/Disturbed | 0.000 | 4 | Carp Yard 2 | 269223.6 | 3810448.53 | |
| 7/15/2014 | ES | TRTE-011 | Tribulus terrestris | puncture vine | point | 5 | <1% | Agriculture | 0.000 | 10 | M9-SP1 | 274107.93 | 3809108.79 | |
| 7/15/2014 | ES | TRTE-012 | Tribulus terrestris | puncture vine | point | 5 | <1% | Agriculture | 0.000 | 8 | M9-SP1 | 274125.22 | 3809086.95 | |
| 7/15/2014 | ES | TRTE-013 | Tribulus terrestris | puncture vine | point | 5 | <1% | Agriculture | 0.000 | 8 | M8-T6 | 274244.2 | 3808952.21 | |
| 7/15/2014 | ES | TRTE-014 | Tribulus terrestris | puncture vine | point | 7 | <1% | Agriculture | 0.000 | 10 | M8-T6 | 274268.86 | 3808932.16 | |
| 7/16/2014 | MG | TRTE-015 | Tribulus terrestris | puncture vine | polygon | 7 | <1% | Roadside | 0.000 | 0 | 4435027E | 271033.07 | 3809604.63 | |
| 7/16/2014 | MG | TRTE-016 | Tribulus terrestris | puncture vine | polygon | 140 | <1% | Roadside | 0.013 | 548 | 106152E | 270256.42 | 3809900.22 | 6' wide along roadside |
| 7/16/2014 | MG | TRTE-017 | Tribulus terrestris | puncture vine | polygon | 35 | <1% | Roadside | 0.018 | 795 | 2303869E | 269811.1 | 3810012.44 | 6' wide along roadside |
| 7/16/2014 | MG | TRTE-018 | Tribulus terrestris | puncture vine | polygon | 45 | <1% | Roadside | 0.037 | 1,630 | 4305747E | 269373.97 | 3810114.82 | |
| 7/16/2014 | MG | TRTE-019 | Tribulus terrestris | puncture vine | polygon | 37 | <1% | Roadside | 0.021 | 912 | 4435014E | 268865.89 | 3810287.15 | |
| 7/16/2014 | MB | TRTE-020 | Tribulus terrestris | puncture vine | polygon | 200 | 1-5% | Roadside | 0.406 | 17,671 | 106195E | 271848.91 | 3809067.28 | |
| 7/16/2014 | MG | TRTE-021 | Tribulus terrestris | puncture vine | point | 3 | <1% | Roadside | 0.003 | 120 | 4170615E | 270983.99 | 3809637.27 | |
| 7/16/2014 | MG | TRTE-022 | Tribulus terrestris | puncture vine | point | 1 | <1% | Roadside | 0.000 | 2 | 4170615E | 270961.04 | 3809646.86 | |
| 7/16/2014 | MG | TRTE-023 | Tribulus terrestris | puncture vine | point | 1 | <1% | Roadside | 0.000 | 1 | 4479528E | 270760.72 | 3809765.33 | |
| 7/16/2014 | MG | TRTE-024 | Tribulus terrestris | puncture vine | point | 2 | <1% | Roadside | 0.000 | 20 | 4479527E | 270722.29 | 3809780.28 | |
| 7/16/2014 | MG | TRTE-025 | Tribulus terrestris | puncture vine | point | 12 | 1-5% | Roadside | 0.002 | 80 | 4435021E | 270360.29 | 3809871.83 | |

| Date | Surveyor Initials | Plant ID | Scientific Name | Common Name | Feature Type | Population Size | % Canopy Cover | Habiat Type Infested | Infested Area (acres) | Infested Area (Sq. ft.) | Nearest Construct | Easting | Northing | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/16/2014 | MG | TRTE-026 | Tribulus terrestris | puncture vine | point | 3 | <1% | Roadside | 0.002 | 100 | 4435021E | 270339.68 | 3809875.6 | |
| 7/16/2014 | MG | TRTE-027 | Tribulus terrestris | puncture vine | point | 1 | 50-75% | Roadside | 0.000 | 2 | 106149E | 270094.15 | 3809937.06 | |
| 7/16/2014 | MG | TRTE-028 | Tribulus terrestris | puncture vine | point | 3 | 50-75% | Roadside | 0.000 | 3 | 106149E | 270073.96 | 3809945.24 | |
| 7/16/2014 | MG | TRTE-029 | Tribulus terrestris | puncture vine | point | 10 | <1% | Roadside | 0.003 | 120 | 4305748E | 269985.69 | 3809968.58 | |
| 7/16/2014 | MG | TRTE-030 | Tribulus terrestris | puncture vine | point | 9 | 25-50% | Roadside | 0.000 | 20 | 4423103E | 269942.12 | 3809979.89 | |
| 7/16/2014 | MG | TRTE-031 | Tribulus terrestris | puncture vine | point | 50 | 5-25% | Roadside | 0.003 | 120 | 4423103E | 269892.69 | 3809991.26 | |
| 7/16/2014 | MG | TRTE-032 | Tribulus terrestris | puncture vine | point | 2 | <1% | Roadside | 0.001 | 40 | 4435020E | 269858.64 | 3809999.32 | |
| 7/16/2014 | MG | TRTE-033 | Tribulus terrestris | puncture vine | point | 3 | 1-5% | Roadside | 0.000 | 20 | 4435018E | 269677.1 | 3810039.76 | |
| 7/16/2014 | MG | TRTE-034 | Tribulus terrestris | puncture vine | point | 25 | 5-25% | Roadside | 0.001 | 60 | 4435017E | 269609.58 | 3810056.69 | |
| 7/16/2014 | MG | TRTE-035 | Tribulus terrestris | puncture vine | point | 1 | 50-75% | Roadside | 0.000 | 1 | 1238740E | 269500.31 | 3810080.83 | |
| 7/16/2014 | MG | TRTE-036 | Tribulus terrestris | puncture vine | point | 8 | 5-25% | Roadside | 0.001 | 30 | 4170614E | 269464.32 | 3810092.06 | |
| 7/16/2014 | MG | TRTE-037 | Tribulus terrestris | puncture vine | point | 2 | 50-75% | Roadside | 0.000 | 1 | 4170614E | 269444.96 | 3810098.55 | |
| 7/16/2014 | MG | TRTE-038 | Tribulus terrestris | puncture vine | point | 13 | 50-75% | Roadside | 0.000 | 4 | 4435016E | 269209.87 | 3810155.61 | |
| 7/16/2014 | MG | TRTE-039 | Tribulus terrestris | puncture vine | point | 18 | 50-75% | Roadside | 0.000 | 6 | 1238747E | 269069.23 | 3810195.87 | |
| 7/16/2014 | MG | TRTE-040 | Tribulus terrestris | puncture vine | point | 1 | 50-75% | Roadside | 0.000 | 1 | 4435105E | 269044.23 | 3810201.07 | |
| 7/16/2014 | MG | TRTE-041 | Tribulus terrestris | puncture vine | point | 7 | 1-5% | Roadside | 0.001 | 40 | 1238749E | 268924.63 | 3810232.52 | |
| 7/16/2014 | MG | TRTE-042 | Tribulus terrestris | puncture vine | point | 1 | 50-75% | Roadside | 0.000 | 1 | 1238750E | 268909.79 | 3810234.51 | |
| 7/16/2014 | MG | TRTE-043 | Tribulus terrestris | puncture vine | point | 2 | <1% | Roadside | 0.002 | 100 | 1238750E | 268889.95 | 3810238.98 | |
| 7/16/2014 | MG | TRTE-044 | Tribulus terrestris | puncture vine | point | 4 | <1% | Roadside | 0.002 | 100 | 106125E | 268856.59 | 3810248.93 | |
| 7/16/2014 | MG | TRTE-045 | Tribulus terrestris | puncture vine | point | 1 | 50-75% | Roadside | 0.000 | 1 | 4305745E | 269246.57 | 3810133.01 | |
| 7/16/2014 | MG | TRTE-046 | Tribulus terrestris | puncture vine | point | 1 | 5-25% | Roadside | 0.000 | 4 | 4305747E | 269343.58 | 3810110.27 | |
| 7/16/2014 | MG | TRTE-047 | Tribulus terrestris | puncture vine | point | 2 | 50-75% | Roadside | 0.000 | 1 | 4170614E | 269452.35 | 3810082.5 | |
| 7/16/2014 | MG | TRTE-048 | Tribulus terrestris | puncture vine | point | 4 | 50-75% | Roadside | 0.000 | 6 | 4435019E | 269735.5 | 3810008.91 | |
| 7/16/2014 | MG | TRTE-049 | Tribulus terrestris | puncture vine | point | 1 | 50-75% | Roadside | 0.000 | 1 | 2303869E | 269755.37 | 3810011.98 | |
| 7/16/2014 | MG | TRTE-050 | Tribulus terrestris | puncture vine | point | 1 | 1-5% | Roadside | 0.001 | 25 | 2303869E | 269799.32 | 3810000.91 | |
| 7/16/2014 | MG | TRTE-051 | Tribulus terrestris | puncture vine | point | 2 | <1% | Roadside | 0.002 | 80 | 4435020E | 269841.11 | 3809992.73 | |

| Date | Surveyor Initials | Plant ID | Scientific Name | Common Name | Feature Type | Population Size | % Canopy Cover | Habiat Type Infested | Infested Area (acres) | Infested Area (Sq. ft.) | Nearest Construct | Easting | Northing | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/16/2014 | MG | TRTE-052 | Tribulus terrestris | puncture vine | point | 1 | <1% | Roadside | 0.000 | 12 | 4423103E | 269883.99 | 3809980.22 | |
| 7/16/2014 | MB | TRTE-053 | Tribulus terrestris | puncture vine | point | 1 | 50-75% | Roadside | 0.000 | 4 | 1920989E | 271285.12 | 3809493.02 | |
| 7/16/2014 | MB | TRTE-054 | Tribulus terrestris | puncture vine | point | 3 | 50-75% | Roadside | 0.000 | 4 | 4435032E | 271402.96 | 3809324.82 | |
| 7/16/2014 | MB | TRTE-055 | Tribulus terrestris | puncture vine | point | 1 | 50-75% | Roadside | 0.000 | 2 | 2303868E | 271526.8 | 3809215.37 | |
| 7/16/2014 | MB | TRTE-056 | Tribulus terrestris | puncture vine | point | 9 | 5-25% | Roadside | 0.000 | 20 | 4423667E | 271650.89 | 3809170.84 | |
| 7/16/2014 | MB | TRTE-057 | Tribulus terrestris | puncture vine | point | 50 | 5-25% | Roadside | 0.001 | 36 | 4435036E | 271722.04 | 3809134.34 | |
| 7/16/2014 | MB | TRTE-058 | Tribulus terrestris | puncture vine | point | 10 | 1-5% | Roadside | 0.002 | 100 | 4435036E | 271749.48 | 3809117.95 | |
| 7/16/2014 | MB | TRTE-059 | Tribulus terrestris | puncture vine | point | 1 | 25-50% | Roadside | 0.000 | 10 | 4435039E | 272039.59 | 3808951.35 | |
| 7/16/2014 | MB | TRTE-060 | Tribulus terrestris | puncture vine | point | 9 | 5-25% | Roadside | 0.000 | 20 | 4435036E | 271712.91 | 3809127.45 | |
| 7/16/2014 | MB | TRTE-061 | Tribulus terrestris | puncture vine | point | 4 | 5-25% | Roadside | 0.000 | 10 | 4423667E | 271692.1 | 3809138.48 | |
| 7/16/2014 | MB | TRTE-062 | Tribulus terrestris | puncture vine | point | 4 | 5-25% | Roadside | 0.000 | 10 | 4435035E | 271477.38 | 3809221.97 | |
| 7/16/2014 | MB | TRTE-063 | Tribulus terrestris | puncture vine | point | 30 | 1-5% | Roadside | 0.001 | 30 | 4435034E | 271404.9 | 3809250.6 | |
| 7/16/2014 | MB | TRTE-064 | Tribulus terrestris | puncture vine | point | 2 | 5-25% | Roadside | 0.000 | 10 | 1324182E | 270182.3 | 3809906 | |
| 7/16/2014 | MB | TRTE-065 | Tribulus terrestris | puncture vine | point | 5 | 5-25% | Roadside | 0.000 | 10 | 4435021E | 270330.9 | 3809867.54 | |
| 7/16/2014 | MB | TRTE-066 | Tribulus terrestris | puncture vine | point | 30 | 25-50% | Roadside | 0.001 | 27 | 4423105E | 270785.13 | 3809738.62 | |
| 7/16/2014 | MB | TRTE-067 | Tribulus terrestris | puncture vine | point | 40 | 5-25% | Roadside | 0.001 | 45 | 4435025E | 270827.23 | 3809713.65 | |
| 7/16/2014 | MB | TRTE-068 | Tribulus terrestris | puncture vine | point | 5 | 5-25% | Roadside | 0.000 | 15 | 4170615E | 270978.02 | 3809625.02 | |
| 7/23/2014 | ES | TRTE-069 | Tribulus terrestris | puncture vine | point | 3 | <1% | Agriculture | 0.000 | 10 | M9-T5 | 274132.75 | 3809992.35 | |

# 2014 LEAST BELL'S VIREO SURVEYS

**FOR**

**SOUTHERN CALIFORNIA EDISON'S**

**SANTA BARBARA COUNTY RELIABILITY PROJECT**

**SANTA BARBARA AND VENTURA COUNTIES, CALIFORNIA**

---

**September 2014**


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## Introduction

Garcia and Associates (GANDA) conducted protocol surveys for least Bell's vireo (LBVI; *Vireo bellii pusillus*) in Santa Barbara and Ventura counties for the Southern California Edison (SCE), Santa Barbara County Reliability Project (SBCRP; Project). Surveys were conducted to determine the presence or absence of the state- and federally endangered LBVI in suitable habitat within 500 feet of Project components that may be affected by Project activities. Survey sites with the potential to support breeding LBVI were identified in the field during a habitat assessment conducted on May 12 to 15, 2014 by Jeff Steinman of GANDA. The habitat assessment covered the entire Project Area as provided in the May 2014 Project drawings, and was based on the identification of components typical of suitable LBVI breeding habitat. These components include thick and or multi-story riparian habitat, especially any containing a thick understory of mule fat (*Baccharis salicifolia*).

Surveys followed the protocol outlined in *2001 United States Fish and Wildlife Service* (USFWS), *Least Bell's Vireo Survey Guidelines* (USFWS 2001) and were conducted under the authorization of USFWS Senior Biologist Chris Dellith. Surveys were initiated on May 19, 2014. Due to the late start of the survey effort, a variance to the survey spacing and time period was requested (SCE 2014). A variance was issued by the USFWS on July 11, 2014 (see Appendix A for the email of the variance), allowing the survey spacing to be reduced for the final three (3) surveys from every 10 days to every seven (7) days and, if needed, to extend the 2014 survey period to August 15.

## Project Description

In 1998, SCE initiated the SBCRP (hereafter referred to as the Project) to increase reliability by reinforcing its existing 66-kilovolt (kV) subtransmission system in northwestern Ventura County and southeastern Santa Barbara County to meet the electrical demands of the south coast of Santa Barbara County during emergency conditions, while also enhancing operational flexibility (Figure 1).

The Project has been divided into six geographically defined Segments (Segments 1, 2, 3A, 3B, 4, and the "Getty Tap") (Figure 2). Segment 1 begins at the Santa Clara Substation off Foothill Road in unincorporated Ventura County. From that origin, it heads north along western Long Canyon; turns northwest at Harmon Canyon in the Ventura Hills; traverses Lake, Sexton, and Hall canyons; then runs west along northern Cañada Seca and crosses Cañada Larga to the Casitas Substation, which lies between State Route 33 (SR-33) and the Ventura River. The Getty Tap is located approximately in the middle of Segment 1. Segment 2 extends west from the Casitas Substation along the south side of Lake Casitas, to the Y near East Casitas Pass. Segment 3B heads west from the Y through the Casitas Valley along the south side of State Route 150 (SR-150), crossing over Madranio Canyon, along Rincon Mountain, and through the

Rincon Valley. At the Santa Barbara–Ventura County line near the intersection of SR-150 and State Route 192 (SR-192), Segment 3B becomes Segment 3A and continues to the west into the Shepard Mesa and Gobernador rural residential areas, then west along SR-192 to the Carpinteria Substation. Segment 4 heads west from the Y along the north side of SR-150, runs northwest along the ridge top of Sutton Canyon, and then turns south to the Carpinteria Substation.

The Project includes the following physical elements:

- Reconstruction of the existing 66-kV subtransmission facilities primarily within existing utility rights-of-way (ROW) between the existing Santa Clara Substation in Ventura County and the existing Carpinteria Substation in Santa Barbara County.
- Installation of marker balls on overhead wire where necessary.
- Modification of subtransmission and substation equipment within the existing Carpinteria Substation, Casitas Substation, and Santa Clara Substation.
- Replacement of line protection relays within existing substation equipment rooms or cabinets at Getty Substation, Goleta Substation, Ortega Substation, and Santa Barbara Substation.
- Installation of telecommunications facilities to connect the Project to the SCE's existing telecommunications system for the protection, monitoring and control of subtransmission and substation equipment. Installation of new telecommunications facilities along Segments 1, 2, and 4 and at the Carpinteria Substation, Casitas Substation, Santa Clara Substation, and Ventura Substation[1].
- The transfer of distribution lines (and third-party infrastructure as necessary) to subtransmission structures along Segment 3A.
- Removal of subtransmission infrastructure in Segments 1 and 2.

[1] The Project also includes additional minor substation and telecommunications work at the Getty Substation, Goleta Substation, Ortega Substation, Santa Barbara Substation, and Ventura Substation; this work would be conducted exclusively on substation property, and thus would have no impact to biological resources. Therefore, this work is not addressed further in this report.

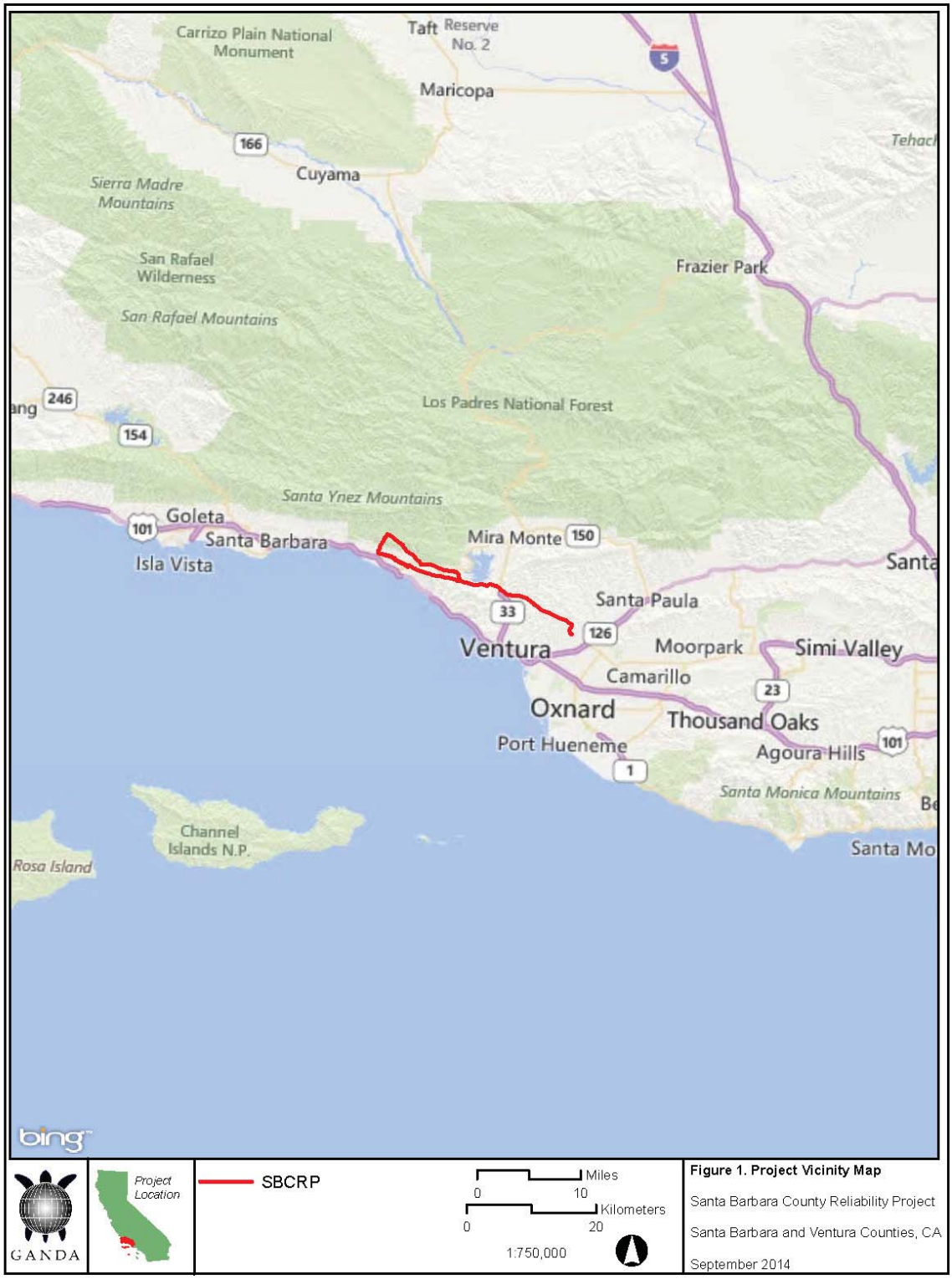


**Figure 1. Project Vicinity Map**

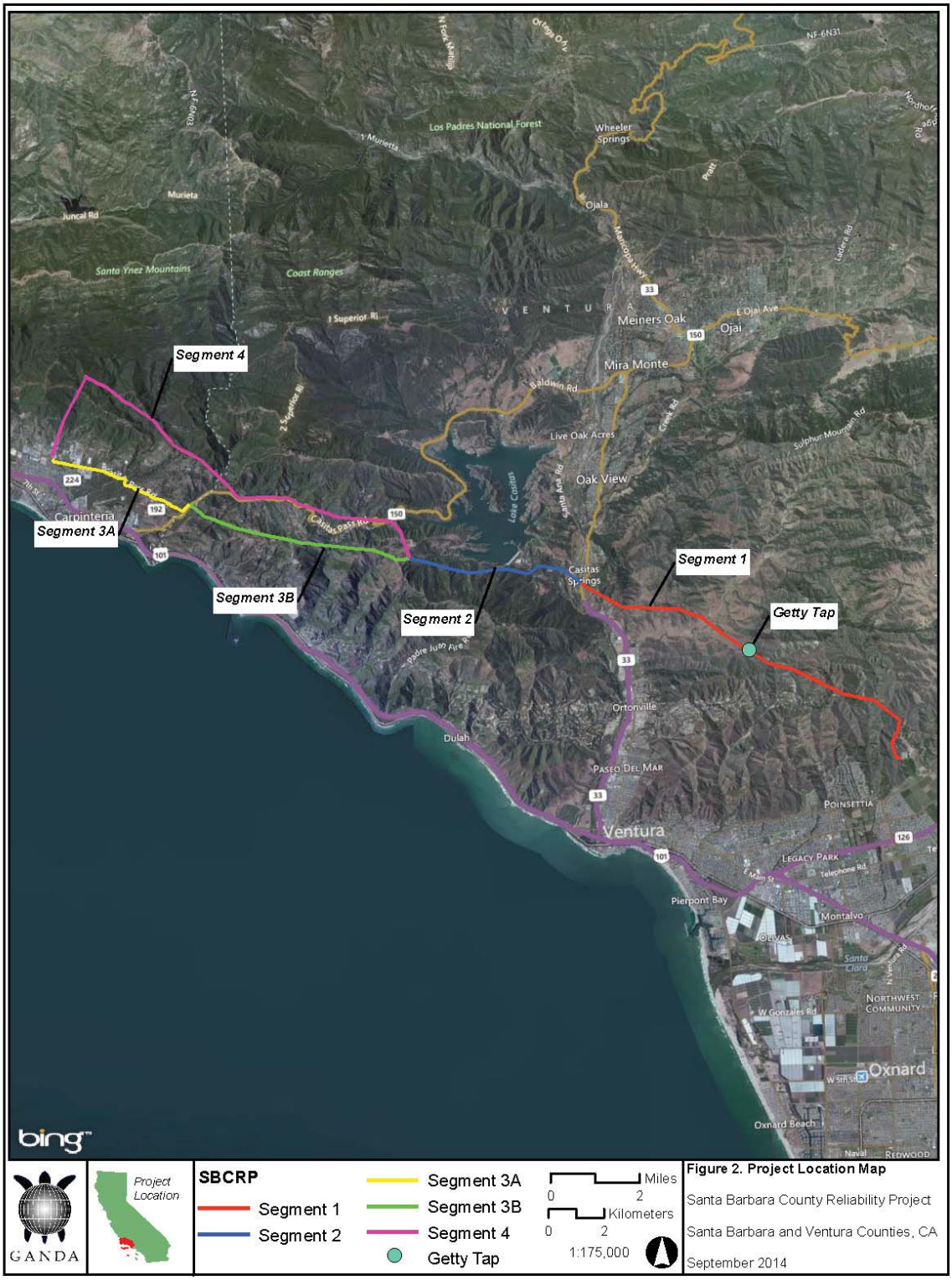


**Figure 2. Project Location Map**

## Regulatory Setting

LBVI and their designated critical habitat are protected under various federal and state laws and regulations. The Federal Endangered Species Act and the California Endangered Species Act specifically provide the most direct protection for this endangered species by protecting individual birds, bird nests, eggs and breeding habitat.

### Endangered Species Act

The LBVI was listed as endangered in 1986 under the Endangered Species Act (ESA; 51 Federal Register [FR] 16474). Critical habitat for LBVI was designated by the USFWS in 1994 (59 FR 4845).

The ESA of 1973 provides for the protection of plant and animal species listed by the federal government as "endangered" or "threatened," and protects "the ecosystems upon which they depend." Pursuant to Section 9 of the ESA, it is unlawful for any person to "take" a federally listed species. "Take," as defined by the ESA, "means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." This can also include the modification of a species' habitat.

When non-federal entities, such as states, counties, local governments, and private landowners, wish to conduct an otherwise lawful activity that might incidentally, but not intentionally, "take" a listed species, an incidental take permit must first be obtained via formal consultation with the USFWS using one of two methods. If a federal nexus is available, an incidental take permit must be obtained for the Project by the federal agency involved in the nexus via formal consultation with USFWS (ESA § 10(a)(1)(B)). If no federal nexus is available, then an incidental take permit must be obtained must first be obtained following formal consultation with the USFWS via Section 7 of the ESA (ESA § 7).

### California Endangered Species Act (CFG Code § 2050, et seq.)

The LBVI was listed as an endangered species in 1980 under the California Endangered Species Act (CESA; California Department of Fish and Wildlife [CDFW] 1980).

The CESA generally parallels the provisions of the Federal ESA, and states that "all native species of fishes, amphibians, reptiles, birds, mammals, invertebrates, and plants, and their habitats, threatened with extinction and those experiencing a significant decline which, if not halted, would lead to a threatened or endangered designation, will be protected or preserved." The CDFW administers the CESA, and has committed to work with all interested persons, agencies, and organizations to protect and preserve such sensitive resources and their habitats.

Under the CESA, "endangered" is defined as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range." "Threatened" is defined as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts." "Take" is defined as "to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill" an individual of a species, but the definition does not include "harm" or "harass," as the ESA does. As a result, the threshold for a take under the CESA is higher than that under the federal ESA.

## Methods

The surveys were conducted by a team of qualified biologists familiar with the songs, whisper songs, calls, scolds, and plumage characteristics of adult and juvenile LBVI. Surveys were conducted following the 2001 USFWS protocol. As recommended by the protocol, eight surveys were conducted between April 10 and July 31. All surveys were conducted during mild weather conditions, as per the protocol. In most cases surveys were conducted between 0530 hours and 1100 hours, however there were 14 occasions when surveys were not completed until 1125 hours due to land owner access constraints. At the Ventura River site, LBVI-5, LBVI surveys were conducted concurrently with southwestern willow flycatcher surveys (*Empidonax traillii extimus*) on all survey visits excluding the July 24 visit.

The protocol LBVI surveys were conducted by slowly walking the survey site so that all suitable habitat was searched for LBVI. Surveyors stopped and observed periodically throughout the survey sites, but no set distance between locations or timing were established, which is consistent with the protocol. Observation of the survey sites was both visual and auditory, but given the cryptic nature of the species, surveyors primarily listened for LBVI vocalizations. In order to avoid impacts to potential breeding habitat and avoid leaving the Project easement, not all of the survey areas where physically entered, but all were observed to the satisfaction of the surveyors and the protocol. Each entire survey site was surveyed during each survey visit and the total area surveyed by each surveyor during each survey day was less than the 50 hectares or 300 meters, as outlined in the protocol.

The surveys were completed at all sites before July 31, the last day recommended by the protocol. All sites were surveyed 10 or more days apart for the first six survey visits. All surveys were conducted seven (7) days apart during Survey Visit Number 7 except for sites LBVI-13 to LBVI-15, and all sites were surveyed seven days apart during Survey Visit 8, which is in accordance with the USFWS-issued variance (Appendix A). See Table 1 for the survey dates and timing. This survey and report fulfill the USFWS project requirements and the conditions of authorization by the USFWS.

Table 1. Survey Dates by Site – Least Bell's Vireo Protocol Surveys in 2014

| Site | Visit | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Survey 1 | Survey 2 | Survey 3 | Survey 4 | Survey 5 | Survey 6 | Survey 7 | Survey 8 |
| LBVI-1 | 5/19 | 5/29 | 6/9 | 6/19 | 6/30 | 7/10 | 7/17 | 7/24 |
| LBVI-2 | 5/19 | 5/29 | 6/9 | 6/19 | 6/30 | 7/10 | 7/17 | 7/24 |
| LBVI-3 | 5/19 | 5/29 | 6/9 | 6/19 | 7/1 | 7/11 | 7/18 | 7/25 |
| LBVI-4 | 5/19 | 5/29 | 6/9 | 6/19 | 6/30 | 7/10 | 7/17 | 7/24 |
| LBVI-5 | 5/20 | 5/30 | 6/10 | 6/20 | 7/1 | 7/11 | 7/18 | 7/25 |
| LBVI-6 | 5/19 | 5/29 | 6/9 | 6/19 | 6/30 | 7/10 | 7/17 | 7/24 |
| LBVI-7 | 5/20 | 5/30 | 6/10 | 6/20 | 7/1 | 7/11 | 7/18 | 7/25 |
| LBVI-8 | 5/20 | 5/30 | 6/10 | 6/20 | 7/1 | 7/11 | 7/18 | 7/25 |
| LBVI-9 | 5/20 | 5/30 | 6/10 | 6/20 | 7/1 | 7/11 | 7/18 | 7/25 |
| LBVI-10 | 5/20 | 5/30 | 6/10 | 6/20 | 7/1 | 7/11 | 7/18 | 7/25 |
| LBVI-11 | 5/20 | 5/30 | 6/10 | 6/20 | 7/1 | 7/11 | 7/18 | 7/25 |
| LBVI-12 | 5/20 | 5/30 | 6/10 | 6/20 | 7/1 | 7/11 | 7/18 | 7/25 |
| LBVI-13 | 5/19 | 5/29 | 6/9 | 6/19 | 6/30 | 7/10 | 7/24 | 7/31 |
| LBVI-14 | 5/19 | 5/29 | 6/9 | 6/19 | 6/30 | 7/10 | 7/24 | 7/31 |
| LBVI-15 | 5/19 | 5/29 | 6/9 | 6/19 | 6/30 | 7/10 | 7/24 | 7/31 |
| LBVI-16 | 5/19 | 5/29 | 6/9 | 6/19 | 6/30 | 7/10 | 7/17 | 7/24 |

= surveys conducted less than 10 days apart

## Site Suitability and Description

The survey area is comprised of 16 sites located along the Project corridor between the cities of Ventura and Carpinteria (Figure 3). Survey sites are located in every segment of the Project except the Getty Tap. Sites in the eastern portion of the survey area are located along the Ventura River and its tributaries, on tributaries to the Santa Clara River, or Arundell Barranca Creek. Sites in the western portion of the survey area are located along Los Sauces, Rincon and Carpinteria creeks or their tributaries. Overall, the survey area includes moderate to good habitat for LBVI. The location, habitat quality, and a representative photo for each site is provided below. Additional photos of each site are located in Appendix B and maps of each site are located in Appendix C.

The California Natural Diversity Database (CNDDB) contains 17 occurrence records for LBVI within 10 miles of the Project Area (Figure 4; CDFW 2014). All occurrence records are located along the Santa Ynez, Santa Clara and Ventura rivers. The CNDDB tracks four occurrences along the Ventura River, including one at Foster Memorial Park, just south of site LBVI-5. USFWS-designated LBVI critical habitat is located within 10 miles of the Project Area on the Santa Ynez River, but it is not connected to any of the drainages in the Project Area (USFWS 1994) (Figure 4).

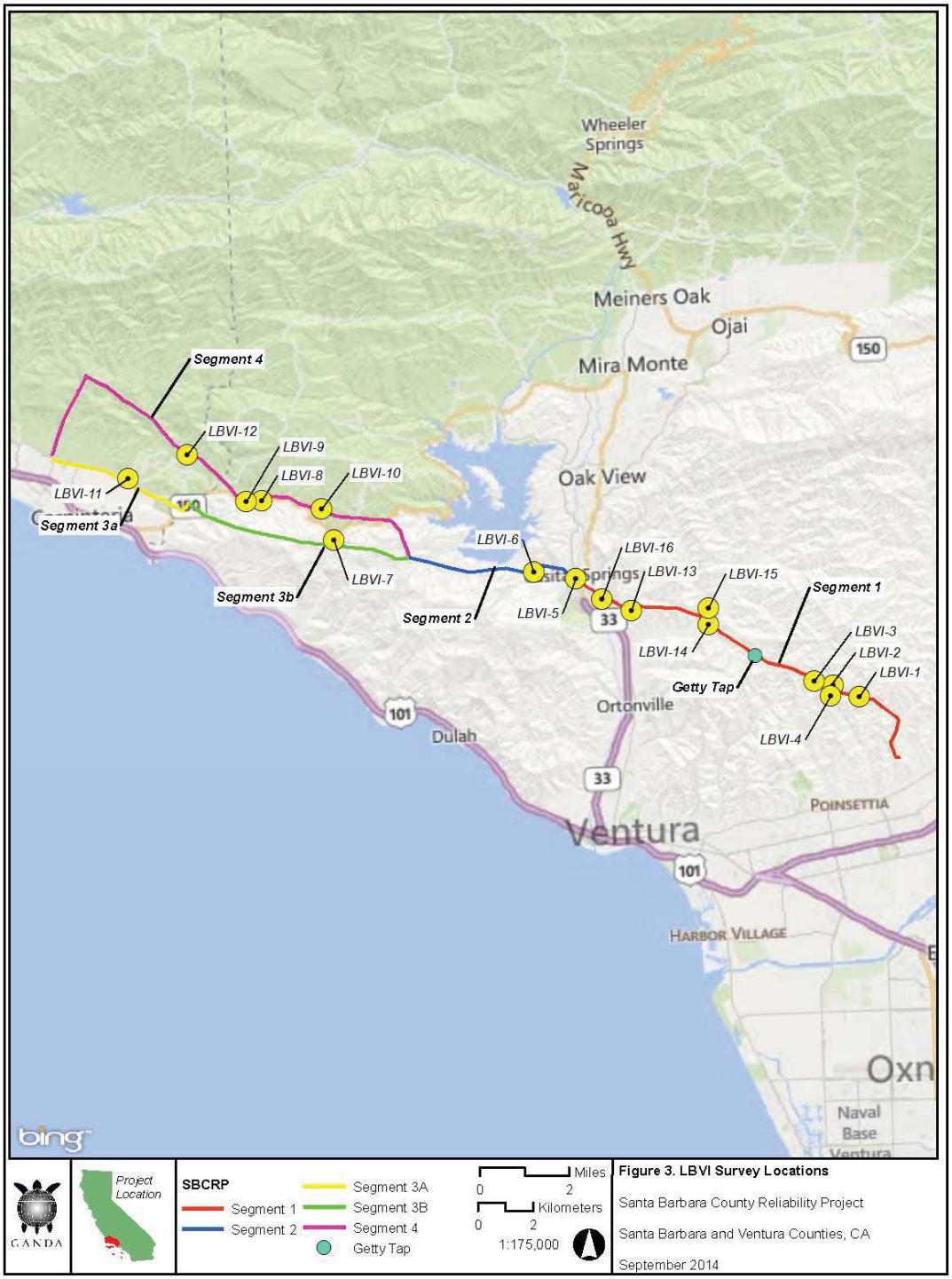


**Figure 3. LBVI Survey Locations**

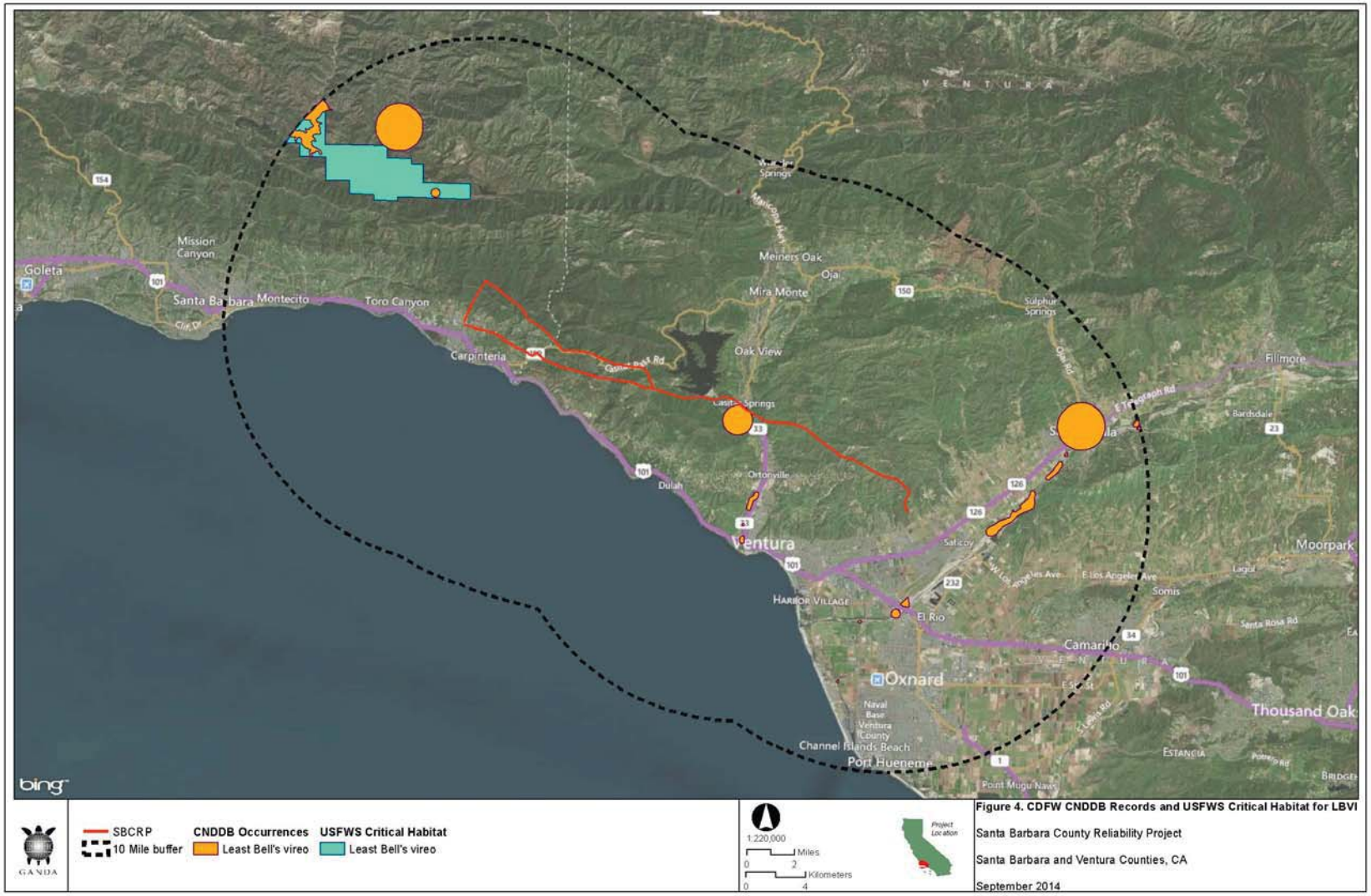


Figure 4. CDFW CNDDB Records and USFWS Critical Habitat for LBVI

A July 2014 query of LBVI on the Cornell Lab of Ornithology and National Audubon Society's eBird website revealed that LBVI has been observed in the Cañada Larga area near survey sites LBVI-14 and LBVI-15, as well as at the Ventura River Estuary and on the Santa Clara River (Figure 5). Additionally, LBVI were observed on three occasions during SCE surveys conducted in the Canada Larga area in 2013. An unknown aged individual was briefly detected aurally and visually on July 31, and a single fledgling/juvenile was briefly observed on both September 5 and September 12. No evidence of breeding or nesting was observed (SCE, pers. comm.).

A description and photos of the 16 survey sites are provided below (Figures 6 through 21).

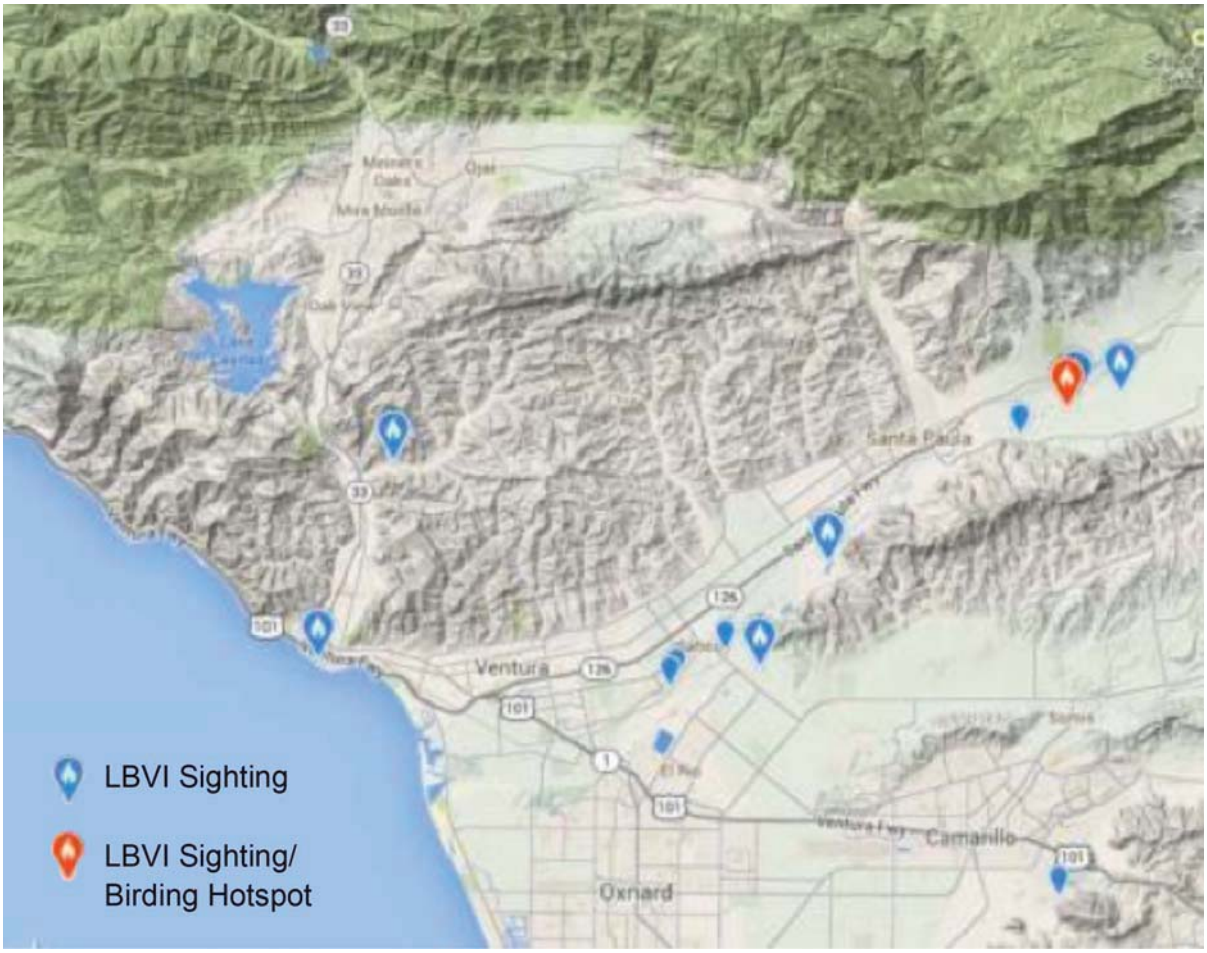


Figure 5. eBird records of LBVI observation in the Project Area. Accessed July 2014.

**LBVI-1 Long Canyon**

This site is located along Long Canyon, a tributary to Harmon Barranca Creek, which flows into the Santa Clara River. Long Canyon is classified as an intermittent creek and no standing or flowing water was observed during the survey effort. The site is comprised of moderate quality LBVI habitat, and includes a gently to steeply banked creek with a single to slightly braided channel surrounded by riparian vegetation. The vegetation is composed of a willow-dominant understory with a lower willow canopy throughout most of the site, but with no upper canopy present. Mule fat and willow are consistent thorough out the riparian habitat, which varies in width from 50 to 100 feet. The survey site is approximately 3.99 acres.

Figure 6. LBVI-1 Long Canyon

**LBVI-2 Upper Lake Canyon**

This site is located along the upper portion of Lake Canyon Creek, a tributary to Arundell Barranca Creek that flows into the ocean. Lake Canyon Creek is classified as an intermittent creek and no standing or flowing water was observed during the survey effort. The site provides moderate quality LBVI habitat, and consists of a moderately to steeply banked creek with a single to slightly braided channel surrounded by riparian vegetation. The vegetation is composed of a willow-dominant understory with a lower willow canopy throughout most of the site, but with no upper canopy present. Mule fat and willow are consistent thorough out the riparian habitat, which varies in width from 50 to 100 feet. The survey site is approximately 0.83 acre.

Figure 7. LBVI-2 Upper Lake Canyon

**LBVI-3 Sexton Canyon**

This site is located east of Sexton Canyon Road and is either a natural or man-made depression that captures water and retains it for at least part of the year. This was evidenced by the presence of a cracked silt layer. During wet years it may contribute to Arundell Barranca Creek, which flows to the ocean, but no standing or flowing water was observed at the site during the survey effort. The site is comprised of moderate quality LBVI habitat, and consists of a depression resembling a former stock pond that is full of riparian vegetation. The vegetation is composed of a willow–mule fat-dominant understory with a lower willow canopy throughout most of the site, but with no upper canopy present. Mule fat and willow are consistent throughout the riparian habitat, which is approximately 200 feet long and 150 feet in width. The survey site is approximately 0.69 acre.

Figure 8. LBVI-3 Sexton Canyon

### LBVI-4 Lower Lake Canyon

This site is located along Lake Canyon Creek, downstream of Site LBVI-2. Lake Canyon is a tributary to Arundell Barranca Creek and is classified as an intermittent creek. No standing or flowing water was observed during the survey effort. The site is comprised of moderate quality LBVI habitat, and consists of a moderately to steeply banked creek with a single to slightly braided channel surrounded by riparian vegetation. In addition, there appears to be the remains of a former man-made basin that has filled in with riparian vegetation. No water was visible although a cracked silt layer provides evidence that the depression retains standing water for at least part of the year. The vegetation is composed of a willow–mule fat-dominant understory with a scattered lower willow canopy, but with no upper canopy present. The mule fat and willow are consistent throughout the riparian habitat, which varies in width from 50 to 200 feet. The survey site is approximately 3.15 acres.

Figure 9. LBVI-4 Lower Lake Canyon

**LBVI-5 Ventura River**

This site is located on the Ventura River, south of the town of Casitas Springs and north of Foster Memorial Park. The Ventura River is classified as a perennial river and, although no flowing water was observed, standing water was observed during all the survey visits. The site is comprised of good quality LBVI habitat, which consists of a wide, braided channel with islands and borders of riparian vegetation. Riprap and gabions line the outer riverbank. The vegetation is composed of a willow–mule fat–arundo-dominated understory with a lower willow–arundo canopy throughout most of the site and an upper canopy of sycamore, willow and oak in some areas. The mule fat and willow are consistent throughout most of the habitat, which varies in width from 700 to 900 feet. The survey site is approximately 18.91 acres.

Figure 10. LBVI-5 Ventura River

**LBVI-6 Casitas Vista**

This site is located on the north side of Casitas Vista Road along Coyote Creek, a tributary to the Ventura River. Coyote Creek is classified as a perennial creek; however, no water was present during any of the survey visits. The site is comprised of good quality LBVI habitat, and consists of a wide braided streambed with a moderately steep bank and islands and borders of riparian vegetation. The vegetation is composed of a willow-dominant understory with a lower willow canopy and a contiguous sycamore, willow, and oak upper canopy throughout most of the site. The willow is consistent throughout the riparian habitat, which varies in width from 100 to 300 feet. The survey site is approximately 8.10 acres.

Figure 11. LBVI-6 Casitas Vista

**LBVI-7 Lake Casitas**

This site is located on the south side of Casitas Pass Road (SR 150) along Los Sauces Creek, which flows to the ocean. Los Sauces is classified as a perennial creek and water was observed in the main creek drainage during all the survey visits. The site is comprised of good quality LBVI habitat, with several branches of a moderate to steeply banked creek in a single to slightly braided channel surrounded by riparian vegetation. The vegetation is composed of a willow-dominant understory with a lower willow canopy throughout most of the site and a contiguous upper canopy consisting of sycamore, willow and oak. The willow is consistent throughout the riparian habitat, which varies in width from 100 to 300 feet. The survey site is approximately 10.33 acres.

Figure 12. LBVI-7 Lake Casitas

**LBVI-8 Highway 150 West Yard – East**

This site is located along Casitas Creek on the south side Casitas Pass Road (SR 150). Casitas Creek is classified as an intermittent creek and no standing or flowing water was observed during the survey effort. The site is comprised of good quality LBVI habitat, and consists of a moderately to steeply banked creek with a single to slightly braided channel surrounded by riparian vegetation. The vegetation is composed of a willow-dominant understory with a lower willow canopy throughout most of the site, but with no upper canopy present. The mule fat and willow are consistent throughout the riparian habitat, which varies in width from 30 to 100 feet. The survey site is approximately 1.42 acres.

Figure 13. LBVI-8 Highway 150 West Yard – East

**LBVI-9 Highway 150 West Yard – West**

This site is located along Casitas Creek on the south side of Casitas Pass Road (SR 150). Casitas Creek is classified as an intermittent creek and no standing or flowing water was observed during the survey effort. The site is comprised of good quality LBVI habitat, and consists of a moderately to steeply banked creek with a single to slightly braided channel surrounded by riparian vegetation. The vegetation is composed of a willow-dominant understory with a lower willow canopy throughout most of the site, but with no upper canopy present. The mule fat and willow are consistent throughout the riparian habitat, which varies in width from 30 to 100 feet. The survey site is approximately 1.17 acres.

Figure 14. LBVI-9 Highway 150 West Yard – West

**LBVI-10 Rameli Canyon**

This site is located on the north side of Casitas Pass Road (SR 150) along Los Sauces Creek, which flows directly to the ocean. Los Sauces is classified as an intermittent creek and no standing or flowing water was observed during the survey effort. The site is comprised of moderate quality LBVI habitat, and consists of a moderately to steeply banked creek with a single to slightly braided channel surrounded by riparian vegetation. The vegetation is composed of a willow-dominant understory with a lower willow canopy throughout most of the site, but with no upper canopy present. The mule fat and willow are consistent throughout the riparian habitat, which varies in width from 50 to100 feet. The survey site is approximately 2.82 acres.

Figure 15. LBVI-10 Rameli Canyon

**LBVI-11 Lillingston Canyon**

This site is located along Carpinteria Creek at the junction of Casitas Pass Road (SR 192) and Lillingston Canyon Road. Carpinteria Creek flows to the ocean and is classified as a perennial creek. No standing or flowing water was observed during the survey effort. The site is comprised of good quality LBVI habitat, and consists of a moderately to steeply banked creek with a single to slightly braided channel surrounded by riparian vegetation. The vegetation is composed of a willow–mule fat-dominant riparian habitat with a lower willow canopy throughout most of the site. There is contiguous upper canopy present consisting of sycamore, willow and oak. The mule fat and willow are consistent throughout the riparian habitat, which varies in width from 50 to 150 feet. The survey site is approximately 2.79 acres.

Figure 16. LBVI-11 Lillingston Canyon

### LBVI-12 Gobernador Canyon

This site is located north of Gobernador Canyon Road along Gobernador Creek, a tributary to Carpinteria Creek. Gobernador Creek is classified as an intermittent creek; however, water was present for most of the survey effort. The site is comprised of moderate quality LBVI habitat, and consists of a creek with a moderately steep bank and a single to slightly braided channel that is surrounded by riparian vegetation. The vegetation is composed of a willow and blackberry-dominant riparian habitat with a willow canopy throughout most of the site, but with no upper canopy present. The mule fat and willow are consistent throughout the riparian habitat, which varies in width from 100 to 200 feet. The survey site is approximately 1.86 acres.

Figure 17. LBVI-12 Gobernador Canyon

**LBVI-13 Weldon Canyon**

The site is located along Weldon Canyon, a tributary to Cañada Larga Creek. Weldon Canyon Creek is classified as an intermittent creek and no standing or flowing water was observed during the survey effort. The site is comprised of good quality LBVI habitat, and consists of a moderately to steeply banked creek with a single to slightly braided channel surrounded by riparian vegetation. The vegetation is composed of a willow–mule fat-dominant understory with a willow-dominated lower canopy and a scattered sycamore and willow upper canopy. The mule fat and willow are consistent throughout the riparian habitat, which varies in width from 100 to 150 feet. The survey site is approximately 8.45 acres.

Figure 18. LBVI-13 Weldon Canyon

**LBVI-14 Cañada Larga**

The site is located south of Cañada Larga Road along Cañada Larga Creek, a tributary to the Ventura River. Cañada Larga Creek is classified as an intermittent creek; however, standing water was present throughout the survey effort. The site is comprised of good quality LBVI habitat, and consists of a moderately to steeply banked creek with a single to slightly braided channel surrounded by riparian vegetation. The vegetation is composed of a willow–mule fat-dominant riparian habitat, a willow-dominated lower canopy and a scattered sycamore and willow upper canopy. The mule fat and willow are consistent throughout the riparian habitat, which varies in width from 125 to 275 feet. The survey site is approximately 5.99 acres.

Figure 19. LBVI-14 Cañada Larga

**LBVI-15 Cañada de Alisos**

The site is located along Cañada de Alisos Creek, a tributary to Cañada Larga Creek. Cañada de Alisos is classified as an intermittent creek and no standing or flowing water was observed during the survey effort. The site is comprised of moderate quality LBVI habitat, and consists of a moderately to steeply banked creek with a single to slightly braided channel surrounded by riparian vegetation. The vegetation is composed of a willow–mule fat-dominant understory, a willow-dominated lower canopy and a scattered sycamore and willow upper canopy. The mule fat and willow are consistent throughout the riparian habitat, which varies in width from 50 to 150 feet. The survey site is approximately 3.56 acres.

Figure 20. LBVI-15 Cañada de Alisos

## LBVI-16 Rocky Mountain

The site is located in an unnamed drainage north of Rocky Mountain Road. This site is probably an ephemeral creek and no standing or flowing water was observed at the site during the survey effort. The site is comprised of moderate quality LBVI habitat, and consists of a steeply banked creek with a single to slightly braided channel surrounded by riparian vegetation. The vegetation consists of a willow–mule fat-dominant understory and a scattered willow lower canopy, but with no upper canopy present. The mule fat and willow are consistent throughout the riparian habitat that varies in width from 50 to 100 feet. The survey site is approximately 2.10 acres.

Figure 21. LBVI-16 Rocky Mountain

## Results

All the areas identified in the most recent SCE construction plans with potential to have Project-related impacts on suitable breeding habitat were adequately surveyed for LBVI to the satisfaction of the protocol with the amended visit timing of the variance. This survey effort resulted in no LBVI detections during any of the survey periods. However, 80 incidental species were observed throughout the survey, including yellow warbler (*Dendroica petechia*) and yellow breasted chat (*Icteria virens*), both considered localized species of concern and riparian-dependent species. Yellow warblers were observed at sites LBVI-6, 8, 9, 10, 11, 12, 13, and 14. Yellow-breasted chats were observed at sites LBVI-1, 4, and 10. Brown-headed cowbird (*Molothrus ater*), a known nest parasite of LBVI, was also observed. Brown-headed cowbirds were observed at sites LBVI-6, 8, 9, 11, 14, and 15.

Other bird species observed throughout the survey sites included those often associated with riparian habitats, such as common yellowthroat (*Geothlypis trichas*) and black-headed grosbeak (*Pheucticus melanocephalus*), and species that utilize low cover, such as California quail (*Callipepla californica*), spotted towhee (*Pipilo maculatus*), and California towhee (*Melozone crissalis*), as well as species that utilize a range of vegetation cover types, such as western scrub-jay (*Aphelocoma californica*) and Anna's hummingbird (*Calypte anna*).

Non-avian vertebrates detected by direct observation or sign at multiple survey sites included western fence lizard (*Sceloporus occidentalis*), dusky-footed woodrat (*Neotoma fuscipes*), desert cottontail (*Sylvilagus audubonii*), and coyote (*Canis latrans*). For a complete list of all incidental bird species and other vertebrate species observed, see Appendix D.

## Conclusion

Although no LBVI were observed, the presence of suitable habitat within the survey area, known occurrences near the survey areas, and designated critical LBVI habitat within 10 miles of the Project indicate the potential for LBVI to breed in the survey area in the future. If work is scheduled to occur within 500 feet of these 16 sites during the LBVI breeding season, a pre-construction biological survey(s) is recommended by a qualified biologist within seven (7) days of the commencement of activities to confirm the absence of LBVI. Best Management Practices (BMPs) should be utilized during project activities, as applicable, to protect biological resources within and adjacent to riparian habitat that may support LBVI.

## References

California Department of Fish and Wildlife (CDFW). 1980. Endangered and threatened animals of California: State of California, The Resources Agency, Department of Fish and Wildlife, Sacramento, California.

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Cornell Lab of Ornithology and National Audubon Society. *eBird*. http://ebird.org/content/ebird. Accessed May 2014.

Southern California Edison (SCE). 2014. SCE Santa Barbara County Reliability Project Least Bell's Vireo Presence/Absence Survey Variance Request. July 3, 2014.

_____. 2013 Personal Communication. Personal communication between Jeff Steinman and SCE Project Biologist Joanna Gregory during the Least Bell's Vireo Habitat Assessment for the Santa Barbara County Reliability Project. May12, 2014.

U.S. Fish and Wildlife Service (USFWS). 1986. Federal Register, Department of the Interior, Fish and Wildlife Service. Endangered and Threatened Wildlife and Plants; Determination of Endangered Status for the *Least Bell's Vireo; Final Rule*. 51 FR 85; pp 16474 – 16481. May 2, 1986.

_____. 1994. Federal Register, Department of the Interior, Fish and Wildlife Service. Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the *Least Bell's Vireo; Final Rule*. 59 FR 22, pp. 4845 – 4867. February 2, 1994.

_____. 2001. Least Bell's Vireo Survey Guidelines. Carlsbad Fish and Wildlife Office. Carlsbad, California.

# Appendix A

# Protocol Variance

**From:** Chris Dellith [mailto:chris_dellith@fws.gov]
**Sent:** Friday, July 11, 2014 2:39 PM
**To:** Jennifer Turner
**Cc:** Joanna.Gregory@sce.com
**Subject:** RE: SCE SBCRP LBVI survey variance

Hi Jennifer,

We will accept a modified survey protocol as described in your request (see attached). As you know, least Bell's vireo are easily detectable and very vocal; therefore, by conducting the last three surveys 7 days apart, you should be able to detect any LBVI if they are there. Furthermore, LBVI are known to remain in their territories beyond the July 31 survey protocol completion date. So, by extending the survey protocol to August 15, you should also be able to detect LBVI. However, we expect you to try and complete the surveys within the normal survey period. Please attach a copy of this email response to your survey report, which we are looking forward to reviewing.

Sincerely,
Chris

==========

Chris Dellith
Senior Fish and Wildlife Biologist (& Acting Deputy Assistant Field Supervisor for South Coast)
Ventura Field Office
U.S. Fish and Wildlife Service
2493 Portola Rd., Suite B
Ventura, CA 93003
(805) 644-1766, Ext. 227

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# Appendix B

# Photo Log

# Site LBVI-1

Photo 1: Outside site, from the northwest facing southeast.

Photo 2: Inside site, from the middle facing south.

# Site LBVI-2

Photo 1: Outside site, facing north.

Photo 2: Inside site, from the south facing north.

# Site LBVI-3

Photo 1: Outside site, from the west facing east.

Photo 2: Inside site, from the south facing north.

# Site LBVI-4

Photo 1: Outside site, from the south facing north.

Photo 2: Inside site, from the south facing north.

# Site LBVI-5

Photo 1: Outside site, from the southwest facing northeast.

Photo 2: Inside site, from the south facing north.

## Site LBVI-6

Photo1: Outside site, from the east facing west.

Photo 2: Inside site, from the south facing north.

# Site LBVI-7

Photo 1: Outside site, from the west facing east.

Photo 2: Inside site, from the south facing north.

## Site LBVI-8

Photo 1: Inside site, from the south looking east.

Photo 2: Inside site, from the north looking south.

# Site LBVI-9

Photo 1: Outside site, from the north facing south.

Photo 2: Outside site, from the east facing south.

# Site LBVI-10

Photo 1: Outside site, from the south facing north.

Photo 2: Inside site, from the north looking south.

# Site LBVI-11

Photo 1: Outside site, from the north facing south.

Photo 2: Inside site, from the southwest facing northeast.

# Site LBVI-12

Photo 1: Outside site, from the southeast facing northwest.

Photo2: Inside site, from the south facing north.

# Site LBVI-13

Photo 1: Outside site, from the northwest facing southeast.

Photo 2: Inside site, from the southwest facing northeast.

# Site LBVI-14

Photo 1: Outside site, from the west facing east.

Photo 2: Inside site, from the west facing east.

# Site LBVI-15

Photo 1: Outside site, from the south facing north.

Photo 2: Inside site, from the west facing east.

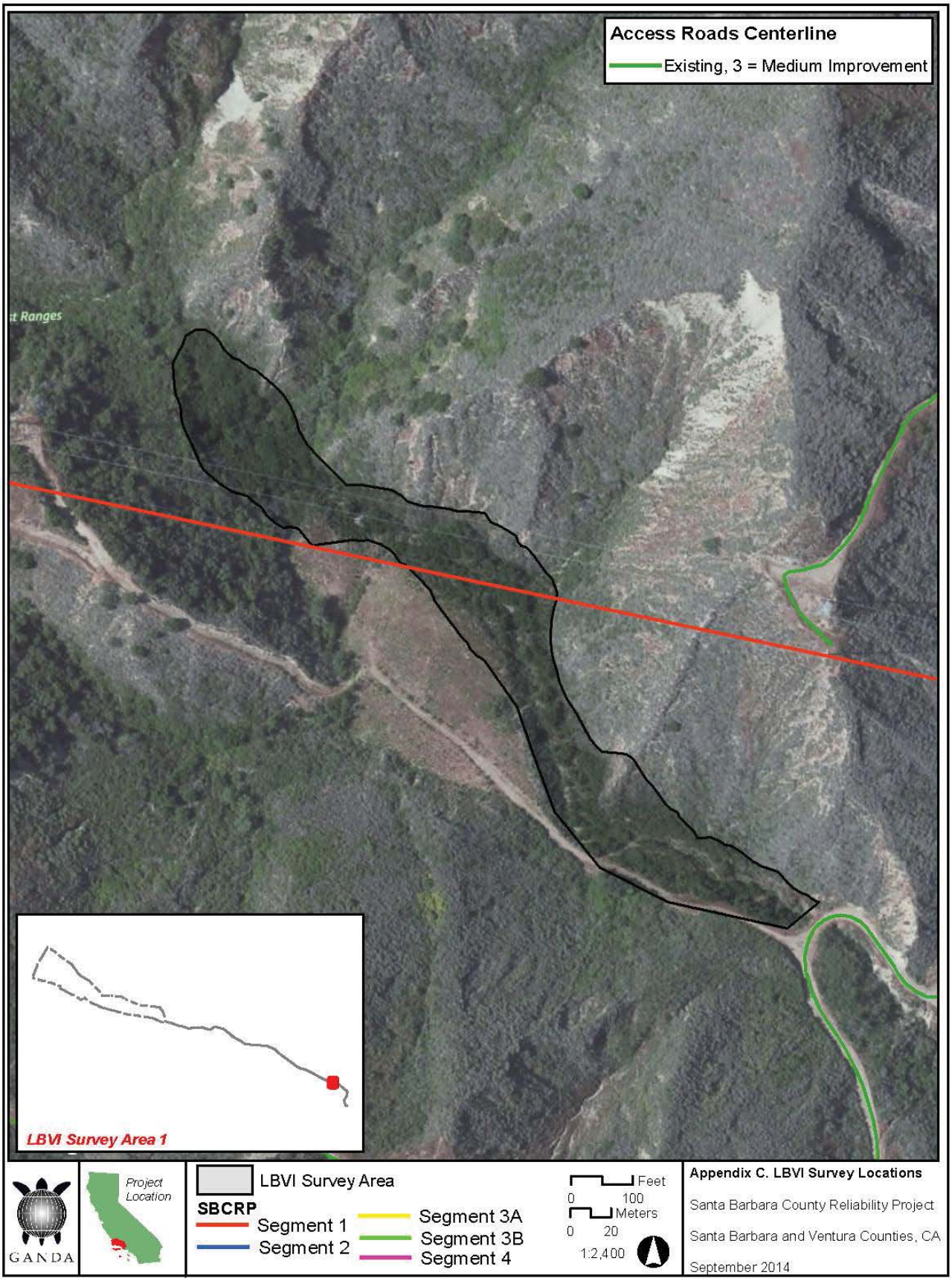
# Site LBVI-16

Photo 1: Outside site, from the north facing south.

Photo 2: Inside site, from the center facing east.

# Appendix C

# Maps of Survey Sites


Access Roads Centerline
Existing, 3 = Medium Improvement
LBVI Survey Area 1
GANDA
Project Location
LBVI Survey Area
SBCRP
Segment 1
Segment 2
Segment 3A
Segment 3B
Segment 4
Feet
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Meters
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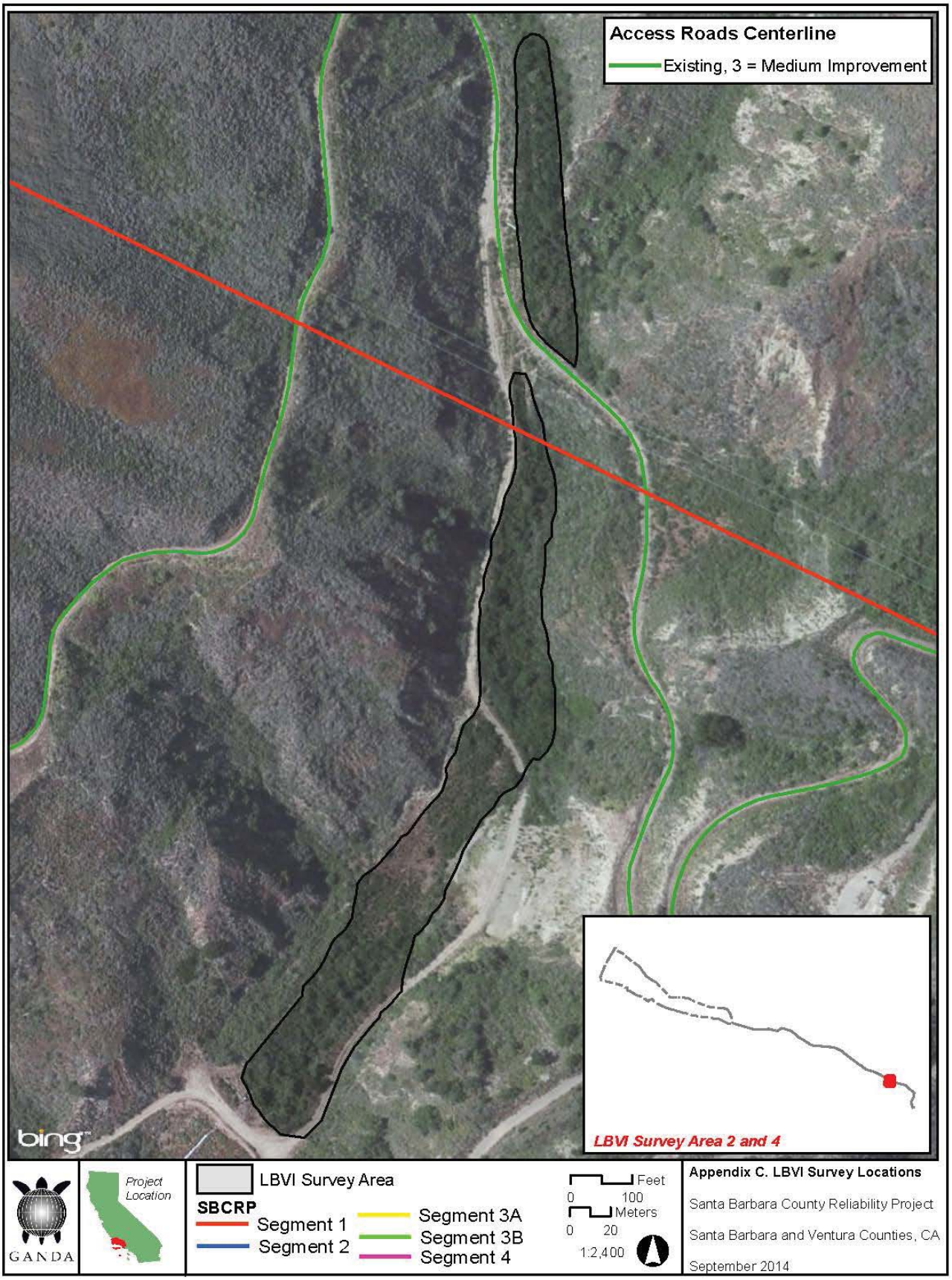
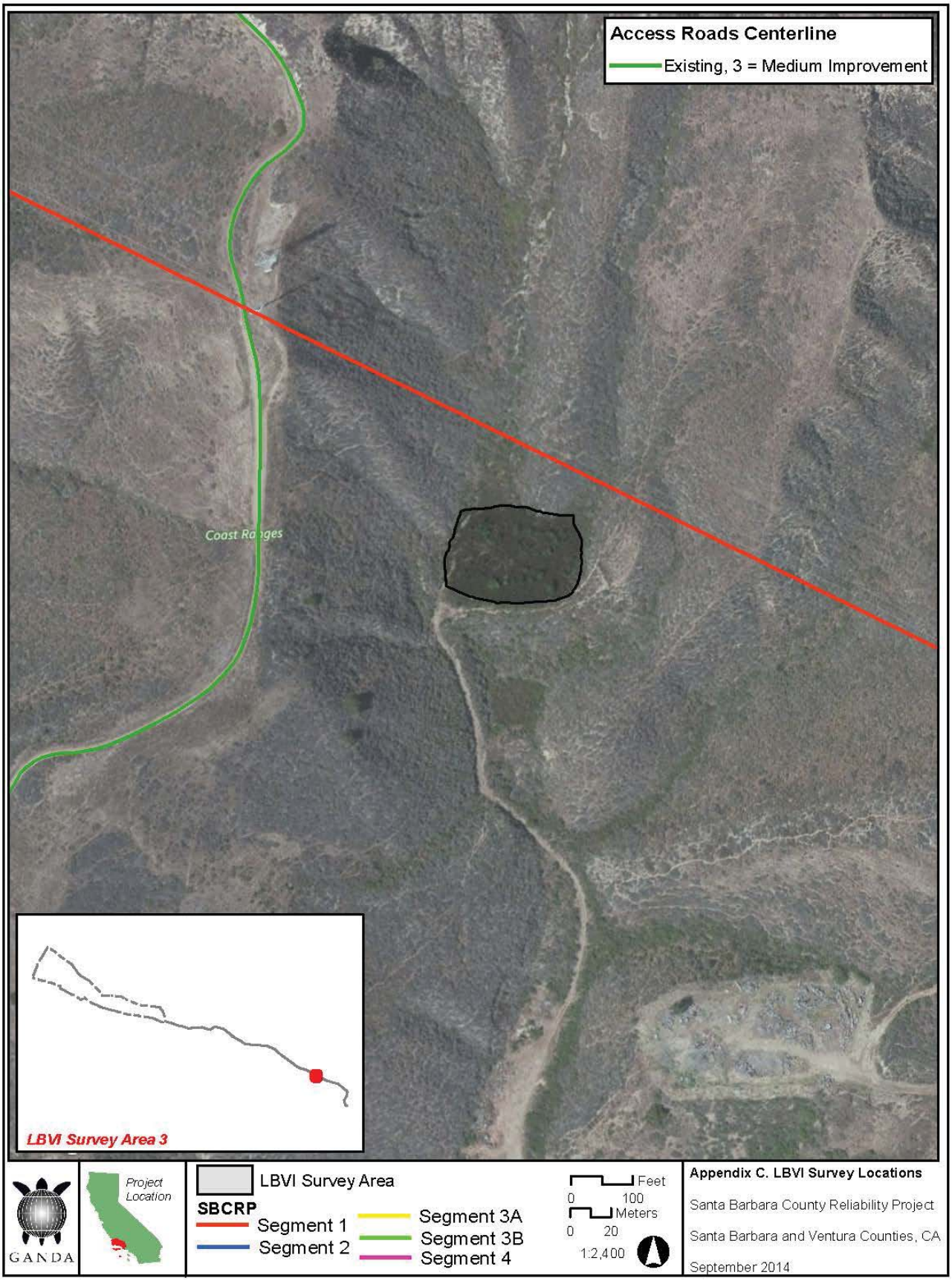
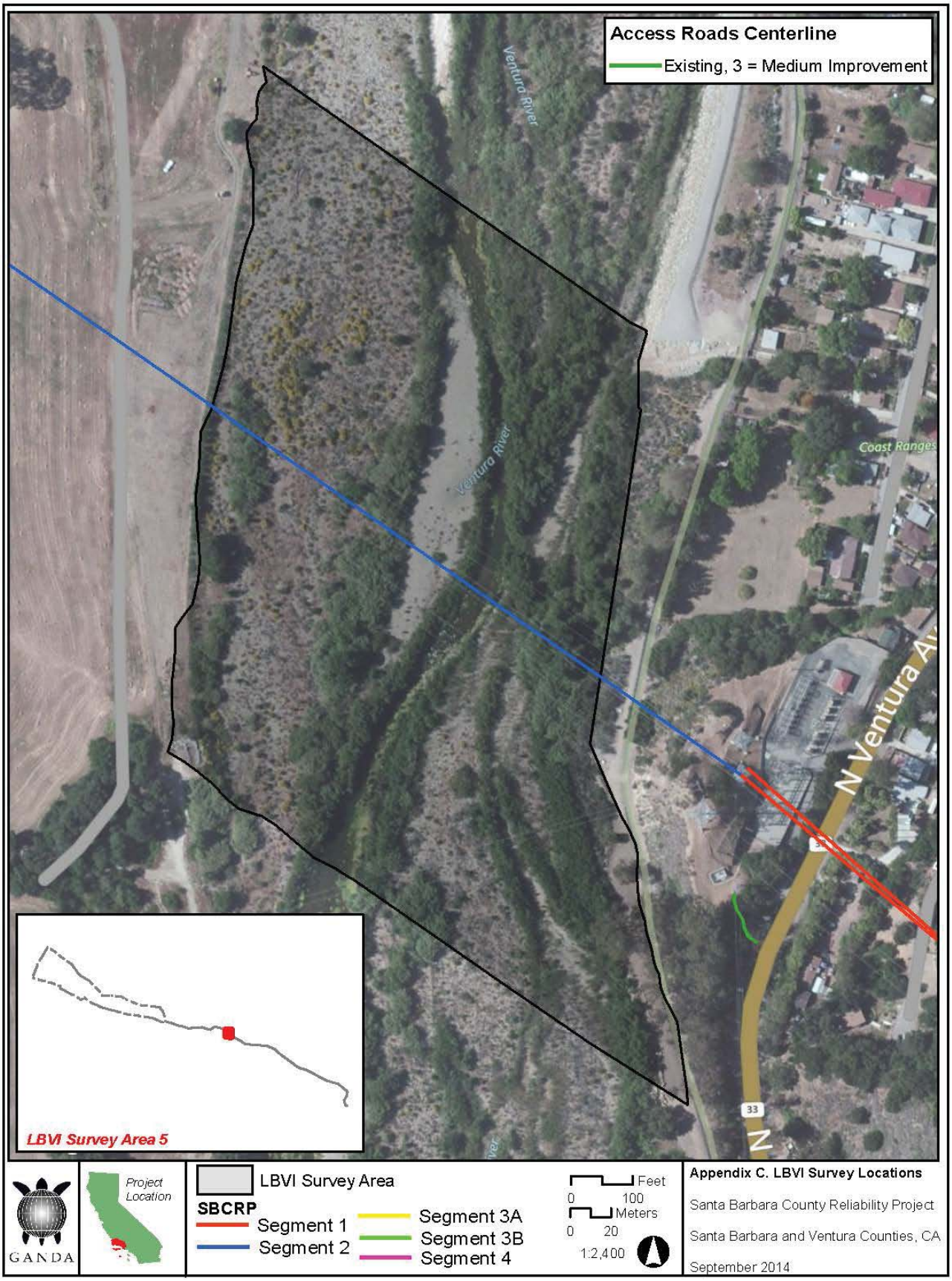
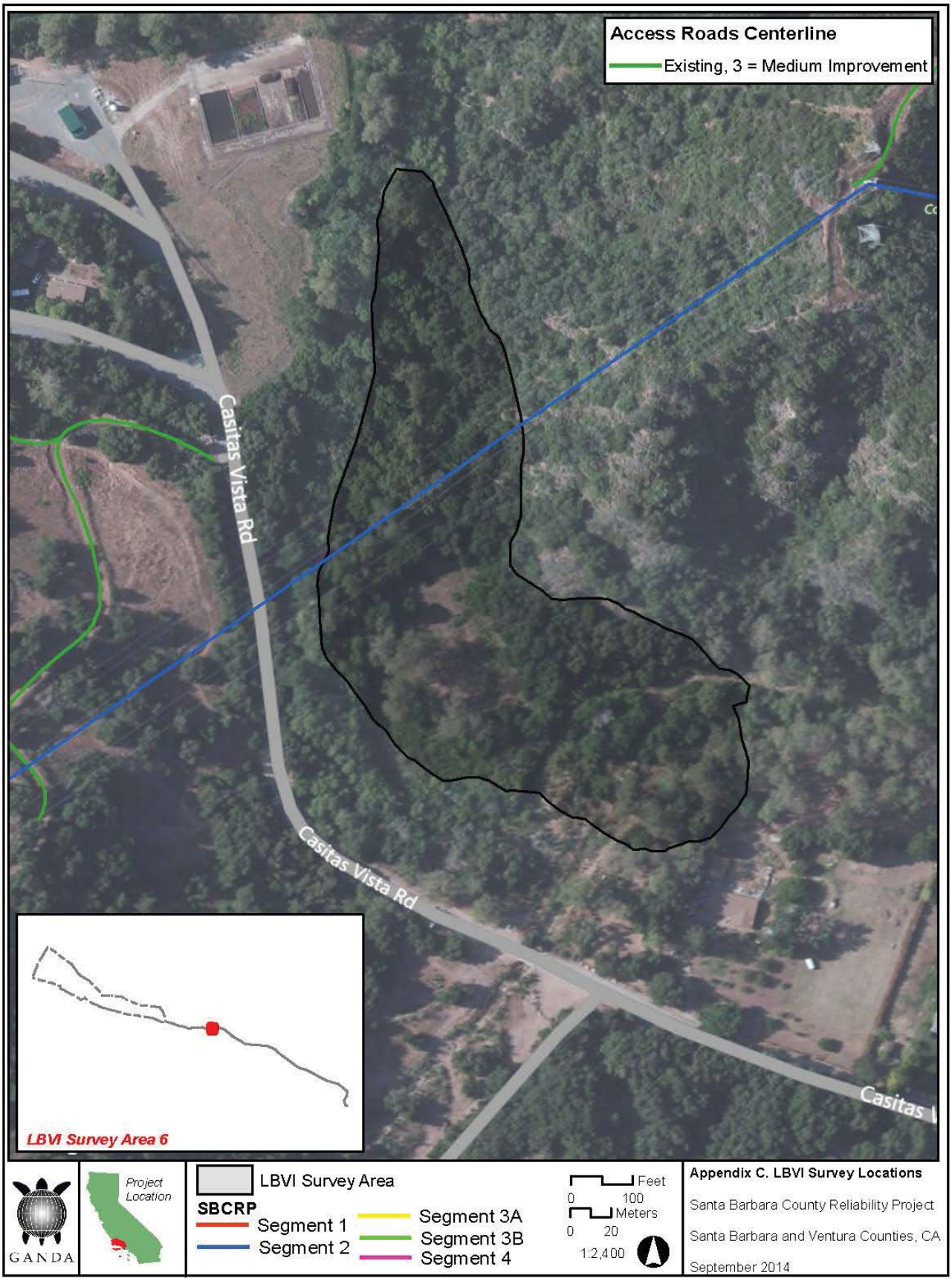
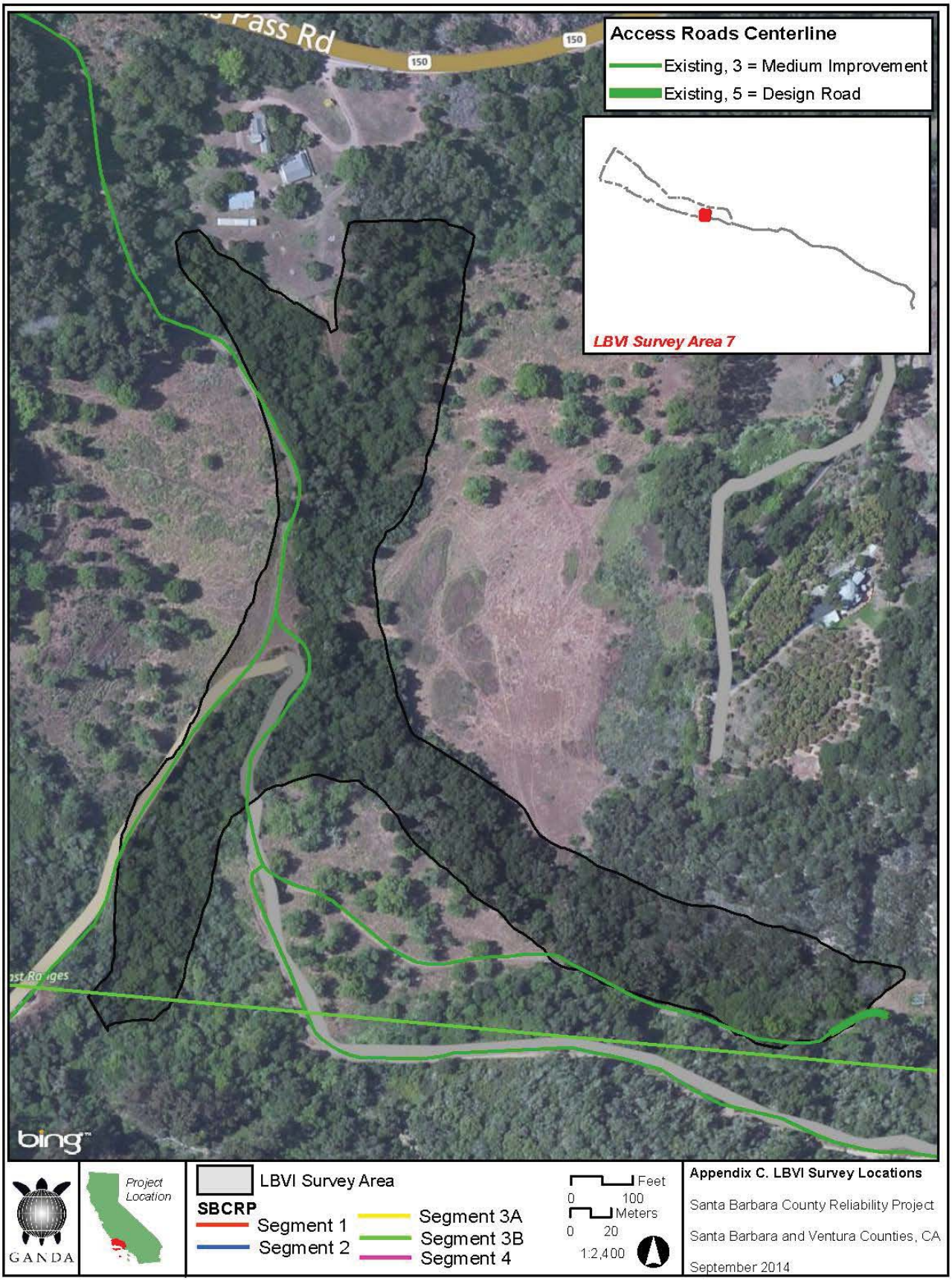
Appendix C. LBVI Survey Locations
Santa Barbara County Reliability Project
Santa Barbara and Ventura Counties, CA
September 2014


Access Roads Centerline
Existing, 3 = Medium Improvement
LBVI Survey Area 2 and 4
bing
GANDA
Project Location
LBVI Survey Area
SBCRP
Segment 1
Segment 2
Segment 3A
Segment 3B
Segment 4
Feet
0 100
Meters
0 20
1:2,400
Appendix C. LBVI Survey Locations
Santa Barbara County Reliability Project
Santa Barbara and Ventura Counties, CA
September 2014


Access Roads Centerline
Existing, 3 = Medium Improvement
Coast Ranges
LBVI Survey Area 3
GANDA
Project Location
LBVI Survey Area
SBCRP
Segment 1
Segment 2
Segment 3A
Segment 3B
Segment 4
Feet
0 100
Meters
0 20
1:2,400
Appendix C. LBVI Survey Locations
Santa Barbara County Reliability Project
Santa Barbara and Ventura Counties, CA
September 2014

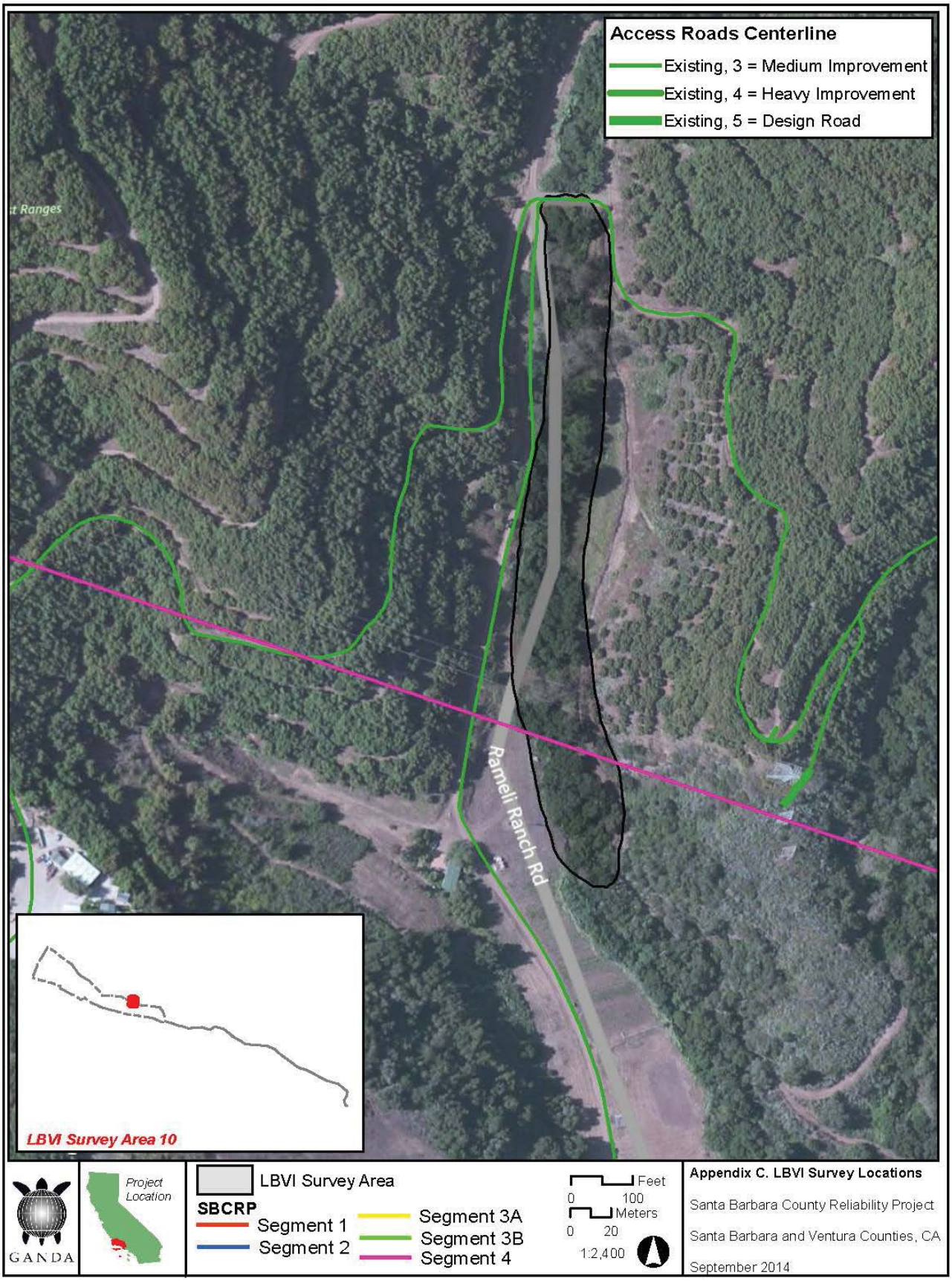

Access Roads Centerline
Existing, 3 = Medium Improvement
Ventura River
Ventura River
Coast Ranges
N Ventura Av
33
LBVI Survey Area 5
GANDA
Project Location
LBVI Survey Area
SBCRP
Segment 1
Segment 2
Segment 3A
Segment 3B
Segment 4
Feet
0 100
Meters
0 20
1:2,400
Appendix C. LBVI Survey Locations
Santa Barbara County Reliability Project
Santa Barbara and Ventura Counties, CA
September 2014


Access Roads Centerline
Existing, 3 = Medium Improvement
Casitas Vista Rd
Casitas Vista Rd
Casitas V
LBVI Survey Area 6
GANDA
Project Location
LBVI Survey Area
SBCRP
Segment 1
Segment 2
Segment 3A
Segment 3B
Segment 4
Feet
0 100
Meters
0 20
1:2,400
Appendix C. LBVI Survey Locations
Santa Barbara County Reliability Project
Santa Barbara and Ventura Counties, CA
September 2014

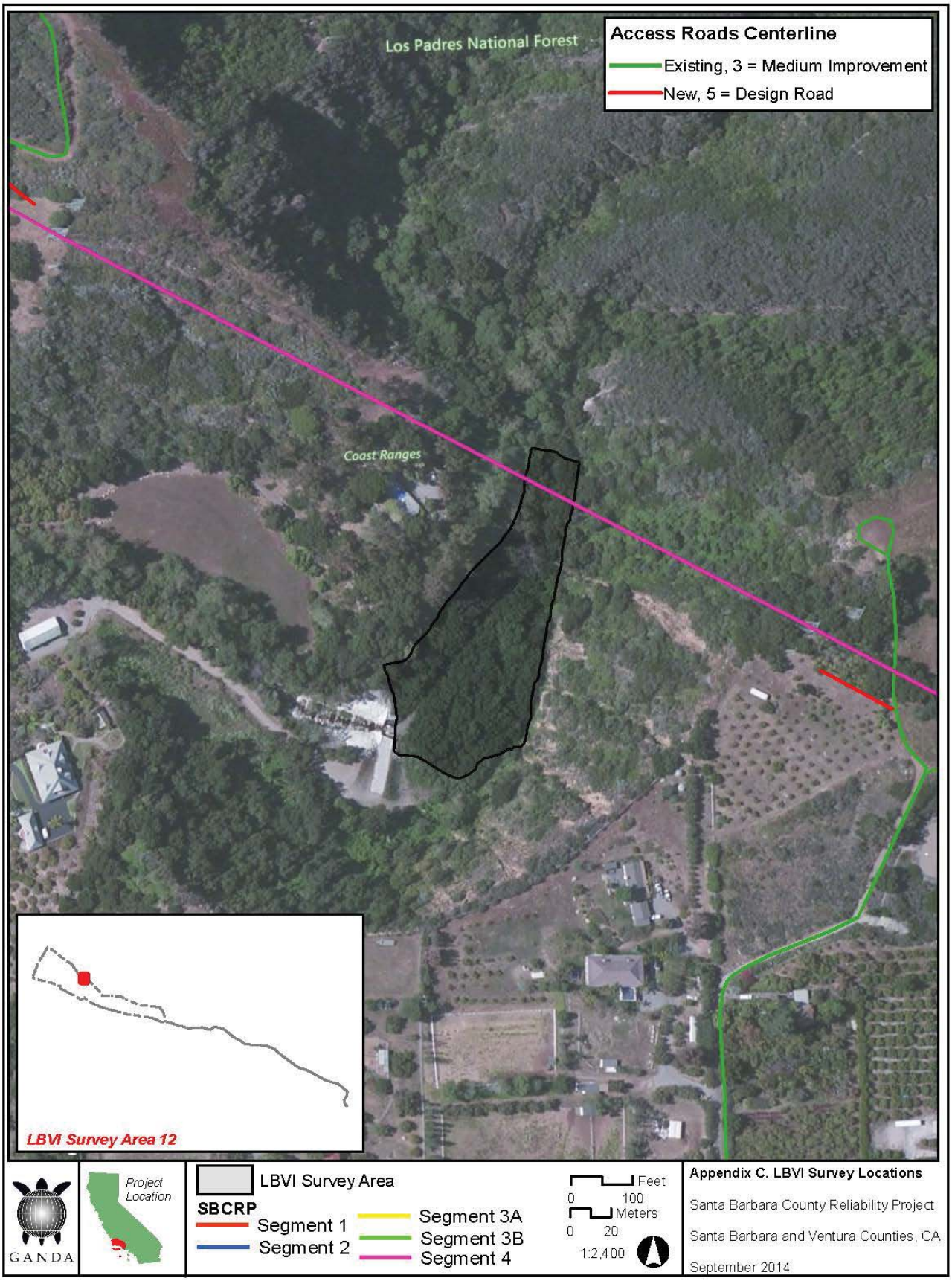

Pass Rd
150
150
Access Roads Centerline
Existing, 3 = Medium Improvement
Existing, 5 = Design Road
LBVI Survey Area 7
bing
GANDA
Project Location
LBVI Survey Area
SBCRP
Segment 1
Segment 2
Segment 3A
Segment 3B
Segment 4
Feet
0 100
Meters
0 20
1:2,400
Appendix C. LBVI Survey Locations
Santa Barbara County Reliability Project
Santa Barbara and Ventura Counties, CA
September 2014

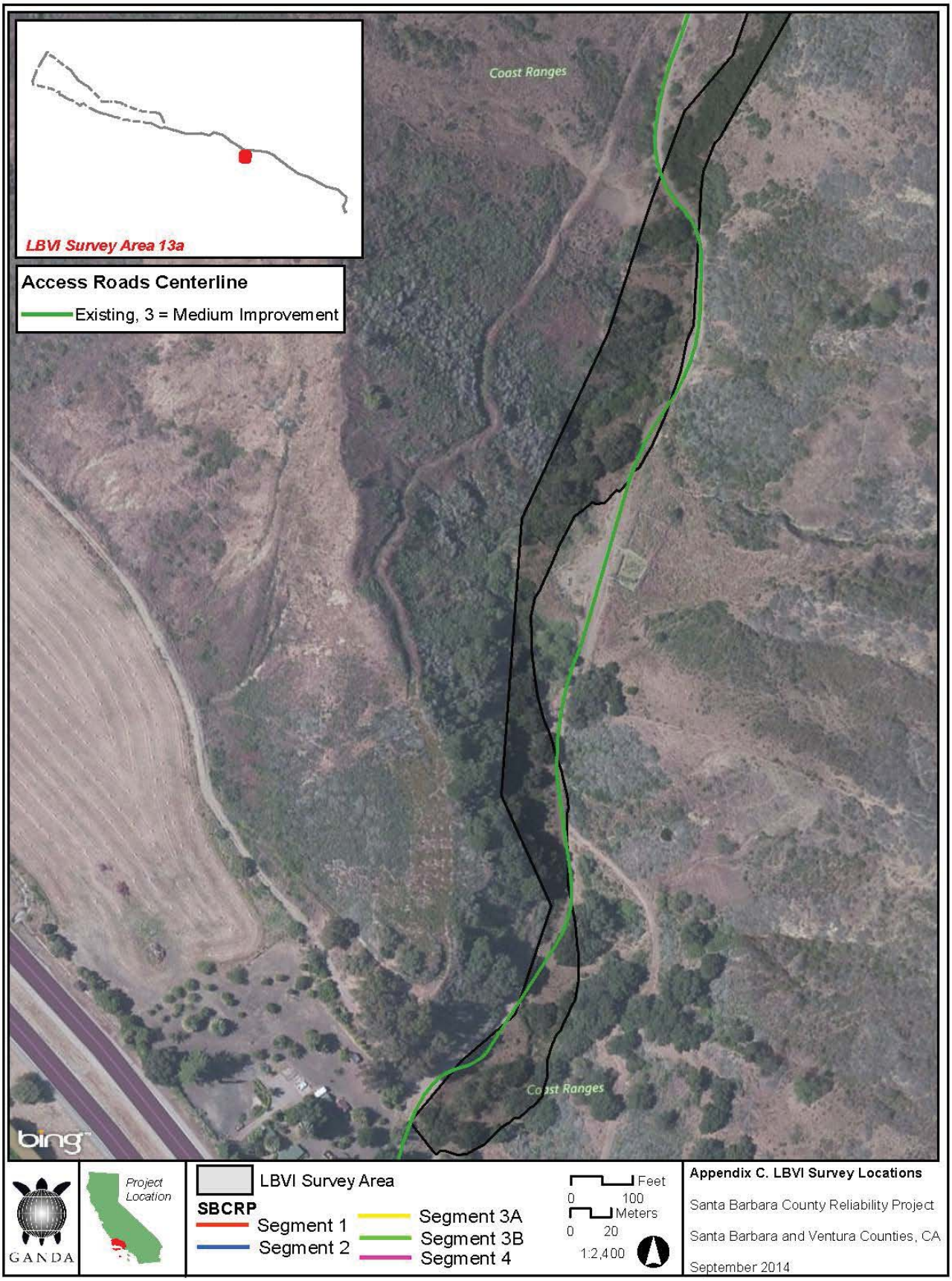
Access Roads Centerline
Existing, 3 = Medium Improvement
Existing, 4 = Heavy Improvement
New, 5 = Design Road
Casitas Pass Rd
150
150
150
LBVI Survey Area 8
GANDA
Project Location
LBVI Survey Area
SBCRP
Segment 1
Segment 2
Segment 3A
Segment 3B
Segment 4
Feet
0 100
Meters
0 20
1:2,400
Appendix C. LBVI Survey Locations
Santa Barbara County Reliability Project
Santa Barbara and Ventura Counties, CA
September 2014

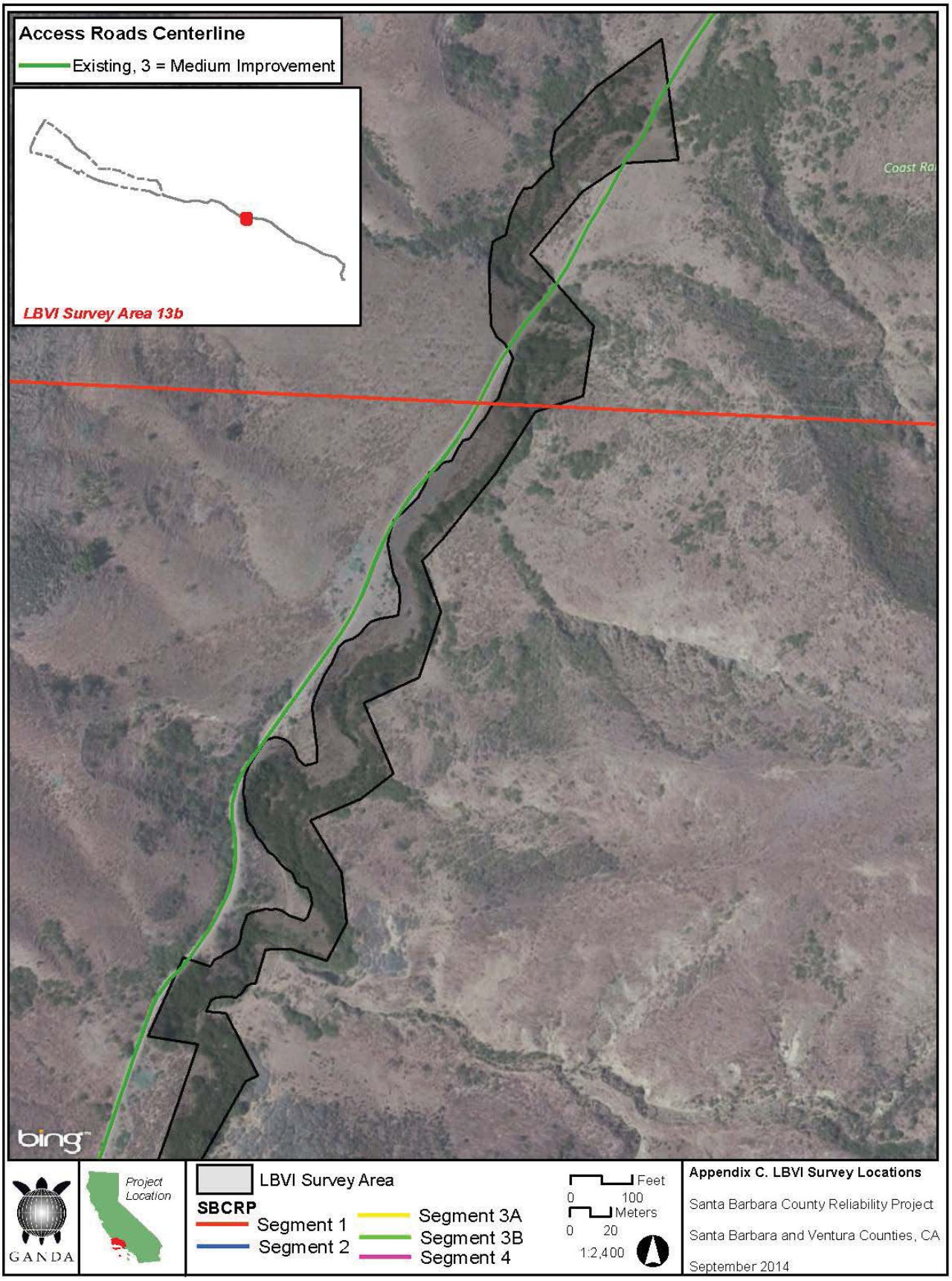
Access Roads Centerline
Existing, 3 = Medium Improvement
Existing, 5 = Design Road
New, 5 = Design Road
Casitas Pass Rd
150
150
Coast Ranges
LBVI Survey Area 9
GANDA
Project Location
LBVI Survey Area
SBCRP
Segment 1
Segment 2
Segment 3A
Segment 3B
Segment 4
Feet
0 100
Meters
0 20
1:2,400
Appendix C. LBVI Survey Locations
Santa Barbara County Reliability Project
Santa Barbara and Ventura Counties, CA
September 2014


Access Roads Centerline
Existing, 3 = Medium Improvement
Existing, 4 = Heavy Improvement
Existing, 5 = Design Road
Rameli Ranch Rd
LBVI Survey Area 10
GANDA
Project Location
LBVI Survey Area
SBCRP
Segment 1
Segment 2
Segment 3A
Segment 3B
Segment 4
Feet
0 100
Meters
0 20
1:2,400
Appendix C. LBVI Survey Locations
Santa Barbara County Reliability Project
Santa Barbara and Ventura Counties, CA
September 2014

LBVI Survey Area 11
Lillingston Canyon Rd
Casitas Pass Rd
192
Coast Ranges
Casitas Pass Rd
192
bing
GANDA
Project Location
LBVI Survey Area
SBCRP
Segment 1
Segment 2
Segment 3A
Segment 3B
Segment 4
Feet
0 100
Meters
0 20
1:2,400
Appendix C. LBVI Survey Locations
Santa Barbara County Reliability Project
Santa Barbara and Ventura Counties, CA
September 2014


Access Roads Centerline
Existing, 3 = Medium Improvement
New, 5 = Design Road
Los Padres National Forest
Coast Ranges
LBVI Survey Area 12
GANDA
Project Location
LBVI Survey Area
SBCRP
Segment 1
Segment 2
Segment 3A
Segment 3B
Segment 4
Feet
0 100
Meters
0 20
1:2,400
Appendix C. LBVI Survey Locations
Santa Barbara County Reliability Project
Santa Barbara and Ventura Counties, CA
September 2014


LBVI Survey Area 13a
Access Roads Centerline
Existing, 3 = Medium Improvement
Coast Ranges
Coast Ranges
bing
GANDA
Project Location
LBVI Survey Area
SBCRP
Segment 1
Segment 2
Segment 3A
Segment 3B
Segment 4
Feet
0 100
Meters
0 20
1:2,400
Appendix C. LBVI Survey Locations
Santa Barbara County Reliability Project
Santa Barbara and Ventura Counties, CA
September 2014


Access Roads Centerline
Existing, 3 = Medium Improvement
LBVI Survey Area 13b
Coast Ra
bing
GANDA
Project Location
LBVI Survey Area
SBCRP
Segment 1
Segment 2
Segment 3A
Segment 3B
Segment 4
Feet
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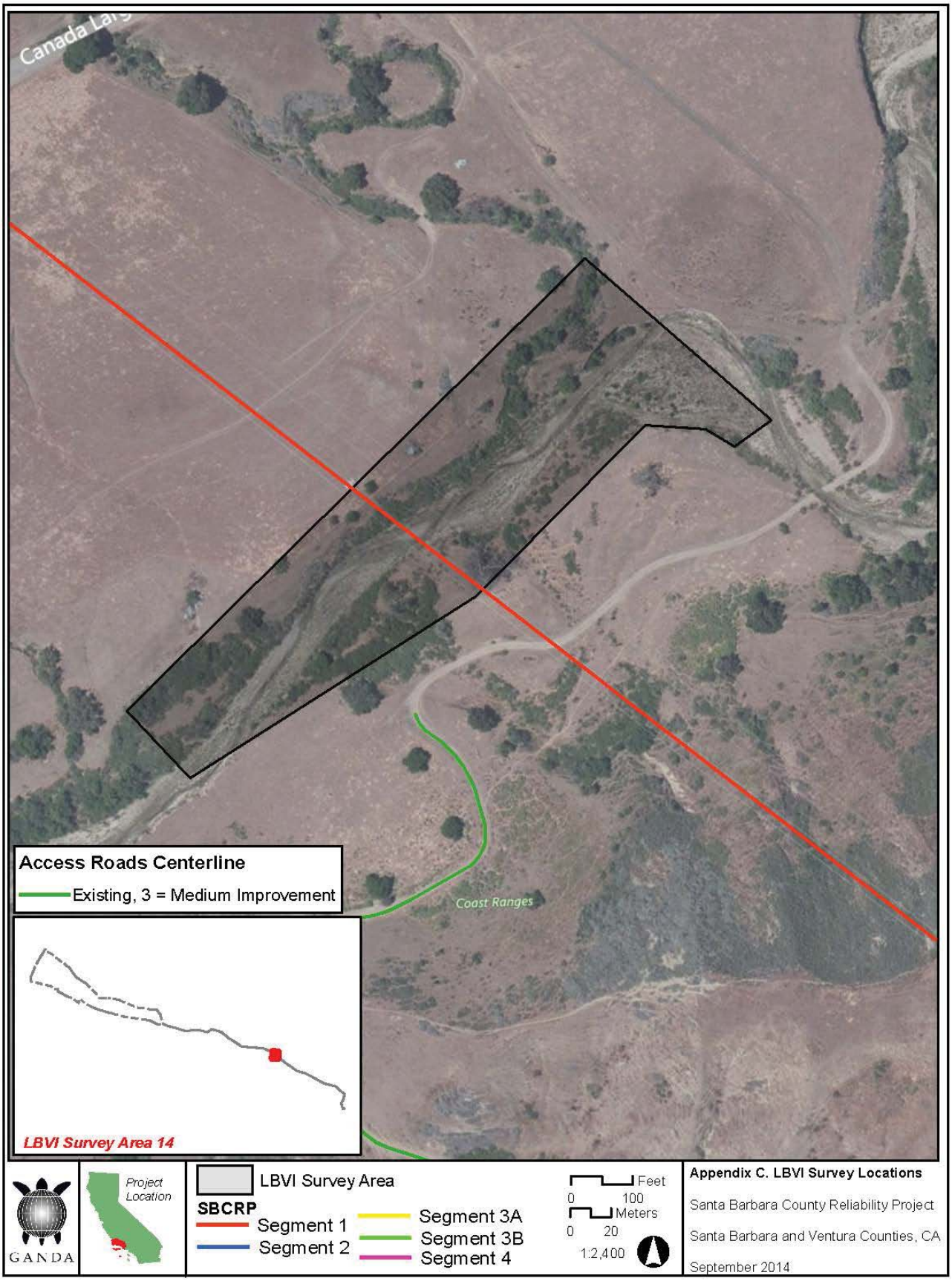
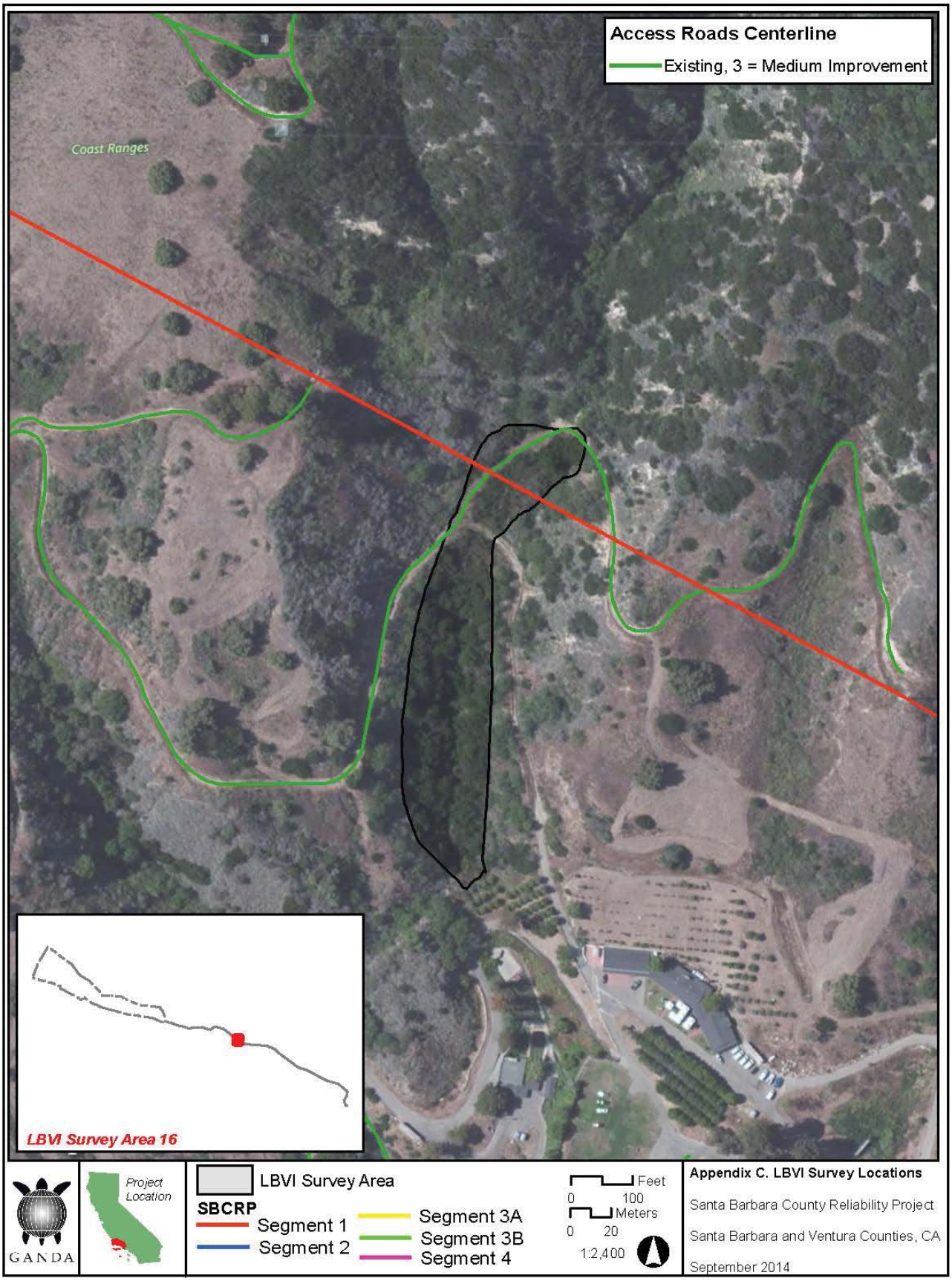
Meters
0 20
1:2,400
Appendix C. LBVI Survey Locations
Santa Barbara County Reliability Project
Santa Barbara and Ventura Counties, CA
September 2014


Canada La
Access Roads Centerline
Existing, 3 = Medium Improvement
Coast Ranges
LBVI Survey Area 14
GANDA
Project Location
LBVI Survey Area
SBCRP
Segment 1
Segment 2
Segment 3A
Segment 3B
Segment 4
Feet
0 100
Meters
0 20
1:2,400
Appendix C. LBVI Survey Locations
Santa Barbara County Reliability Project
Santa Barbara and Ventura Counties, CA
September 2014

Access Roads Centerline
Existing, 3 = Medium Improvement
Coast Ranges
LBVI Survey Area 15
GANDA
Project Location
LBVI Survey Area
SBCRP
Segment 1
Segment 2
Segment 3A
Segment 3B
Segment 4
Feet
0 100
Meters
0 20
1:2,400
Appendix C. LBVI Survey Locations
Santa Barbara County Reliability Project
Santa Barbara and Ventura Counties, CA
September 2014


Access Roads Centerline
Existing, 3 = Medium Improvement
Coast Ranges
LBVI Survey Area 16
GANDA
Project Location
LBVI Survey Area
SBCRP
Segment 1
Segment 2
Segment 3A
Segment 3B
Segment 4
Feet
0 100
Meters
0 20
1:2,400
Appendix C. LBVI Survey Locations
Santa Barbara County Reliability Project
Santa Barbara and Ventura Counties, CA
September 2014

# Appendix D

# Incidental Species List

# Bird Species

| | Site | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Species** | LBVI-1 | LBVI-2 | LBVI-3 | LBVI-4 | LBVI-5 | LBVI-6 | LBVI-7 | LBVI-8 | LBVI-9 | LBVI-10 | LBVI-11 | LBVI-12 | LBVI-13 | LBVI-14 | LBVI-15 | LBVI-16 |
| Mallard (*Anas platyrhychos*) | | | | | X | | | | | | | | | | | |
| California Quail (*Callipepla californica*) | | | X | X | X | | X | X | | X | | | | X | X | X |
| Turkey Vulture (*Cathartes aura*) | | | | | X | X | | | | | | X | | X | X | X |
| Cooper's Hawk (*Accipeter cooperii*) | | | | | X | | | | | | | | | | | |
| Red-shouldered Hawk (*Buteo lineatus*) | | | | | X | | | X | | X (nest) | | | | | | |
| Red-tailed Hawk (*Buteo jamaicensis*) | X | | | | X | | | | | X (nest) | X | X | | X | X | X |
| American Kestral (*Falco sparverius*) | X | | | | X | | | | | X | | | X | X | X | X |
| Killdeer (*Charadrius vociferus*) | | | | | | | | | | | | | | | X | |
| Band-tailed Pigeon (*Patagioenas fasciata*) | | | | | | | X | X | | | | | | | | |
| Mourning Dove (*Zenaida macroura*) | X | X | X | X | X | | | | | X | X | X | | X | X | X |
| White-winged Dove (*Zenaida asiatica*) | | | | | X | | | | | | | | | | | |
| Eurasian-collared Dove (*Streptopelia decaocta*) | | | | | | | | | | | X | | | | X | X |
| Rock Pigeon (*Columba livia*) | | | | | | | | | | X | | | | | | X |
| Common Ground-Dove (*Columbina passerina*) | | | | | | | | | | | | | | X | | |
| Greater Roadrunner (*Geococcyx californianus*) | | | | X | X | | | | | | | | | X | | |
| Great Horned Owl (*Bubo virginianus*) | | | | | | | | | | | X | | | | X | |
| White-throated Swift (*Aeronautes saxatalis*) | | | X | X | X | | | | | | | | | | | |
| Black Chinned Hummingbird (*Archilochus colubris*) | | | | X | X | | | | | | | | | X | | |
| Costa's Hummingbird (*Calypte costae*) | | | | X | X | | | | | | | | X | | X | |
| Anna's Hummingbird (*Calypte anna*) | X | X | X | X | X | X | | X | X | X | X | X | X | X | X | X |
| Allen's Hummingbird (*Selasphorus sasin*) | X | X | | X | | | | | | | | | | X | | |
| Rufous Hummingbird (*Selasphorus rufus*) | | | | | | | | | X | X | | | X | | | |
| Nuttall's Woodpecker (*Picoides nuttallii*) | X | X | | X | X | | X | X | | X | | X | X | X | X | X |
| Downy Woodpecker (*Picoides pubescens*) | | | | | X | | | | X | | X | X | | | | |
| Hairy Woodpecker (*Picoides villosus*) | | | | | | | | X | | | | | | X | | |
| Northern Flicker (*Colaptes sordidulus*) | | X | | X | X | | | | X | X | X | X | X | X | | |
| Acorn Woodpecker (*Melanerpes formicivorus*) | | | | X | X | X | X | | | X | X | | | | X | |
| Western Wood Pewee (*Contopus sordidulus*) | | | | | X | | | X | X | X | | | | | | |
| Pacific-slope Flycatcher (*Enpidonax difficilis*) | X | | | | X | X | X | X | X | X | X | X | X | X | | X |
| Dusky-capped Flycatcher( *Myiarchus tuberculifer*) | | | | | | | X | | | | | | | | | |
| Black Phoebe (*Sayornis nigricans*) | | | | | X | | X | | | X | | X | X | | | |
| Ash-throated Flycatcher (*Myiarchus cinerascens*) | X | X | X | X | X | | X | | | X | | X | X | X | X | X |
| Cassin's Kingbird (*Tyrranus vociferans*) | | | | | X | | | | | | | | | X | X | X |
| Hutton's Vireo (*Vireo huttoni*) | | | | | | X | X | | | X | X | | | | | |
| Warbling Vireo (*Vireo gilvus*) | X | | | | | | X | X | X | | | | | | | |
| Western Scrub-Jay (*Aphelocoma californica*) | X | X | | X | X | X | | X | X | X | X | X | | X | X | X |
| Common Raven (*Corvus corax*) | X | | | X | X | X | | | X | X | X | | X | X | X | X |
| American Crow (*Corvus brachyrhynchos*) | | | | | X | X | | | | | | | | X | | |
| Cliff Swallow( *Petrochelidon pyrrhonota*) | | | | | | | | X | X | | X | X | X | | X | X |
| Barn Swallow (*Hirundo rustica*) | | | | | | | | | | | X | | X | | | |
| Tree Swallow (*tachycineta bicolor*) | | | | | X | | | | | | | | | | | |
| Northern Rough-winged Swallow (*Stelgidopteryx serripennis*) | | | | | X | | | | | | X | | | | | X |
| Oak Titmouse (*Baeolophus inornatus*) | | | | X | X | | | X | | X | X | X | X | X | | X |
| Bushtit (*Psaltriparus minimus*) | X | | | X | X | | | X | X | X | X | X | | X | X | X |
| White-breasted Nuthatch (*Sitta carolinensis*) | | | | | | | | | | X | | X | | | | |
| House Wren( *Troglodytes aedon*) | | | | | | X | X | | | X | | X | | X | X | |
| Canyon Wren (*Catherpes mexicanus*) | | | X | X | | | | X | | | | X | | | | |
| Bewick's Wren (*Thryomanes bewickii*) | X | X | X | X | | | X | | X | | | | X | X | X | X |
| Rock Wren (*Salpinctes obsoletus*) | | | | | | | | | | | | | | | X | |

| | Site | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Species** | LBVI-1 | LBVI-2 | LBVI-3 | LBVI-4 | LBVI-5 | LBVI-6 | LBVI-7 | LBVI-8 | LBVI-9 | LBVI-10 | LBVI-11 | LBVI-12 | LBVI-13 | LBVI-14 | LBVI-15 | LBVI-16 |
| Wrentit (*Chamaea fasciata*) | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Blue Grey Gnatcatcher (*Polioptila caerulea*) | | | | | | | | | | | | | | X | | |
| Western Bluebird (*Sialia mexicana*) | | | | | X | | X | | | X | | | | X | X | X |
| Swainson's Thrush (*Catharus ustulatus*) | | | | | X | | X | | X | X | | | | | | |
| Hermit Thrush (*Catharus guttatus*) | | | | | | | | | X | | | | | | | |
| American Robin (*Turdus migratorius*) | | | | | X | | | X | X | X | X | | | | X | |
| Northern Mockingbird (*Mimus polyglottos*) | | | | | | | | | | | | | X | X | X | X |
| California Thrasher(*Toxostoma redivivum*) | X | X | X | X | X | | X | | X | | | | X | X | X | |
| European Starling (*Sturnus vulgaris*) | | | | | | | | | | | | | | X | | |
| Phainopepla (*Phainopepla nitens*) | X | X | X | X | | | | X | X | X | X | X | | X | X | X |
| Orange-crowned Warbler (*Vermivora celata*) | X | | | | | | X | X | X | X | X | X | X | | | |
| Yellow Warbler (*Dendroica petechia*) | | | | | | X | | X | X | X | X | X | X | X | | |
| Wilson's Warbler (*Wilsonia pusilla*) | | | | X | | | X | | | X | X | X | | | | |
| Common Yellowthroat (*Geothlypis trichas*) | X | X | X | X | X | | X | X | X | X | X | | X | X | | X |
| Yellow-breasted Chat (*Icteria virens*) | X | | | X | | | | | | X | | | | | | |
| Western Tanager (*Piranga ludoviciana*) | | | | X | X | | | X | X | | | | | | | |
| Spotted Towhee (*Pipilo maculatus*) | X | X | X | X | X | X | X | X | X | X | X | X | X | | X | |
| California Towhee (*Melzone crissalis*) | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| Chipping Sparrow (*Spizella passerina*) | | | | | | | | X | | | | | | | | |
| Song Sparrow (*Melospiza melodia*) | X | X | | X | X | | X | X | X | X | | | X | X | | |
| Rufous-crowned Sparrow (*Aimophila ruficeps*) | X | | | X | | | | | | | | | | X | | |
| Lark Sparrow (*Chondestes grammacus*) | | | | | | | | | | | | | | X | | |
| Dark-eyed Junco (*Junco hyemalis*) | | | | | X | | | | | | X | | | | | |
| Black-headed Grosbeak (*Pheucticus melanocephalus*) | X | X | X | X | X | X | X | X | X | X | | | X | X | X | X |
| Blue Grosbeak (*Passerina caerulea*) | | | | | X | | | | | | | | X | X | X | |
| Lazuli Bunting (*Passerina amoena*) | X | | | X | | | | | | | | | X | X | | |
| Red-winged Blackbird (*Agelaius phoeniceus*) | | | | | | | | | | | | | | X | | |
| Brewer's Blackbird (*Euphagus cyanocephalus*) | | | | | | | | | | | | | | | X | |
| Brown-headed Cowbird (*Molothrus ater*) | | | | | | X | | X | X | | X | | | X | X | |
| Hooded Oriole (*Icterus cucullatus*) | | | | | X | | | | | X | | | | X | | |
| Bullock's Oriole (*Icterus bullockii*) | | | | | X | | | X | X | | | | X | X | X | X |
| House Finch (*Carpodacus mexicanus*) | X | X | | X | X | | | X | X | X | X | | X | X | X | X |
| Purple Finch *Carpodacus purpureus*) | | | | | X | | | | | X | | | | | X | |
| Lesser Goldfinch (*Spinus psaltria*) | | | | X | X | | | X | X | X | X | | X | X | X | X |
| American Goldfinch (Spinus tristis) | | | | | X | | | | | X | | | | X | | |
| Lawrence's Goldfinch (*Spinus lawrencei*) | | | | | | | | | | | | | | X | | |

# Vertebrate Species

| | Site | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Species** | LBVI-1 | LBVI-2 | LBVI-3 | LBVI-4 | LBVI-5 | LBVI-6 | LBVI-7 | LBVI-8 | LBVI-9 | LBVI-10 | LBVI-11 | LBVI-12 | LBVI-13 | LBVI-14 | LBVI-15 | LBVI-16 |
| **Amphibians** | | | | | | | | | | | | | | | | |
| Bull Frog (tadpole)(*Lithobates catesbeianus*) | | | | | X | | | | | | | | | X | | |
| California Newt (*Taricha torosa*) | | | | | | | | | | | | X | | X | | |
| **Reptiles** | | | | | | | | | | | | | | | | |
| Southern Alligator Lizard (*Elgaria multicarinata*) | | X | | | | | | | | | | | | | | |
| Western Fence Lizard (*Sceloporus occidentalis*) | | X | | X | | X | X | | X | X | | X | X | X | | X |
| Common Side-blotch Lizard (*Uta stansburiana*) | | | | | | | | | | | | | | X | | |
| Coastal Whiptail (*Aspidoscelis tigris stejneger*i) | | X | | X | | | | | | | | | | | | |
| Western Pond Turtle (*Actinemys marmorata*) | | | | | | | | | | | | | | X | | |
| **Mammals** | | | | | | | | | | | | | | | | |
| North American Opposum (*Didelphis virginiana*) | | | | | | | | | | | X | | | | | |
| Desert Cottontail (*Sylvilagus audubonii*) | | | | | | | | | | | | | | X | X | X |
| Fox Squirel (*Sciurus niger*) | | | | | | | | | | | X | X | | | | |
| Californai-ground Squirel (*Otospermophilus beechey* i) | | | | | | | | | | | | | X | X | X | X |
| Merriam's Chipmunk (*Neotamias merria* mi) | | | | | | | | | | X | | | | | | |
| Dusky-footed Woodrat (Midden)(*Neotoma fuscipes*) | | | | | X | | X | X | | | X | | | X | | X |
| Coyote (*Canis latrans*) | X | | | | | | | | | X | X | X | | | X | x (scat) |
| Domestic Dog (*Canis lupus familiaris*) | | | | | X | | | | | | | | | | | |
| Gray Fox (*Urocyon cinereoargenteus*) | | | | | | | | | X | | | X | | | | |
| Raccoon (Scat)(*Procyon lotor*) | | | | | | | | | | | X | X | | | X | X |
| Mountain Lion (Tracks)(*Puma concolor*) | | X | | X | | | | | | | | | | | | |
| Bobcat (*Lynx rufus*) | | | | | | | X | | | | | | | | | |
| Domestic Horse (*Equus ferus caballus*) | | | | | | | | | | | | | | | X | |
| Mule Deer (*Odocoileus hemionus*) | | | X | | | X | X | | | | | | | X | X (scat) | X (scat) |
| Cattle (*Bos taurus*) | | | | | | | | | | | | | | X | X (scat) | |

# PROTECTED TREE REPORT

# SOUTHERN CALIFORNIA EDISON

# SANTA BARBARA COUNTY RELIABILITY PROJECT (SBCRP)

# SANTA BARBARA AND VENTURA COUNTIES, CALIFORNIA

---

**October 2014**

**PREPARED FOR:**
Southern California Edison
1218 S. Fifth Avenue
Monrovia, CA 91016
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**PREPARED BY:**
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1025 East Ocean Avenue, Suite C
Lompoc CA 93436
Contact: Susan Dewar, Certified Arborist (ISA #WE-7374A)

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# 1.0 INTRODUCTION

Garcia and Associates (GANDA) was tasked by the Southern California Edison Company (SCE) to document protected trees that may be subject to removal or encroachment impacts during construction of the Santa Barbara County Reliability Project (SBCRP; Project) in Ventura and Santa Barbara counties, California. This report presents the methods and results for the protected tree inventory conducted by GANDA during July 2014.

## 1.1 Project Description

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

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

The Project includes the following physical elements:

- Reconstruction of the existing 66-kV subtransmission facilities primarily within existing utility rights-of-way (ROW) between the existing Santa Clara Substation in Ventura County and the existing Carpinteria Substation in Santa Barbara County.
- Installation of marker balls on overhead wire where determined to be necessary.

- Modification of subtransmission and substation equipment within the existing Carpinteria Substation, Casitas Substation, and Santa Clara Substation.
- Replacement of line protection relays within existing substation equipment rooms or cabinets at the Getty Substation, Goleta Substation, Ortega Substation, and Santa Barbara Substation [1].
- Installation of telecommunications facilities to connect the Project to SCE's existing telecommunications system for the protection, monitoring and control of subtransmission and substation equipment. Installation of new telecommunications facilities along Segments 1, 2, and 4 and at the Carpinteria Substation, Casitas Substation, Santa Clara Substation, and Ventura Substation.
- Transfer of distribution lines (and third-party infrastructure as necessary) to subtransmission structures along Segment 3A.
- Removal of subtransmission infrastructure in Segments 1 and 2.

## 1.2 Environmental Setting

The Project lies north and west of U.S. Highway 101 (US-101), between 1 and 6 miles from the coastline. Elevations vary through the Project Area, from 31 feet above sea level (ASL) near the Carpinteria Substation, which lies in the coastal plain, to 1,500 feet ASL along Segment 4 in the foothills of the western Transverse Ranges, to more than 1,800 feet ASL along portions of Segment 3B near Rincon Peak.

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

The majority of the Project is located on private lands, while three tower sites and associated access and spur roads in Segment 4 are located within the Santa Barbara Front, a geographical unit of lands under the jurisdiction of the Los Padres National Forest, owned by the USFS. Land

[1] The Project also includes additional minor substation and telecommunications work at the Getty Substation, Goleta Substation, Ortega Substation, Santa Barbara Substation, and Ventura Substation; this work would be conducted exclusively on substation property, and thus would have no impact to biological resources. Therefore, this work is not addressed further in this report.

uses in the immediate vicinity of the Project are dominated by agriculture (cattle grazing and orchards) and "open-space" areas covered by native vegetation communities, with low-density residential development and commercial areas (nurseries and row crops) scattered through Segments 3A, 3B, and 4.

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

## 1.3 Regulatory Setting

The Project crosses many jurisdictions with differing tree protection ordinances and regulations (some of which overlap), including Los Padres National Forest, riparian areas subject to jurisdiction of the California Department of Fish and Wildlife, Santa Barbara County, Ventura County, Santa Barbara County Costal Zone , and the City of Carpinteria. Below is a summary of ordinances and regulations potentially applicable to trees on the Project:

- Los Padres National Forest Land Management Plan (USFS 2005)
- California Fish and Game Code Section 1600
- Santa Barbara County Comprehensive Plan (County of Santa Barbara 2009)
- Santa Barbara County Coastal Zone Ordinance (County of Santa Barbara 2014)
- Santa Barbara County Deciduous Oak Tree Protection and Regeneration Ordinance (County of Santa Barbara 2003)
- Ventura County Non-coastal Zoning Tree Protection Ordinance; includes base zone versus Scenic Resource Protection overlay zone (County of Ventura 2009)
- City of Carpinteria Street Tree Management Plan (City of Carpinteria 2010)

*Los Padres National Forest Management Plan*: Protects Management Indicator Species, including big-cone Douglas-fir (*Pseudotsuga macrocarpa*), white fir (*Abies concolor*), blue oak (*Quercus douglasii*), California black oak (*Quercus kelloggii*), valley oak (*Quercus lobata*), and coulter pine (*Pinus coulteri*) and Forest Service Sensitive species, including (*Abies bracteata)* and scrub oak (*Quercus dumosa*).

*California Fish and Game Code Section 1600*: Provides protection of fish and wildlife resources, including riparian trees. Impacts to riparian trees would be included in a Lake and Streambed Alteration Agreement (LSAA).

*Santa Barbara County Comprehensive Plan*: Applicable to inland rural areas of the county. This plan protects mature live oak tree species with a 6-inch or greater dbh, blue oak trees with a 4-inch or greater dbh, or live and blue oaks 6 feet or greater in height. Protected valley oak trees are those trees with a 2-inch or greater dbh, or those 6 feet or more in height.

*Santa Barbara County Coastal Zone Ordinance*: Protects any tree 6 inches or greater in diameter at 4 feet above the ground, and is at least 6 feet tall, which is: 1) located in a county street right-of-way; or 2) located within 50 feet of any major or minor stream; 3) that is an oak species; or 4) used as habitat by monarch butterflies.

*Santa Barbara County Deciduous Oak Tree Protection and Regeneration Ordinance*: Applicable to all areas outside the Coastal Zone and urban boundary lines. This ordinance protects valley oak trees and blue oak trees that are 4 inches or more in diameter at 4.5 feet above ground (diameter at breast height, or dbh).

*Ventura County Tree Protection Ordinance*: Applicable to all areas outside the Coastal Zone (base zone versus Scenic Resource Protection overlay; Appendix A: Figure 5. This ordinance protects oaks and sycamores (*Platanus racemosa*) that are over 9.5 inches in circumference (3-inch dbh) (or 6.25 inches circumference [2-inch dbh] for multi-stemmed oaks). In the Scenic Resource Protection overlay zone, this ordinance protects most native tree species that are over 9.5 inches in circumference (3-inch dbh). Heritage Trees (any species of tree with a single trunk of 90 or more inches in girth [28.6-inch dbh] or with multiple trunks, two of which collectively measure 72 inches in girth [23-inch dbh] or more) and Historical Trees (any tree or group of trees identified by the county or a city as a landmark, or identified on the federal or California Historic Resources Inventory to be of historical or cultural significance, or identified as contributing to a site or structure of historical or cultural significance) are also protected.

*City of Carpinteria Street Tree Management Plan*: Provides protection for street trees within the city limits.

## 2.0 METHODOLOGY

GANDA's staff botanists and arborists conducted the protected tree survey under the supervision of certified arborist Susan Dewar (ISA #WE-7374A). Surveys took place from July 14 to18 and July 23 and 24, 2014. All access roads and construction work areas within Segments 1, 2, 3A, 3B, and 4 were included in the survey. All trees within approximately 25 feet of the Project were assessed for potential impacts. SCE Construction Project Manager, Kevin Darney, assisted the arborist team in the field to identify the trees that would be removed, pruned/trimmed, and encroached upon due to project activities. All portions of the study area were driven or walked to inventory the trees within this area. Data were collected for all trees of ordinance size for the respective jurisdiction expected to be impacted by Project activities and are presented herein. Trees not expected to be impacted are not addressed in this report.

All protected trees with the potential to be impacted were physically tagged with uniquely numbered aluminum tags (unless trees were inaccessible or it was deemed unsafe to tag a specific tree due to steep slopes or dense poison oak; see Tables 1-4). Data collected for each tree included diameter at breast height (dbh) measured at 4.5 feet above ground level (or 4.0 feet above ground level in the Santa Barbara County Coastal Zone, as required by ordinance), canopy diameter, and tree height. Each tree was photographed and given a general health rating (i.e., excellent, good, fair, poor), by ground-level visual inspection. The location was recorded by a hand-held global positioning system (GPS) unit. The health assessment generally followed the assessment metric below:

*Excellent:* Trees showing vigor and strong growth with no signs of decay, dieback, insect infestation, or significant structural defects.

*Good:* Trees showing vigor, no major dieback or discoloration of foliage, less than 10% foliar dieback, and no signs of insects, disease, decay, or significant structural defects.

*Fair*: Trees with 10 to 30% foliar dieback, poor foliage coloration, dead wood, or showing some signs of disease and decay and minor structural defects.

*Poor*: Trees with more than 30% foliar dieback, dead wood, severe decay or insect activity or structural problems.

## 3.0 RESULTS

Within the Project Area, 195 protected trees were identified that may be subject to construction-related removal or encroachment impacts. Of those, 40 are expected to be removed and 155 trees are expected to require permits for encroachment impacts to the canopy or root zone (most requiring minor clearance pruning).

*Los Padres National Forest Management Plan:* No trees classified as Management Indicator Species in the Los Padres National Forest Management Plan will be impacted; permitting not required.

*California Fish and Game Code Section 1600*: Four riparian trees: one California bay (*Umbellularia californica*), one western sycamore, and two arroyo willows (*Salix lasiolepis*) that are not subject to the Santa Barbara County Comprehensive Plan, Coastal Zone Ordinance, or Deciduous Oak Tree Protection and Regeneration Ordinance will be impacted by Project activities. One coast live oak (*Quercus agrifolia*) within the Santa Barbara County Coastal Zone boundary but not of sufficient size for protection will require pruning (Table 3). In addition, ten riparian trees (arroyo willows) will be impacted within Ventura County that are not subject to the Ventura County Tree Protection Ordinance. An official determination of CDFW jurisdiction was not conducted in this study. No attempt was made to delineate all CDFW jurisdictional resources that may be impacted. Impacts to the 15 riparian trees will need to be permitted through a LSAA, along with anticipated impacts to other riparian vegetation (non-ordinance sized trees, shrubs), other riparian trees that are within other jurisdictions and protected under ordinance (i.e., ordinance-sized oak trees that are also in riparian areas), and impacts to channel bed and banks. Impacts and permitting for the aforementioned CDFW jurisdictional resources are out of the scope of this report and will not be discussed further.

*Santa Barbara County Comprehensive Plan*: Table 2 and Appendix A: Figure 3 present protected trees located in rural Santa Barbara County and subject to the tree protection regulations within the Santa Barbara County Comprehensive Plan. Forty-nine protected trees in rural Santa Barbara County have the potential to be impacted by the Project. All are coast live oak. Seven protected trees are anticipated to require removal and 42 will be subject to encroachment impacts (root compaction/pruning and/or canopy pruning). (Table 2 and Appendix A: Figure 3).

*Santa Barbara County Coastal Zone Ordinance*: Table 3 and Appendix A: Figure 4 presents protected trees located in the Santa Barbara County Coastal Zone. Fifty protected trees in the Santa Barbara County Coastal Zone are expected to be impacted by the Project. All trees are coast live oak. Eighteen protected trees are anticipated to require removal, and 32 will be subject to encroachment impacts (Table 3; Appendix A: Figure 4). Four additional coast live oak trees

within this portion of the Project will be removed or pruned, but these trees were not at ordinance size at the time of the survey (Table 3).

*Santa Barbara County Deciduous Oak Tree Protection and Regeneration Ordinance*: No valley oak or blue oak trees are anticipated to be impacted by the Project.

*Ventura County Tree Protection Ordinance*: Table 4 and Appendix A: Figure 5 present protected trees located in Ventura County, subject to the Ventura County Tree Protection Ordinance. In Ventura County, 176 protected trees are expected to be impacted by the project. Thirteen protected trees are anticipated to require removal and 67 will be subject to encroachment impacts significant enough to require permitting. The majority of trees expected to be impacted are coast live oak; however, a few black walnut (*Juglans californica*), one cottonwood (*Populus fremontii*), one eucalyptus (*Eucalyptus* sp.), and one pepper tree (*Schinus molle*) will be impacted as well. The non-native eucalyptus and pepper tree are considered Heritage Trees under the Ventura County Tree Protection Ordinance. One coast live oak that was not ordinance size at the time of the survey has been included in Table 4 below, as well as one dead coast live oak; neither of these will require permitting.

*City of Carpinteria Street Tree Management Plan*: Project impacts are not expected to occur on any protected trees within the City of Carpinteria.

**Table 1. Trees under California Department of Fish and Wildlife Jurisdiction (Not Protected by Santa Barbara or Ventura County Ordinances/Plans)**

| Tree Number | Species | Diameter at 4.5' above ground (DBH) (inches) *(some trees with multiple trunks at 4.5' above ground)* | Canopy Height (feet) | Canopy Diameter (feet) | Anticipated Project Impact(s) | Root Compaction (%) | Root Pruning (%) | Canopy Pruning (%) | Health | Tree location (easting, UTM 11S) | Tree location (northing, UTM 11S) | County | Project Segment | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 534 | *Umbellularia californica* | 24,29, 28, 29, 15, 20, 17, 17, 12, 8, 8 | 25 | 18 | **Removal** | - | - | - | Good | 269866.6 | 3812945 | Santa Barbara | Segment 4 | Riparian tree—not protected by inland Santa Barbara County tree protection regulations. |
| 551 | *Platanus racemosa* | 24,4,3 | 70 | 60 | **Removal** | - | - | - | Good | 269505.4 | 3812216 | Santa Barbara | Segment 4 | Riparian tree—not protected by inland Santa Barbara County tree protection regulations. |
| 552 | *Salix lasiolepis* | 10 | 25 | 20 | Root and canopy | 15 | - | 10 | Good | 269511.0 | 3812224 | Santa Barbara | Segment 4 | Riparian tree—not protected by inland Santa Barbara County tree protection regulations. |
| 553 | *Salix lasiolepis* | 17 | 25 | 25 | Root and canopy | 15 | - | 10 | Good | 269513.6 | 3812222 | Santa Barbara | Segment 4 | Riparian tree- not protected by inland Santa Barbara County tree protection regulations. |
| 678 | *Quercus agrifolia* | 5 | 20 | 20 | Canopy Pruning | - | - | 5 | Excellent | 274213.7 | 3809395 | Santa Barbara | Segment 4 | Not of ordinance size at time of survey; riparian tree. |
| 628 | *Salix lasiolepis* | 6,5,5 | 25 | 40 | Canopy Pruning | - | - | 15 | Good | 278730.3 | 3806722 | Ventura | Segment 3b | Riparian tree- not protected by Ventura County tree protection regulations. |
| 629 | *Salix lasiolepis* | 12,9 | 40 | 60 | Canopy Pruning | - | - | 10 | Good | 278735.4 | 3806738 | Ventura | Segment 3b | Riparian tree- not protected by Ventura County tree protection regulations. |
| 630 | *Salix lasiolepis* | 20 | 45 | 40 | Canopy Pruning | - | - | 5 | Good | 278747.7 | 3806732 | Ventura | Segment 3b | Riparian tree- not protected by Ventura County tree protection regulations. |
| 631 | *Salix lasiolepis* | 9,10,3 | 35 | 40 | Root and canopy | 15 | - | 5 | Good | 278737.1 | 3806726 | Ventura | Segment 3b | Riparian tree- not protected by Ventura County tree protection regulations. |

| Tree Number | Species | Diameter at 4.5' above ground (DBH) (inches) *(some trees with multiple trunks at 4.5' above ground)* | Canopy Height (feet) | Canopy Diameter (feet) | Anticipated Project Impact(s) | Root Compaction (%) | Root Pruning (%) | Canopy Pruning (%) | Health | Tree location (easting, UTM 11S) | Tree location (northing, UTM 11S) | County | Project Segment | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 632 | *Salix lasiolepis* | 11 | 45 | 40 | Root and canopy | 10 | - | 10 | Good | 278750.3 | 3806750 | Ventura | Segment 3b | Riparian tree- not protected by Ventura County tree protection regulations. |
| 633 | *Salix lasiolepis* | 5,6,8 | 35 | 40 | Root and canopy | 10 | - | 5 | Good | 278744.7 | 3806753 | Ventura | Segment 3b | Riparian tree- not protected by Ventura County tree protection regulations. |
| 634 | *Salix lasiolepis* | 4,3 | 25 | 40 | Canopy Pruning | - | - | 10 | Good | 278744.1 | 3806754 | Ventura | Segment 3b | Riparian tree- not protected by Ventura County tree protection regulations. |
| 635 | *Salix lasiolepis* | 5,5,12 | 25 | 50 | Root and canopy | 10 | - | 20 | Good | 278755.1 | 3806751 | Ventura | Segment 3b | Riparian tree- not protected by Ventura County tree protection regulations. |
| 636 | *Salix lasiolepis* | 7 | 35 | 40 | Root and canopy | 15 | - | 10 | Good | 278763.6 | 3806764 | Ventura | Segment 3b | Riparian tree- not protected by Ventura County tree protection regulations. |
| 759 | Salix laevigata | 27 | 20 | 20 | Root and canopy | 35 | - | 20 | Good | 290946.7 | 3804143 | Ventura | Segment 1 | Riparian tree- not protected by Ventura County tree protection regulations. |

**Table 2: Protected Trees Expected to be Impacted by Project Activities within Santa Barbara County**

| Tree Number | Species | Diameter at 4.5' above ground (DBH) (inches) *(some trees with multiple trunks at 4.5' above ground)* | Canopy Height (feet) | Canopy Diameter (feet) | Anticipated Project Impact(s) | Root Compaction (%) | Root Pruning (%) | Canopy Pruning (%) | Health | Tree location (easting, UTM 11S) | Tree location (northing, UTM 11S) | County | Project Segment | Notes | Santa Barbara County Permit Review Required |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 501 | *Quercus agrifolia* | 8.5, 11, 14 | 35 | 35 | **Removal** | - | - | - | Good | 271325.1 | 3812494 | Santa Barbara | Segment 4 | | X |
| 502 | *Quercus agrifolia* | 23 | 50 | 60 | Root Impacts | <1 | - | - | Excellent | 271692.2 | 3812300 | Santa Barbara | Segment 4 | | X |
| 503 | *Quercus agrifolia* | 30 | 50 | 40 | Root Impacts | 20 | - | - | Good | 271855.6 | 3812115 | Santa Barbara | Segment 4 | | X |
| 504 | *Quercus agrifolia* | 19, 17, 25 | 45 | 60 | Root Impacts | <1 | - | - | Excellent | 272348.2 | 3811775 | Santa Barbara | Segment 4 | | X |
| 505 | *Quercus agrifolia* | 12, 10, 17, 8, 6 | 30 | 34 | Root and canopy | 20 | - | 20 | Fair | 272395.5 | 3811625 | Santa Barbara | Segment 4 | | X |
| 506 | *Quercus agrifolia* | 12, 5, 7 | 40 | 34 | Root and canopy | 10 | - | 10 | Good | 272400.2 | 3811636 | Santa Barbara | Segment 4 | | X |
| 507 | *Quercus agrifolia* | 5,4,5,6,6,7 | 20 | 20 | Root Impacts | 5 | - | - | Good | 272404.2 | 3811636 | Santa Barbara | Segment 4 | | X |
| 508 | *Quercus agrifolia* | 7,5,6,9,5 | 25 | 24 | Root and canopy | 10 | - | 10 | Good | 272410.6 | 3811640 | Santa Barbara | Segment 4 | | X |
| 509 | *Quercus agrifolia* | 9,10,8,7,3,10,11,7,6 | 40 | 24 | Root and canopy | 35 | - | 10 | Good | 272414.3 | 3811625 | Santa Barbara | Segment 4 | | X |
| 510 | *Quercus agrifolia* | 10,7,7 | 12 | 15 | **Removal** | - | - | - | Poor | 272419.2 | 3811628 | Santa Barbara | Segment 4 | | X |
| 511 | *Quercus agrifolia* | 10,9,8,10 | 40 | 40 | Root Impacts | 20 | - | - | Good | 272418.4 | 3811623 | Santa Barbara | Segment 4 | | X |
| 512 | *Quercus agrifolia* | 14,15,15,24,17 | 50 | 60 | Root and canopy | 15 | - | 10 | Fair | 272427.6 | 3811632 | Santa Barbara | Segment 4 | | X |
| 513 | *Quercus agrifolia* | 6,8,9,6,6,10,9 | 25 | 30 | Root and canopy | 20 | - | 20 | Fair | 272434.3 | 3811624 | Santa Barbara | Segment 4 | | X |
| 514 | *Quercus agrifolia* | 13,13,13,18,18 | 25 | 45 | Root and canopy | 40 | - | 25 | Good | 272436.2 | 3811611 | Santa Barbara | Segment 4 | | X |
| 515 | *Quercus agrifolia* | 24, 24 | 55 | 40 | Root Impacts | <1 | - | - | Excellent | 272438.2 | 3811596 | Santa Barbara | Segment 4 | | X |
| 516 | *Quercus agrifolia* | 9.8,7.7,10,9.6, 10.1, 12.5 | 35 | 45 | Root and canopy | 40 | - | 20 | Good | 272456.5 | 3811591 | Santa Barbara | Segment 4 | | X |
| 517 | *Quercus agrifolia* | 16,9,13 | 25 | 35 | Root and canopy | 5 | - | <1 | Excellent | 272479.2 | 3811579 | Santa Barbara | Segment 4 | | X |
| 518 | *Quercus agrifolia* | 19 | 40 | 40 | Root and canopy | 40 | - | 5 | Good | 272517.4 | 3811568 | Santa Barbara | Segment 4 | | X |
| 519 | *Quercus agrifolia* | 18 | 35 | 35 | Root and canopy | 40 | - | 15 | Good | 272523.2 | 3811566 | Santa Barbara | Segment 4 | | X |

| Tree Number | Species | Diameter at 4.5' above ground (DBH) (inches) *(some trees with multiple trunks at 4.5' above ground)* | Canopy Height (feet) | Canopy Diameter (feet) | Anticipated Project Impact(s) | Root Compaction (%) | Root Pruning (%) | Canopy Pruning (%) | Health | Tree location (easting, UTM 11S) | Tree location (northing, UTM 11S) | County | Project Segment | Notes | Santa Barbara County Permit Review Required |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 520 | *Quercus agrifolia* | 9.3, 11.7 | 30 | 40 | Root and canopy | 40 | - | 35 | Good | 272543 | 3811561 | Santa Barbara | Segment 4 | | X |
| 521 | *Quercus agrifolia* | 29.3 | 40 | 40 | Root and canopy | 40 | - | 35 | Good | 272551.2 | 3811557 | Santa Barbara | Segment 4 | Tree may not tolerate 35% canopy loss (may result in removal). Pruning impacts should be minimized to the extent feasible. | X |
| 522 | *Quercus agrifolia* | 3.3 | 15 | 10 | **Removal** | - | - | - | Fair | 272578.3 | 3811550 | Santa Barbara | Segment 4 | | X |
| 523 | *Quercus agrifolia* | 3.8 | 10 | 10 | **Removal** | - | - | - | Fair | 272579.1 | 3811551 | Santa Barbara | Segment 4 | | X |
| 524 | *Quercus agrifolia* | 6, 18, 8 | 40 | 40 | **Removal** | - | - | - | Good | 272778.4 | 3811404 | Santa Barbara | Segment 4 | | X |
| 525 | *Quercus agrifolia* | 20 | 40 | 20 | **Removal** | - | - | - | Good | 272769.6 | 3811403 | Santa Barbara | Segment 4 | | X |
| 526 | *Quercus agrifolia* | 7 | 20 | 20 | **Removal** | - | - | - | Fair | 272774.4 | 3811404 | Santa Barbara | Segment 4 | | X |
| 529 | *Quercus agrifolia* | 29 | 35 | 60 | Canopy Pruning | - | - | 10 | Excellent | 269691.2 | 3812294 | Santa Barbara | Segment 4 | | X |
| 530 | *Quercus agrifolia* | 9 | 25 | 25 | Root and canopy | 40 | - | 25 | Good | 269664.5 | 3812326 | Santa Barbara | Segment 4 | | X |
| 531 | *Quercus agrifolia* | 13.2,8.3 | 20 | 20 | Root and canopy | 40 | - | 35 | Good | 269662.4 | 3812329 | Santa Barbara | Segment 4 | | X |
| 532 | *Quercus agrifolia* | 12,7 | 20 | 20 | Root and canopy | 25 | - | 25 | Fair | 269672.7 | 3812319 | Santa Barbara | Segment 4 | | X |
| 533 | *Quercus agrifolia* | 32 | 40 | 60 | Canopy Pruning | - | - | 10 | Good | 269668.1 | 3812455 | Santa Barbara | Segment 4 | | X |
| | | | | | | | | | | | | | | | |
| 535 | *Quercus agrifolia* | 16 | 25 | 30 | Canopy Pruning | - | - | 20 | Good | 269847.3 | 3813065 | Santa Barbara | Segment 4 | | X |
| 536 | *Quercus agrifolia* | 17 | 25 | 30 | Canopy Pruning | - | - | 20 | Good | 269847.9 | 3813065 | Santa Barbara | Segment 4 | | X |
| 537 | *Quercus agrifolia* | 14,11 | 25 | 40 | Root and canopy | 15 | - | 20 | Good | 270463.2 | 3813115 | Santa Barbara | Segment 4 | | X |

| Tree Number | Species | Diameter at 4.5' above ground (DBH) (inches) *(some trees with multiple trunks at 4.5' above ground)* | Canopy Height (feet) | Canopy Diameter (feet) | Anticipated Project Impact(s) | Root Compaction (%) | Root Pruning (%) | Canopy Pruning (%) | Health | Tree location (easting, UTM 11S) | Tree location (northing, UTM 11S) | County | Project Segment | Notes | Santa Barbara County Permit Review Required |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 538 | *Quercus agrifolia* | 24 | 50 | 70 | Canopy Pruning | - | - | 15 | Good | 269949.5 | 3813413 | Santa Barbara | Segment 4 | | X |
| 539 | *Quercus agrifolia* | 9,9 | 45 | 35 | Root and canopy | - | - | 7 | Good | 269940.0 | 3813426 | Santa Barbara | Segment 4 | | X |
| 540 | *Quercus agrifolia* | 18,9 | 40 | 50 | Canopy Pruning | 40 | - | 5 | Good | 269936.3 | 3813436 | Santa Barbara | Segment 4 | | X |
| 541 | *Quercus agrifolia* | 14 | 30 | 35 | Root and canopy | 20 | - | 5 | Good | 269918.7 | 3813444 | Santa Barbara | Segment 4 | | X |
| 542 | *Quercus agrifolia* | 19 | 35 | 40 | Root and canopy | 30 | - | 5 | Fair | 269840.2 | 3813509 | Santa Barbara | Segment 4 | | X |
| 543 | *Quercus agrifolia* | 21 | 50 | 45 | Root and canopy | 25 | - | 30 | Good | 269776.1 | 3813464 | Santa Barbara | Segment 4 | Tree may not tolerate 30% canopy reduction (may result in removal). Minimize pruning as feasible. | X |
| 544 | *Quercus agrifolia* | 8,10,14,5 | 30 | 35 | Canopy Pruning | - | - | 15 | Good | 269719.4 | 3813412 | Santa Barbara | Segment 4 | | X |
| 545 | *Quercus agrifolia* | 16,17,12,11,5,5 | 35 | 40 | Root and canopy | 30 | - | 10 | Good | 269765.6 | 3813308 | Santa Barbara | Segment 4 | | X |
| 546 | *Quercus agrifolia* | 34 | 50 | 50 | Root and canopy | 10 | - | 3 | Good | 269712.3 | 3813175 | Santa Barbara | Segment 4 | | X |
| 547 | *Quercus agrifolia* | 5, 24, 23 | 50 | 50 | Canopy Pruning | - | - | 5 | Good | 269699.4 | 3813182 | Santa Barbara | Segment 4 | | X |
| 548 | *Quercus agrifolia* | 13 | 30 | 40 | Canopy Pruning | - | - | 2 | Good | 269714.8 | 3813159 | Santa Barbara | Segment 4 | | X |
| 549 | *Quercus agrifolia* | 15 | 45 | 50 | Canopy Pruning | - | - | 2 | Good | 269744.2 | 3813139 | Santa Barbara | Segment 4 | | X |
| 550 | *Quercus agrifolia* | 10, 15 | 30 | 40 | Canopy Pruning | - | - | 5 | Good | 269847.0 | 3813087 | Santa Barbara | Segment 4 | | X |
| 554 | *Quercus agrifolia* | 13,6,10,11,7 | 25 | 35 | Root and canopy | 5 | - | 5 | Good | 269530.2 | 3812081 | Santa Barbara | Segment 4 | | X |
| 555 | *Quercus agrifolia* | 11, 10, 12 | 35 | 40 | Canopy Pruning | - | - | 5 | Good | 269270.7 | 3811900 | Santa Barbara | Segment 4 | | X |

**Table 3: Protected Trees Expected to be Impacted by Project Activities within the Santa Barbara County Coastal Zone**

| Tree Number | Species | Diameter at 4.0' above ground (inches) *(some trees with multiple trunks at 4.0' above ground)* | Canopy Height (feet) | Canopy Diameter (feet) | Anticipated Project Impact(s) | Root Compaction (%) | Root Pruning (%) | Canopy Pruning (%) | Health | Tree location (easting, UTM 11S) | Tree location (northing, UTM 11S) | County | Project Segment | Notes | Coastal Commission Permit Review Required |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 527 | *Quercus agrifolia* | 10 | 30 | 30 | **Removal** | - | - | - | Good | 269029.8 | 3811036 | Santa Barbara | Segment 4 | | X |
| 528 | *Quercus agrifolia* | 7, 12 | 30 | 30 | **Removal** | - | - | - | Good | 269032.6 | 3811037 | Santa Barbara | Segment 4 | | X |
| 601 | *Quercus agrifolia* | 13.5 | 20 | 30 | Canopy Pruning | 5 | - | 5 | Excellent | 273959 | 3810244 | Santa Barbara | Segment 4 | | X |
| 602 | *Quercus agrifolia* | 17 | 20 | 50 | Root and canopy | 30 | - | 5 | Fair | 273899 | 3810157 | Santa Barbara | Segment 4 | | X |
| 603 | *Quercus agrifolia* | 10 | 20 | 20 | Root and canopy | 20 | - | 30 | Fair | 273903 | 3810157 | Santa Barbara | Segment 4 | | X |
| 604 | *Quercus agrifolia* | 7, 8, 8, 9 | 30 | 50 | **Removal** | - | - | - | Good | 273856 | 3810170 | Santa Barbara | Segment 4 | | X |
| 605 | *Quercus agrifolia* | 12 | 30 | 30 | **Removal** | - | - | - | Excellent | 273865.6 | 3810159 | Santa Barbara | Segment 4 | | X |
| 606 | *Quercus agrifolia* | 20 | 20 | 30 | **Removal** | - | - | - | Good | 273857.6 | 3810149 | Santa Barbara | Segment 4 | | X |
| 607 | *Quercus agrifolia* | 16, 14, 15, 16, 11 | 30 | 60 | Canopy Pruning | - | - | 10 | Good | 273905.3 | 3810149 | Santa Barbara | Segment 4 | | X |
| 608 | *Quercus agrifolia* | 24 (estimate) | 45 | 60 | Canopy Pruning | - | - | 20 | Good | 273806.3 | 3809964 | Santa Barbara | Segment 4 | Tree not tagged—on adjacent property behind chain link fence | X |
| 669 | *Quercus agrifolia* | 16 | 35 | 40 | Root and canopy | 30 | - | 5 | Excellent | 274542.8 | 3809620 | Santa Barbara | Segment 4 | | X |
| 670 | *Quercus agrifolia* | 7 | 25 | 15 | Root and canopy | 20 | - | 5 | Good | 274551.9 | 3809601 | Santa Barbara | Segment 4 | | X |
| 671 | *Quercus agrifolia* | 23,10 | 35 | 45 | Canopy Pruning | - | - | 5 | Excellent | 274220.4 | 3809503 | Santa Barbara | Segment 4 | | X |
| 672 | *Quercus agrifolia* | 19,32 | 35 | 60 | Canopy Pruning | - | - | 5 | Excellent | 274195.1 | 3809471 | Santa Barbara | Segment 4 | | X |
| 673 | *Quercus agrifolia* | 16,15 | 35 | 50 | Canopy Pruning | - | - | 5 | Good | 274192.8 | 3809465 | Santa Barbara | Segment 4 | | X |
| 674 | *Quercus agrifolia* | 18 | 25 | 40 | Canopy Pruning | - | - | 10 | Excellent | 274186 | 3809455 | Santa Barbara | Segment 4 | | X |
| 675 | *Quercus* | 12,9 | 35 | 50 | Canopy | - | - | 5 | Excellent | 274207.2 | 3809405 | Santa Barbara | Segment 4 | | X |

| Tree Number | Species | Diameter at 4.0' above ground (inches) *(some trees with multiple trunks at 4.0' above ground)* | Canopy Height (feet) | Canopy Diameter (feet) | Anticipated Project Impact(s) | Root Compaction (%) | Root Pruning (%) | Canopy Pruning (%) | Health | Tree location (easting, UTM 11S) | Tree location (northing, UTM 11S) | County | Project Segment | Notes | Coastal Commission Permit Review Required |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *agrifolia* | | | | Pruning | | | | | | | | | | |
| 676 | *Quercus agrifolia* | 10 | 30 | 40 | Canopy Pruning | - | - | 5 | Excellent | 274210.1 | 3809403 | Santa Barbara | Segment 4 | | X |
| 677 | *Quercus agrifolia* | 12 | 30 | 30 | Canopy Pruning | - | - | 5 | Good | 274212.3 | 3809400 | Santa Barbara | Segment 4 | | X |
| 679 | *Quercus agrifolia* | 20 | 30 | 40 | Canopy Pruning | - | - | 5 | Good | 274251.8 | 3809355 | Santa Barbara | Segment 4 | | X |
| 680 | *Quercus agrifolia* | 27 | 50 | 60 | Canopy Pruning | - | - | 5 | Good | 274264.9 | 3809358 | Santa Barbara | Segment 4 | | X |
| 681 | *Quercus agrifolia* | 16 | 30 | 40 | Root and canopy | 5 | - | 30 | Excellent | 274105.5 | 3809439 | Santa Barbara | Segment 4 | | X |
| 682 | *Quercus agrifolia* | 19 | 35 | 60 | **Removal** | - | - | - | Good | 274108 | 3809445 | Santa Barbara | Segment 4 | | X |
| 683 | *Quercus agrifolia* | 5 | 10 | 20 | **Removal** | - | - | - | Good | 274108.8 | 3809449 | Santa Barbara | Segment 4 | Not of ordinance size at time of survey | |
| 684 | *Quercus agrifolia* | 5,5 | 25 | 40 | Canopy Pruning | - | - | 50 | Excellent | 274107.6 | 3809451 | Santa Barbara | Segment 4 | | X |
| 685 | *Quercus agrifolia* | 2 | 10 | 20 | Root and canopy | 20 | - | 25 | Excellent | 274107.9 | 3809460 | Santa Barbara | Segment 4 | Not of ordinance size at time of survey | |
| 686 | *Quercus agrifolia* | 6 | 20 | 10 | **Removal** | - | - | - | Good | 274106.3 | 3809486 | Santa Barbara | Segment 4 | | X |
| 687 | *Quercus agrifolia* | 3,3,2,2 | 10 | 15 | **Removal** | - | - | - | Excellent | 274111.8 | 3809489 | Santa Barbara | Segment 4 | | X |
| 688 | *Quercus agrifolia* | 16 | 40 | 40 | **Removal** | - | - | - | Fair | 274108.2 | 3809498 | Santa Barbara | Segment 4 | | X |
| 689 | *Quercus agrifolia* | 2,2,3,4 | 8 | 20 | Root and canopy | 40 | - | 50 | Excellent | 274108.4 | 3809497 | Santa Barbara | Segment 4 | | X |
| 690 | *Quercus agrifolia* | 14,15,10 | 45 | 50 | **Removal** | - | - | - | Good | 274107.2 | 3809504 | Santa Barbara | Segment 4 | | X |
| 691 | *Quercus agrifolia* | 2,2,2,2,2 | 15 | 20 | **Removal** | - | - | - | Good | 274112.2 | 3809509 | Santa Barbara | Segment 4 | | X |
| 692 | *Quercus agrifolia* | 6,8,8,8,8,4,3,7 | 25 | 30 | Root and canopy | 25 | - | 25 | Excellent | 274106.8 | 3809525 | Santa Barbara | Segment 4 | | X |
| 693 | *Quercus* | 7,7,7,2,3 | 20 | 20 | Root and | 30 | - | 35 | Fair | 274107.6 | 3809531 | Santa Barbara | Segment 4 | | X |

| Tree Number | Species | Diameter at 4.0' above ground (inches) *(some trees with multiple trunks at 4.0' above ground)* | Canopy Height (feet) | Canopy Diameter (feet) | Anticipated Project Impact(s) | Root Compaction (%) | Root Pruning (%) | Canopy Pruning (%) | Health | Tree location (easting, UTM 11S) | Tree location (northing, UTM 11S) | County | Project Segment | Notes | Coastal Commission Permit Review Required |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *agrifolia* | | | | canopy | | | | | | | | | | |
| 694 | *Quercus agrifolia* | 16 | 30 | 50 | Root and canopy | 20 | - | 30 | Good | 274107.9 | 3809570 | Santa Barbara | Segment 4 | | X |
| 695 | *Quercus agrifolia* | 7 | 30 | 20 | **Removal** | - | - | - | Fair | 274108.3 | 3809574 | Santa Barbara | Segment 4 | | X |
| 696 | *Quercus agrifolia* | 5,6,8,5,5,6 | 30 | 30 | **Removal** | - | - | - | Good | 274110.1 | 3809577 | Santa Barbara | Segment 4 | | X |
| 697 | *Quercus agrifolia* | 11,7,9,10 | 35 | 40 | **Removal** | - | - | - | Excellent | 274110.6 | 3809600 | Santa Barbara | Segment 4 | | X |
| 698 | *Quercus agrifolia* | 7,8,9 | 25 | 30 | **Removal** | - | - | - | Good | 274109.9 | 3809619 | Santa Barbara | Segment 4 | | X |
| 699 | *Quercus agrifolia* | 3,2,2 | 10 | 15 | **Removal** | - | - | - | Excellent | 274110.6 | 3809625 | Santa Barbara | Segment 4 | | X |
| 700 | *Quercus agrifolia* | 2,2 | 15 | 10 | **Removal** | - | - | - | Good | 274112.2 | 3809659 | Santa Barbara | Segment 4 | Not of ordinance size at time of survey | |
| 701 | *Quercus agrifolia* | 9,6,8 | 10 | 30 | **Removal** | - | - | - | Good | 273593.1 | 3808365 | Santa Barbara | Segment 3a | | X |
| 702 | *Quercus agrifolia* | 9 | 30 | 30 | **Removal** | - | - | - | Good | 273618.5 | 3808405 | Santa Barbara | Segment 3a | | X |
| 703 | *Quercus agrifolia* | 28 | 50 | 70 | Root and canopy | 5 | - | 5 | Excellent | 273606.4 | 3808351 | Santa Barbara | Segment 3a | | X |
| 704 | *Quercus agrifolia* | 11 | 30 | 40 | Canopy Pruning | - | - | 1 | Fair | 273615.3 | 3808359 | Santa Barbara | Segment 3a | | X |
| 705 | *Quercus agrifolia* | 23 | 50 | 70 | Canopy Pruning | - | - | 1 | Fair | 273619.3 | 3808362 | Santa Barbara | Segment 3a | | X |
| 706 | *Quercus agrifolia* | 21,24,17 | 60 | 60 | Root and canopy | 20 | - | 1 | Good | 273458.7 | 3808227 | Santa Barbara | Segment 3a | | X |
| 707 | *Quercus agrifolia* | 6,6 | 10 | 10 | Root and canopy | 15 | - | 5 | Excellent | 273471.9 | 3808233 | Santa Barbara | Segment 3a | | X |
| 708 | *Quercus agrifolia* | 12,6,7,20 | 25 | 40 | Root and canopy | 25 | - | 10 | Good | 273480 | 3808238 | Santa Barbara | Segment 3a | | X |
| 709 | *Quercus agrifolia* | 31,32 | 50 | 50 | Root and canopy | 30 | - | 5 | Good | 273508 | 3808254 | Santa Barbara | Segment 3a | | X |
| 710 | *Quercus agrifolia* | 22 | 35 | 40 | Root and canopy | 15 | - | 5 | Excellent | 273511.6 | 3808267 | Santa Barbara | Segment 3a | | X |
| 711 | *Quercus* | 19 | 40 | 40 | Root and | 35 | - | 5 | Excellent | 273519 | 3808294 | Santa Barbara | Segment | | X |

| Tree Number | Species | Diameter at 4.0' above ground (inches) *(some trees with multiple trunks at 4.0' above ground)* | Canopy Height (feet) | Canopy Diameter (feet) | Anticipated Project Impact(s) | Root Compaction (%) | Root Pruning (%) | Canopy Pruning (%) | Health | Tree location (easting, UTM 11S) | Tree location (northing, UTM 11S) | County | Project Segment | Notes | Coastal Commission Permit Review Required |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *agrifolia* | | | | canopy | | | | | | | | 3a | | |
| 801 | *Quercus agrifolia* | 12,8,3 | 25 | 30 | Canopy Pruning | - | - | 5 | Good | 269119.1 | 3811261 | Santa Barbara | Segment 4 | | X |

**Table 4: Protected Trees Expected to be Impacted by Project Activities within Ventura County**

| Tree Number | Species | Diameter at 4.5' above ground (DBH) (inches) *(some trees with multiple trunks at 4.5' above ground)* | Canopy Height (feet) | Canopy Diameter (feet) | Anticipated Project Impact(s) | Root Compaction (%) | Root Pruning (%) | Canopy Pruning (%) | Health | Heritage Tree | Tree location (easting, UTM 11S) | Tree location (northing, UTM 11S) | County | Project Segment | Notes | Ventura County Permit Required |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 556 | *Quercus agrifolia* | 10,11,15,12 | 40 | 50 | Root and canopy | 20 | - | 15 | Fair | Yes | 275262.9 | 3808647 | Ventura | Segment 4 | | X |
| 557 | *Quercus agrifolia* | 15, 15 | 35 | 35 | Root and canopy | 40 | - | 10 | Good | Yes | 275274 | 3808634 | Ventura | Segment 4 | | X |
| 558 | *Quercus agrifolia* | 13 | 30 | 25 | Root Impacts | 40 | - | - | Fair | No | 275280.9 | 3808627 | Ventura | Segment 4 | | X |
| 559 | *Quercus agrifolia* | 6,7 | 25 | 20 | Root and canopy | 20 | - | 10 | Good | No | 275366.6 | 3808542 | Ventura | Segment 4 | | X |
| 560 | *Quercus agrifolia* | 20,24 | 50 | 60 | Root and canopy | 40 | 30 | 5 | Good | Yes | 276117.2 | 3808530 | Ventura | Segment 4 | | X |
| 561 | *Quercus agrifolia* | 32 | 35 | 60 | Root and canopy | 10 | - | 5 | Good | Yes | 276465 | 3808448 | Ventura | Segment 4 | | |
| 562 | *Juglans californica* | 24 | 40 | 60 | Root and canopy | 25 | - | 3 | Fair | No | 276519.6 | 3808469 | Ventura | Segment 4 | | X |
| 563 | *Quercus agrifolia* | 18, 16, 19, 17, 12 | 35 | 40 | Canopy Pruning | - | - | 25 | Good | Yes | 277177.2 | 3808414 | Ventura | Segment 4 | | X |
| 564 | *Quercus agrifolia* | 15,6 | 20 | 20 | Root and canopy | - | 10 | 25 | Good | No | 277182.2 | 3808407 | Ventura | Segment 4 | | X |
| 565 | *Quercus agrifolia* | 7 | 20 | 30 | Root and canopy | - | 10 | 30 | Good | No | 277408.3 | 3808326 | Ventura | Segment 4 | | X |
| 566 | *Quercus agrifolia* | 6 | 15 | 12 | None expected | - | - | - | Fair | No | 277463.2 | 3808250 | Ventura | Segment 4 | In guard structure area, should be avoidable with careful planning | |
| 567 | *Quercus agrifolia* | 13 | 30 | 40 | None expected | - | - | - | Good | No | 277463.8 | 3808248 | Ventura | Segment 4 | In guard structure area, should be avoidable with careful planning | |
| 568 | *Quercus agrifolia* | 36 | 45 | 80 | None expected | - | - | - | Good | Yes | 277921.5 | 3808072 | Ventura | Segment 4 | In guard structure area, should be avoidable with careful planning | |
| 569 | *Quercus agrifolia* | 42 | 50 | 60 | Root and canopy | 15 | - | 5 | Good | Yes | 278392.2 | 3807999 | Ventura | Segment 4 | | |

| Tree Number | Species | Diameter at 4.5' above ground (DBH) (inches) *(some trees with multiple trunks at 4.5' above ground)* | Canopy Height (feet) | Canopy Diameter (feet) | Anticipated Project Impact(s) | Root Compaction (%) | Root Pruning (%) | Canopy Pruning (%) | Health | Heritage Tree | Tree location (easting, UTM 11S) | Tree location (northing, UTM 11S) | County | Project Segment | Notes | Ventura County Permit Required |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 570 | *Quercus agrifolia* | 13 | 25 | 30 | Root and canopy | 40 | - | 30 | Good | No | 278357.2 | 3807873 | Ventura | Segment 4 | Likely avoidable | |
| 571 | *Populus fremontii* | 6 | 20 | 20 | Canopy Pruning | - | - | 20 | Good | No | 278283.4 | 3807604 | Ventura | Segment 4 | Planted specimen | X |
| 572 | *Quercus agrifolia* | 29 | 50 | 70 | Root and canopy | 20 | - | 15 | Fair | Yes | 278697.8 | 3808026 | Ventura | Segment 4 | | X |
| 573 | *Quercus agrifolia* | 17,16 | 50 | 70 | Canopy Pruning | - | - | 5 | Fair | Yes | 278664 | 3807968 | Ventura | Segment 4 | | |
| 574 | *Quercus agrifolia* | 19,15 | 35 | 60 | Root and canopy | 20 | - | 5 | Fair | Yes | 278656.2 | 3807975 | Ventura | Segment 4 | | X |
| 575 | *Quercus agrifolia* | 15,13 | 30 | 60 | Root and canopy | 20 | - | 5 | Poor | Yes | 278660 | 3807957 | Ventura | Segment 4 | | X |
| 576 | *Quercus agrifolia* | 11,8,9,6,14,11,12,9,12 | 35 | 50 | Canopy Pruning | - | - | 5 | Poor | Yes | 278646.9 | 3807882 | Ventura | Segment 4 | | |
| 577 | *Quercus agrifolia* | 16,9,12 | 30 | 40 | Canopy Pruning | - | - | 5 | Good | Yes | 278635.6 | 3807886 | Ventura | Segment 4 | | |
| 578 | *Quercus agrifolia* | 19, 15 | 40 | 60 | Root and canopy | 20 | - | 5 | Good | Yes | 279420.7 | 3807532 | Ventura | Segment 4 | | X |
| 579 | *Quercus agrifolia* | 2 | 10 | 10 | **Removal** | - | - | - | Good | No | 279503.5 | 3807950 | Ventura | Segment 4 | Not ordinance size at time of survey | |
| 580 | *Quercus agrifolia* | 14,10 | 30 | 70 | Canopy Pruning | - | - | 10 | Fair | Yes | 279506.6 | 3807974 | Ventura | Segment 4 | | |
| 581 | *Quercus agrifolia* | 3,3 | 15 | 10 | Root and canopy | 20 | - | 3 | Good | No | 279491.2 | 3807966 | Ventura | Segment 4 | | X |
| 582 | *Quercus agrifolia* | 14 | 40 | 60 | Canopy Pruning | - | - | 5 | Good | No | 279706.5 | 3807732 | Ventura | Segment 4 | | |
| 583 | *Quercus agrifolia* | 14,15,8 | 40 | 50 | Canopy Pruning | - | - | 10 | Fair | Yes | 279713.7 | 3807740 | Ventura | Segment 4 | | |
| 584 | *Quercus agrifolia* | 9,14,16 | 50 | 70 | Canopy Pruning | - | - | 10 | Good | Yes | 279728.8 | 3807755 | Ventura | Segment 4 | | |
| 585 | *Quercus agrifolia* | 6,11 | 25 | 30 | **Removal** | - | - | - | Good | No | 280122.2 | 3807478 | Ventura | Segment 4 | | X |
| 586 | *Quercus agrifolia* | 3,3,5 | 15 | 15 | **Removal** | - | - | - | Good | No | 280120.7 | 3807504 | Ventura | Segment 4 | | X |
| 587 | *Quercus agrifolia* | 9 | 25 | 20 | Root and canopy | 20 | - | 30 | Good | No | 280123.6 | 3807464 | Ventura | Segment 4 | | X |
| 588 | *Quercus agrifolia* | 7,7 | 25 | 25 | Canopy Pruning | - | - | 30 | Good | No | 280486.1 | 3807423 | Ventura | Segment 4 | | X |
| 589 | *Quercus agrifolia* | 16,27 | 45 | 60 | Canopy Pruning | - | - | 5 | Good | Yes | 281091.4 | 3807187 | Ventura | Segment 4 | | |

| Tree Number | Species | Diameter at 4.5' above ground (DBH) (inches) *(some trees with multiple trunks at 4.5' above ground)* | Canopy Height (feet) | Canopy Diameter (feet) | Anticipated Project Impact(s) | Root Compaction (%) | Root Pruning (%) | Canopy Pruning (%) | Health | Heritage Tree | Tree location (easting, UTM 11S) | Tree location (northing, UTM 11S) | County | Project Segment | Notes | Ventura County Permit Required |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 590 | *Quercus agrifolia* | 12,12 | 35 | 50 | Canopy Pruning | - | - | 2 | Good | Yes | 281227.3 | 3807055 | Ventura | Segment 4 | Scenic Resource Protection Overlay Zone | |
| 591 | *Quercus agrifolia* | 23, 15, 25 | 40 | 50 | Root and canopy | 25 | - | 10 | Good | Yes | 281203.6 | 3806990 | Ventura | Segment 4 | | X |
| 592 | *Quercus agrifolia* | 26,16,17 | 50 | 70 | Canopy Pruning | - | - | 5 | Good | Yes | 281164.3 | 3806944 | Ventura | Segment 4 | | |
| 593 | *Quercus agrifolia* | 11 | 25 | 20 | Root and canopy | 20 | - | 30 | Good | No | 281292.2 | 3806621 | Ventura | Segment 4 | Scenic Resource Protection Overlay Zone | X |
| 594 | *Quercus agrifolia* | 23 | 35 | 45 | Root and canopy | 40 | - | 10 | Good | No | 281300.1 | 3806639 | Ventura | Segment 4 | Scenic Resource Protection Overlay Zone | X |
| 595 | *Quercus agrifolia* | 10,18 | 25 | 40 | Canopy Pruning | - | - | 10 | Good | Yes | 280772 | 3806395 | Ventura | Segment 3b | | |
| 596 | *Quercus agrifolia* | 20, 16, 26 | 40 | 40 | Canopy Pruning | - | - | 5 | Good | Yes | 280771.4 | 3806434 | Ventura | Segment 3b | | |
| 597 | *Quercus agrifolia* | 20 | 40 | 60 | Canopy Pruning | - | - | 5 | Fair | No | 280778.2 | 3806456 | Ventura | Segment 3b | Tree not tagged (steep slope) | |
| 598 | *Quercus agrifolia* | 32,22 | 50 | 60 | Canopy Pruning | - | - | 5 | Fair | Yes | 280792.8 | 3806478 | Ventura | Segment 3b | | |
| 599 | *Quercus agrifolia* | 24 | 45 | 60 | Canopy Pruning | - | - | 10 | Fair | No | 280787.1 | 3806467 | Ventura | Segment 3b | | |
| 600 | *Quercus agrifolia* | 9 | 20 | 20 | Canopy Pruning | - | - | 10 | Good | No | 280805.6 | 3806493 | Ventura | Segment 3b | | |
| 609 | *Quercus agrifolia* | 4 | 12 | 6 | **Removal** | - | - | - | Excellent | No | 274622.3 | 3808845 | Ventura | Segment 4 | | X |
| 610 | *Quercus agrifolia* | 7.5 | 20 | 20 | **Removal** | - | - | - | Poor | No | 274608.9 | 3808843 | Ventura | Segment 4 | | X |
| 611 | *Quercus agrifolia* | 7 | 20 | 12 | **Removal** | - | - | - | Good | No | 275014.1 | 3808759 | Ventura | Segment 4 | | X |
| 612 | *Quercus agrifolia* | 7 | 20 | 20 | **Removal** | - | - | - | Good | No | 275017 | 3808759 | Ventura | Segment 4 | | X |
| 613 | *Quercus agrifolia* | 30, 25 | 40 | 100 | **Removal** | - | - | - | Good | Yes | 275296.4 | 3807454 | Ventura | Segment 3b | | X |
| 614 | *Quercus agrifolia* | 7, 4, 3 | 20 | 10 | **Removal** | - | - | - | Good | No | 275290.1 | 3807466 | Ventura | Segment 3b | | X |

| Tree Number | Species | Diameter at 4.5' above ground (DBH) (inches) *(some trees with multiple trunks at 4.5' above ground)* | Canopy Height (feet) | Canopy Diameter (feet) | Anticipated Project Impact(s) | Root Compaction (%) | Root Pruning (%) | Canopy Pruning (%) | Health | Heritage Tree | Tree location (easting, UTM 11S) | Tree location (northing, UTM 11S) | County | Project Segment | Notes | Ventura County Permit Required |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 615 | *Quercus agrifolia* | 23 | 35 | 70 | Root and canopy | - | 10 | 20 | Fair | No | 275291 | 3807453 | Ventura | Segment 3b | | X |
| 616 | *Quercus agrifolia* | 30 | 40 | 80 | Root and canopy | - | 10 | 20 | Good | Yes | 275367.3 | 3807430 | Ventura | Segment 3b | | X |
| 617 | *Quercus agrifolia* | 4.5, 9.5, 8, 9 | 25 | 30 | Root and canopy | 20 | - | 20 | Good | No | 275357.1 | 3807439 | Ventura | Segment 3b | | X |
| 618 | *Quercus agrifolia* | 14, 9 | 40 | 40 | Root and canopy | 25 | - | 20 | Good | No | 275367.5 | 3807434 | Ventura | Segment 3b | | X |
| 619 | *Quercus agrifolia* | 40, 24 | 60 | 80 | Root and canopy | 30 | 10 | 30 | Good | Yes | 275368.3 | 3807439 | Ventura | Segment 3b | Tree may not tolerate 30% canopy loss; minimize impacts. | X |
| 620 | *Quercus agrifolia* | 25 | 25 | 60 | Root and canopy | 20 | - | 20 | Fair | No | 275331.1 | 3807441 | Ventura | Segment 3b | | X |
| 621 | *Quercus agrifolia* | 37 | 50 | 60 | Root and canopy | 20 | - | 30 | Good | Yes | 275340.1 | 3807434 | Ventura | Segment 3b | Tree may not tolerate 30% canopy loss; minimize impacts. | X |
| 622 | *Quercus agrifolia* | 13 | 20 | 20 | Root and canopy | 20 | - | 20 | Fair | No | 275328.4 | 3807445 | Ventura | Segment 3b | | X |
| 623 | *Quercus agrifolia* | 11 | 20 | 20 | Root and canopy | 20 | - | 20 | Fair | No | 275332.4 | 3807448 | Ventura | Segment 3b | | X |
| 624 | *Quercus agrifolia* | 14,25 | 25 | 40 | Root and canopy | 25 | - | 5 | Fair | Yes | 278880.4 | 3806585 | Ventura | Segment 3b | | X |
| 625 | *Quercus agrifolia* | 13 | 25 | 50 | Canopy Pruning | - | - | 20 | Fair | No | 278954.7 | 3806583 | Ventura | Segment 3b | | X |
| 626 | *Quercus agrifolia* | 22 | 35 | 40 | Root and canopy | 40 | - | 5 | Good | No | 278948 | 3806599 | Ventura | Segment 3b | | X |
| 627 | *Quercus agrifolia* | 24,22 | 45 | 70 | Canopy Pruning | - | - | 5 | Fair | Yes | 278926.5 | 3806615 | Ventura | Segment 3b | | |
| 637 | *Quercus agrifolia* | 10,7 | 25 | 30 | Root and canopy | 10 | - | 10 | Good | No | 278772.6 | 3806870 | Ventura | Segment 3b | | |
| 638 | *Quercus agrifolia* | 9,13,10 | 25 | 30 | Root and canopy | 10 | - | 5 | Good | Yes | 278770.9 | 3806882 | Ventura | Segment 3b | | |
| 639 | *Quercus agrifolia* | 22,5 | 35 | 50 | Canopy Pruning | - | - | 10 | Good | Yes | 278731 | 3806949 | Ventura | Segment 3b | | |
| 640 | *Quercus agrifolia* | 10 | 30 | 30 | Root and canopy | 10 | - | 5 | Good | No | 278718 | 3806955 | Ventura | Segment 3b | | |

| Tree Number | Species | Diameter at 4.5' above ground (DBH) (inches) *(some trees with multiple trunks at 4.5' above ground)* | Canopy Height (feet) | Canopy Diameter (feet) | Anticipated Project Impact(s) | Root Compaction (%) | Root Pruning (%) | Canopy Pruning (%) | Health | Heritage Tree | Tree location (easting, UTM 11S) | Tree location (northing, UTM 11S) | County | Project Segment | Notes | Ventura County Permit Required |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 641 | *Quercus agrifolia* | 32 | 50 | 80 | Canopy Pruning | - | - | 5 | Fair | Yes | 278696.3 | 3806949 | Ventura | Segment 3b | Tree not tagged (dense poison oak) | |
| 642 | *Eucalyptus* sp. | 32 | 65 | 60 | **Removal** | - | - | - | Good | Yes | 276619.7 | 3807016 | Ventura | Segment 3b | | X |
| 643 | *Schinus molle* | 30 | 35 | 50 | **Removal** | - | - | - | Good | Yes | 276617.2 | 3807002 | Ventura | Segment 3b | | X |
| 644 | *Quercus agrifolia* | 30 | 40 | 40 | Canopy Pruning | 30 | - | 10 | Good | Yes | 275247.3 | 3807432 | Ventura | Segment 3b | | X |
| 645 | *Quercus agrifolia* | 3 | 15 | 12 | Canopy Pruning | - | - | 20 | Good | No | 275245.9 | 3807426 | Ventura | Segment 3b | | X |
| 646 | *Quercus agrifolia* | 9 | 20 | 20 | Root and canopy | 20 | - | 30 | Good | No | 275240.7 | 3807423 | Ventura | Segment 3b | | X |
| 647 | *Quercus agrifolia* | 17 | 25 | 30 | Root and canopy | 30 | - | 15 | Good | No | 275235.5 | 3807419 | Ventura | Segment 3b | | X |
| 648 | *Quercus agrifolia* | 27 | 25 | 30 | Root and canopy | 20 | - | 10 | Good | No | 275234.3 | 3807399 | Ventura | Segment 3b | | X |
| 649 | *Quercus agrifolia* | 17,14 | 35 | 35 | Root and canopy | 30 | - | 5 | Good | Yes | 275088.7 | 3808081 | Ventura | Segment 3a | | X |
| 650 | *Quercus agrifolia* | 17,18,24,5,6 | 35 | 60 | Root and canopy | 10 | - | 2 | Fair | Yes | 275151.1 | 3808085 | Ventura | Segment 3a | | |
| 651 | *Quercus agrifolia* | 52 | 50 | 100 | Root and canopy | 30 | - | 15 | Good | Yes | 274315.1 | 3808108 | Ventura | Segment 3b | | X |
| 652 | *Quercus agrifolia* | 23 | 35 | 50 | Root and canopy | 30 | - | 5 | Good | No | 274516.6 | 3807843 | Ventura | Segment 3b | | X |
| 653 | *Quercus agrifolia* | 19 | 55 | 60 | Canopy Pruning | - | - | 5 | Good | No | 284340.3 | 3805186 | Ventura | Segment 2 | Scenic Resource Protection Overlay Zone; tree not tagged | |
| 654 | *Quercus agrifolia* | 16, 13, 8, 13, 5 | 40 | 45 | Canopy Pruning | - | - | 10 | Good | Yes | 284284.7 | 3805353 | Ventura | Segment 2 | Scenic Resource Protection Overlay Zone | |
| 655 | *Quercus agrifolia* | 17 | 30 | 60 | Canopy Pruning | - | - | 20 | Fair | No | 283889.3 | 3805132 | Ventura | Segment 2 | Scenic Resource Protection Overlay Zone | X |

| Tree Number | Species | Diameter at 4.5' above ground (DBH) (inches) *(some trees with multiple trunks at 4.5' above ground)* | Canopy Height (feet) | Canopy Diameter (feet) | Anticipated Project Impact(s) | Root Compaction (%) | Root Pruning (%) | Canopy Pruning (%) | Health | Heritage Tree | Tree location (easting, UTM 11S) | Tree location (northing, UTM 11S) | County | Project Segment | Notes | Ventura County Permit Required |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 656 | *Quercus agrifolia* | 12 | 30 | 80 | Canopy Pruning | - | - | 5 | Good | No | 283068 | 3805253 | Ventura | Segment 2 | Scenic Resource Protection Overlay Zone; tree not tagged | |
| 657 | *Quercus agrifolia* | 19 | 45 | 50 | Canopy Pruning | - | - | 5 | Good | No | 282634.7 | 3805418 | Ventura | Segment 2 | Scenic Resource Protection Overlay Zone | |
| 658 | *Quercus agrifolia* | 13,9,14 | 30 | 60 | Canopy Pruning | - | - | 5 | Fair | Yes | 282365.1 | 3805414 | Ventura | Segment 2 | Scenic Resource Protection Overlay Zone; tree not tagged | |
| 659 | *Juglans californica* | 5,5,6 | 20 | 30 | Canopy Pruning | - | - | 15 | Good | No | 282279.4 | 3805555 | Ventura | Segment 2 | Scenic Resource Protection Overlay Zone | |
| 660 | *Quercus agrifolia* | 17,18 | 50 | 65 | Canopy Pruning | - | - | 5 | Good | Yes | 282272.3 | 3805582 | Ventura | Segment 2 | Scenic Resource Protection Overlay Zone; tree not tagged | |
| 661 | *Quercus agrifolia* | 10,18 | 30 | 60 | Canopy Pruning | - | - | 5 | Fair | Yes | 282146.2 | 3805705 | Ventura | Segment 2 | Scenic Resource Protection Overlay Zone | |
| 662 | *Quercus agrifolia* | 49 | 35 | 50 | Root and canopy | 10 | - | 10 | Fair | Yes | 287227.4 | 3805403 | Ventura | Segment 2 | | |
| 663 | *Quercus agrifolia* | 51 | 40 | 70 | Root and canopy | 15 | - | 5 | Fair | Yes | 287233.9 | 3805406 | Ventura | Segment 2 | | |
| 664 | *Quercus agrifolia* | 17 | 15 | 6 | **Removal** | - | - | - | Poor | No | 287216.8 | 3805427 | Ventura | Segment 2 | | X |
| 665 | *Quercus agrifolia* | 14 | 30 | 40 | Canopy Pruning | 10 | - | 5 | Good | No | 285745.3 | 3805378 | Ventura | Segment 2 | | |
| 666 | *Quercus agrifolia* | 20 | 35 | 60 | Root and canopy | 15 | - | 10 | Good | No | 285693.3 | 3805225 | Ventura | Segment 2 | | |
| 667 | *Quercus agrifolia* | 20 | 30 | 40 | Canopy Pruning | - | - | 5 | Good | No | 285690.5 | 3805191 | Ventura | Segment 2 | | |
| 668 | *Quercus agrifolia* | 14,16,10,23 | 35 | 50 | Canopy Pruning | - | - | 10 | Fair | Yes | 285699.5 | 3805196 | Ventura | Segment 2 | | |

| Tree Number | Species | Diameter at 4.5' above ground (DBH) (inches) *(some trees with multiple trunks at 4.5' above ground)* | Canopy Height (feet) | Canopy Diameter (feet) | Anticipated Project Impact(s) | Root Compaction (%) | Root Pruning (%) | Canopy Pruning (%) | Health | Heritage Tree | Tree location (easting, UTM 11S) | Tree location (northing, UTM 11S) | County | Project Segment | Notes | Ventura County Permit Required |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 712 | *Quercus agrifolia* | 13,22,19,26,7 | 40 | 60 | Canopy Pruning | - | - | 5 | Excellent | Yes | 295793.1 | 3800303 | Ventura | Segment 1 | | |
| 713 | *Quercus agrifolia* | 35 | 35 | 60 | Root and canopy | 5 | - | 5 | Excellent | Yes | 295743.8 | 3800305 | Ventura | Segment 1 | | |
| 714 | *Quercus agrifolia* | 37 | 50 | 80 | Canopy Pruning | - | - | 5 | Excellent | Yes | 295641.8 | 3800241 | Ventura | Segment 1 | | |
| 715 | *Quercus agrifolia* | 43 | 50 | 80 | Root and canopy | 15 | - | 5 | Good | Yes | 295609.2 | 3800228 | Ventura | Segment 1 | | |
| 716 | *Quercus agrifolia* | 21 | 30 | 30 | Root and canopy | 10 | - | 5 | Fair | No | 295505.1 | 3800242 | Ventura | Segment 1 | | |
| 717 | *Quercus agrifolia* | 13,17,10,11 | 40 | 40 | Root and canopy | 5 | - | 10 | Good | Yes | 295466.3 | 3800198 | Ventura | Segment 1 | | |
| 718 | *Quercus agrifolia* | 25 | 25 | 50 | Root and canopy | 15 | - | 10 | Fair | No | 295448.7 | 3800192 | Ventura | Segment 1 | | |
| 719 | *Platanus racemosa* | 26,18 | 50 | 50 | Root and canopy | 15 | - | 5 | Fair | Yes | 295436.8 | 3800193 | Ventura | Segment 1 | | |
| 720 | *Quercus agrifolia* | 16,16,14,12 | 30 | 50 | Root and canopy | 25 | - | 5 | Good | Yes | 295348.7 | 3800664 | Ventura | Segment 1 | | X |
| 721 | *Quercus agrifolia* | 30 | 40 | 50 | Root and canopy | 15 | - | 5 | Good | Yes | 295633.3 | 3801024 | Ventura | Segment 1 | | |
| 722 | *Quercus agrifolia* | 26 | 35 | 45 | Root and canopy | 20 | - | 5 | Good | No | 295498.7 | 3801087 | Ventura | Segment 1 | | X |
| 723 | *Quercus agrifolia* | 11 | 25 | 30 | **Removal** | - | - | - | Good | No | 287628.2 | 3804732 | Ventura | Segment 1 | | X |
| 724 | *Quercus agrifolia* | 14 | 25 | 30 | **Removal** | - | - | - | Good | No | 287629.3 | 3804731 | Ventura | Segment 1 | | X |
| 725 | *Quercus agrifolia* | 15,15 | 25 | 40 | Root and canopy | 35 | - | 35 | Good | Yes | 287636.2 | 3804746 | Ventura | Segment 1 | | X |
| 726 | *Quercus agrifolia* | 12,12 | 25 | 40 | Canopy Pruning | 25 | - | 35 | Good | Yes | 287639.4 | 3804748 | Ventura | Segment 1 | | X |
| 727 | *Quercus agrifolia* | 7,7,3,3,4,2,5 | 25 | 30 | Root and canopy | 15 | - | 5 | Excellent | Yes | 287835.5 | 3804627 | Ventura | Segment 1 | | |
| 728 | *Quercus agrifolia* | 13,19,17 | 30 | 40 | Root and canopy | 15 | - | 10 | Excellent | Yes | 288300.6 | 3804495 | Ventura | Segment 1 | | |
| 729 | *Quercus agrifolia* | 19 | 30 | 40 | Root and canopy | 5 | - | 5 | Good | No | 288306.7 | 3804498 | Ventura | Segment 1 | | |
| 730 | *Quercus agrifolia* | 39 | 30 | 40 | Root and canopy | 5 | - | 5 | Excellent | Yes | 288323.7 | 3804496 | Ventura | Segment 1 | | |
| 731 | *Quercus agrifolia* | 18,17 | 25 | 40 | Root and canopy | 10 | - | 5 | Good | Yes | 288382.9 | 3804545 | Ventura | Segment 1 | | |

| Tree Number | Species | Diameter at 4.5' above ground (DBH) (inches) *(some trees with multiple trunks at 4.5' above ground)* | Canopy Height (feet) | Canopy Diameter (feet) | Anticipated Project Impact(s) | Root Compaction (%) | Root Pruning (%) | Canopy Pruning (%) | Health | Heritage Tree | Tree location (easting, UTM 11S) | Tree location (northing, UTM 11S) | County | Project Segment | Notes | Ventura County Permit Required |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 732 | *Quercus agrifolia* | 5,4,4 | 15 | 20 | Root and canopy | 20 | - | 5 | Excellent | No | 288392.1 | 3804549 | Ventura | Segment 1 | | X |
| 733 | *Quercus agrifolia* | 20,7 | 30 | 40 | Root and canopy | 20 | - | 5 | Good | Yes | 288470.9 | 3804626 | Ventura | Segment 1 | | X |
| 734 | *Quercus agrifolia* | 5 | 15 | 20 | Root and canopy | 10 | - | 5 | Excellent | No | 288615.2 | 3804653 | Ventura | Segment 1 | | |
| 735 | *Quercus agrifolia* | 8,4 | 20 | 20 | Root and canopy | 30 | - | 20 | Excellent | No | 288627.1 | 3804657 | Ventura | Segment 1 | | X |
| 736 | *Quercus agrifolia* | 5,5 | 20 | 20 | Root and canopy | 20 | - | 10 | Good | No | 288626.2 | 3804667 | Ventura | Segment 1 | | X |
| 737 | *Quercus agrifolia* | 20 | 40 | 40 | Root and canopy | 5 | - | 5 | Excellent | No | 288737.8 | 3804645 | Ventura | Segment 1 | | |
| 738 | *Quercus agrifolia* | 26 | 50 | 50 | Root and canopy | 30 | - | 5 | Good | No | 288992.2 | 3804472 | Ventura | Segment 1 | | X |
| 739 | *Quercus agrifolia* | 6 | 15 | 20 | Root and canopy | 5 | - | 10 | Excellent | No | 288997.5 | 3804471 | Ventura | Segment 1 | | |
| 740 | *Quercus agrifolia* | 25 | 30 | 40 | Root and canopy | 15 | - | 15 | Excellent | No | 289038.2 | 3804402 | Ventura | Segment 1 | | |
| 741 | *Quercus agrifolia* | 6 | 25 | 20 | Root and canopy | 15 | - | 10 | Good | No | 289033.6 | 3804397 | Ventura | Segment 1 | | |
| 742 | *Quercus agrifolia* | 9 | 25 | 20 | Root and canopy | 10 | - | 5 | Excellent | No | 289031.5 | 3804396 | Ventura | Segment 1 | | |
| 743 | *Quercus agrifolia* | 8,4 | 20 | 25 | Root and canopy | 15 | - | 15 | Good | No | 289036.6 | 3804357 | Ventura | Segment 1 | | |
| 744 | *Quercus agrifolia* | 10,10 | 20 | 30 | Root and canopy | 15 | - | 15 | Excellent | No | 289042.4 | 3804324 | Ventura | Segment 1 | | |
| 745 | *Quercus agrifolia* | 20,28 | 50 | 50 | Root and canopy | 20 | - | 15 | Good | Yes | 289042.4 | 3803934 | Ventura | Segment 1 | | X |
| 746 | *Quercus agrifolia* | 7,7 | 25 | 25 | Root and canopy | 10 | - | 10 | Excellent | No | 288987.7 | 3803912 | Ventura | Segment 1 | | |
| 747 | *Quercus agrifolia* | 9,10 | 20 | 20 | Root and canopy | 20 | - | 5 | Excellent | No | 288967.1 | 3803905 | Ventura | Segment 1 | | X |
| 748 | *Quercus agrifolia* | 18,13 | 30 | 30 | Root and canopy | 25 | - | 5 | Good | Yes | 289161.4 | 3804345 | Ventura | Segment 1 | | X |
| 749 | *Quercus agrifolia* | 10,16,8 | 35 | 40 | Root and canopy | 25 | - | 5 | Good | Yes | 289303.1 | 3804668 | Ventura | Segment 1 | | X |
| 750 | *Quercus agrifolia* | 13 | 25 | 20 | Root and canopy | 20 | - | 20 | Excellent | No | 289330.6 | 3804692 | Ventura | Segment 1 | | X |
| 751 | *Quercus agrifolia* | 53 | 60 | 70 | Canopy Pruning | - | - | 5 | Good | Yes | 289173.2 | 3803065 | Ventura | Segment 1 | | |

| Tree Number | Species | Diameter at 4.5' above ground (DBH) (inches) *(some trees with multiple trunks at 4.5' above ground)* | Canopy Height (feet) | Canopy Diameter (feet) | Anticipated Project Impact(s) | Root Compaction (%) | Root Pruning (%) | Canopy Pruning (%) | Health | Heritage Tree | Tree location (easting, UTM 11S) | Tree location (northing, UTM 11S) | County | Project Segment | Notes | Ventura County Permit Required |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 752 | *Quercus agrifolia* | 38 | 50 | 80 | Canopy Pruning | - | - | 15 | Good | Yes | 289167.5 | 3803057 | Ventura | Segment 1 | | |
| 753 | *Quercus agrifolia* | 8 | 25 | 40 | Root and canopy | 15 | - | 10 | Excellent | No | 289155 | 3803036 | Ventura | Segment 1 | | |
| 754 | *Quercus agrifolia* | 13 | 25 | 25 | Root and canopy | 10 | - | 5 | Excellent | No | 289156.6 | 3803033 | Ventura | Segment 1 | | |
| 755 | *Quercus agrifolia* | 33 | 60 | 80 | Root and canopy | 10 | - | 10 | Fair | Yes | 289172.4 | 3802954 | Ventura | Segment 1 | | |
| 756 | *Quercus agrifolia* | 28 | 40 | 50 | Root and canopy | 35 | - | 10 | Excellent | Yes | 289061.6 | 3802834 | Ventura | Segment 1 | Tree not tagged (behind barbed wire fence) | X |
| 757 | *Quercus agrifolia* | 27 | 40 | 50 | Root and canopy | 35 | - | 10 | Good | No | 290650.9 | 3803909 | Ventura | Segment 1 | | X |
| 758 | *Quercus agrifolia* | 23 | 30 | 50 | Root and canopy | 10 | - | 20 | Good | No | 290651.6 | 3803915 | Ventura | Segment 1 | | X |
| 760 | *Quercus agrifolia* | 14,14,10 | 35 | 40 | Root and canopy | 25 | - | 5 | Good | Yes | 289690.7 | 3801493 | Ventura | Segment 1 | | X |
| 761 | *Quercus agrifolia* | 34,16 | 35 | 50 | Root and canopy | 25 | - | 20 | Good | Yes | 293814.1 | 3801866 | Ventura | Segment 1 | Tree not tagged (dense poison oak) | X |
| 762 | *Quercus agrifolia* | 19,19 | 35 | 50 | Canopy Pruning | - | - | 5 | Fair | Yes | 293879.7 | 3801871 | Ventura | Segment 1 | Tree not tagged (dense poison oak) | |
| 763 | *Quercus agrifolia* | 16,24 | 35 | 40 | Root and canopy | 30 | - | 5 | Good | Yes | 293926.6 | 3801866 | Ventura | Segment 1 | | X |
| 764 | *Quercus agrifolia* | 16 | 25 | 25 | **Removal** | - | - | - | **Dead** | No | 294025.9 | 3801803 | Ventura | Segment 1 | | |
| 765 | *Quercus agrifolia* | 16,19,18 | 30 | 50 | Root and canopy | 25 | - | 5 | Excellent | Yes | 294011 | 3801805 | Ventura | Segment 1 | | X |
| 766 | *Quercus agrifolia* | 36 | 50 | 80 | Root and canopy | 20 | - | 10 | Good | Yes | 293662.3 | 3801841 | Ventura | Segment 1 | | X |
| 767 | *Quercus agrifolia* | 28 | 35 | 40 | Root and canopy | 25 | - | 5 | Good | No | 293655.4 | 3802326 | Ventura | Segment 1 | | X |
| 768 | *Quercus agrifolia* | 10,14 | 25 | 30 | Root and canopy | 35 | - | 40 | Good | Yes | 293660.4 | 3802322 | Ventura | Segment 1 | Tree may not tolerate 40% canopy loss; minimize impacts. | X |
| 769 | *Quercus agrifolia* | 29 | 35 | 40 | Root and canopy | 40 | - | 5 | Good | Yes | 293679.8 | 3802318 | Ventura | Segment 1 | | X |

| Tree Number | Species | Diameter at 4.5' above ground (DBH) (inches) *(some trees with multiple trunks at 4.5' above ground)* | Canopy Height (feet) | Canopy Diameter (feet) | Anticipated Project Impact(s) | Root Compaction (%) | Root Pruning (%) | Canopy Pruning (%) | Health | Heritage Tree | Tree location (easting, UTM 11S) | Tree location (northing, UTM 11S) | County | Project Segment | Notes | Ventura County Permit Required |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 770 | *Quercus agrifolia* | 31 | 30 | 60 | Root and canopy | 15 | - | 10 | Good | Yes | 293857.4 | 3802288 | Ventura | Segment 1 | | |
| 771 | *Quercus agrifolia* | 45 | 40 | 80 | Root and canopy | 15 | - | 5 | Fair | Yes | 294007.1 | 3802270 | Ventura | Segment 1 | | |
| 772 | *Quercus agrifolia* | 24 | 35 | 40 | Canopy Pruning | - | - | 15 | Good | No | 294044.6 | 3802273 | Ventura | Segment 1 | | |
| 773 | *Quercus agrifolia* | 30 | 50 | 80 | Root and canopy | 15 | - | 5 | Good | Yes | 294058.7 | 3802264 | Ventura | Segment 1 | | |
| 774 | *Quercus agrifolia* | 25 | 35 | 60 | Root and canopy | 15 | - | 10 | Good | No | 294076.1 | 3802269 | Ventura | Segment 1 | | |
| 775 | *Quercus agrifolia* | 36 | 35 | 40 | Root and canopy | 35 | - | 5 | Fair | Yes | 294166.5 | 3802276 | Ventura | Segment 1 | | X |
| 776 | *Quercus agrifolia* | 21 | 20 | 30 | Root and canopy | 10 | - | 10 | Good | No | 294228.2 | 3802274 | Ventura | Segment 1 | | |
| 777 | *Quercus agrifolia* | 38 | 40 | 60 | Root and canopy | 10 | - | 5 | Good | Yes | 294301.2 | 3802265 | Ventura | Segment 1 | | |
| 802 | *Quercus agrifolia* | 18 | 35 | 40 | Canopy Pruning | 10 | - | 15 | Good | No | 291875.3 | 3804174 | Ventura | Segment 1 | | |
| 803 | *Quercus agrifolia* | 21, 6 | 40 | 30 | Canopy Pruning | - | - | 10 | Excellent | Yes | 291966.8 | 3803880 | Ventura | Segment 1 | | |
| 804 | *Quercus agrifolia* | 4, 4 | 20 | 15 | Canopy Pruning | - | - | 10 | Good | No | 291968.2 | 3803875 | Ventura | Segment 1 | | |
| 805 | *Quercus agrifolia* | 20 | 35 | 30 | Canopy Pruning | - | - | 10 | Good | No | 292030 | 3803800 | Ventura | Segment 1 | | |
| 806 | *Quercus agrifolia* | 44 | 50 | 60 | Canopy Pruning | - | - | 5 | Good | Yes | 295881.1 | 3802420 | Ventura | Segment 1 | | |
| 807 | *Quercus agrifolia* | 25 | 45 | 50 | Canopy Pruning | - | - | 5 | Good | No | 295896.2 | 3802428 | Ventura | Segment 1 | | |

## 4.0 CONCLUSIONS

*Los Padres National Forest Management Plan:* No trees classified as Management Indicator Species in the Los Padres National Forest Management Plan will be impacted; no permitting necessary.

*California Fish and Game Code Section 1600*: A Lake and Streambed Alteration Agreement will be required for impacts to riparian trees, shrubs, and CDFW jurisdictional bed and bank. Delineation of CDFW jurisdictional resources is outside the scope of this report; however, 15 riparian trees that will require encroachment or removal that are not covered under other tree permits were documented during the protected tree survey.

*Santa Barbara County Comprehensive Plan*: A zoning permit must be sought through the Santa Barbara County Planning Department for any removal or encroachment impacts to protected trees. The Planning Department will assess the tree impacts and determine what impacts will require permitting. Forty-nine (49) protected trees will need to be evaluated by the Planning Department for consideration of impacts and potential permitting.

*Santa Barbara County Coastal Zone Ordinance*: A Coastal Zone Development Permit will be required for tree removals in areas under the Commission's jurisdiction. The Coastal Commission will be required to review proposed impacts to 50 protected trees; the Coastal Commission will then determine which trees they deem to require permitting.

*Santa Barbara County Deciduous Oak Tree Protection and Regeneration Ordinance*: No valley oak or blue oak trees are anticipated to be impacted by the Project; permitting under this ordinance will not be required.

*Ventura County Tree Protection Ordinance*: In Ventura County, 176 protected trees are expected to be impacted by the project. The Ventura County threshold between "major" and "minor" pruning (minor pruning not requiring permitting) is defined as loss of more than or less than 20% of the trees canopy or root system, respectively. Thirteen (13) protected trees are anticipated to require removal and 67 will be subject to major pruning, thus 80 total trees would need to be included on the permit. Minor pruning, not requiring a permit, will occur on 96 trees. A discretionary permit will be required in Ventura County because Heritage Trees are proposed for removal and encroachment, and six or more trees or 4 or more oaks or sycamores (cumulatively) will require removal or encroachment.

*City of Carpinteria Street Tree Management Plan*: Project impacts are not expected to occur on any protected trees within the City of Carpinteria; no permit necessary.

Table 5 summarizes tree impacts by jurisdiction for actions expected to require permitting.

**Table 5: Summary of Protected Tree Impacts by Jurisdiction**

| Regulation | Jurisdiction | Number of Trees Expected to be Impacted Requiring Permitting | | |
|---|---|---|---|---|
| | | **Encroachment (canopy or root pruning)** | **Removal** | **Total** |
| Los Padres National Forest Management Plan | Los Padres National Forest | 0 | 0 | **0** |
| California Fish and Game Code Section 1600 | Riparian areas | 13 | 2 | **15*** |
| Deciduous Oak Tree Protection & Regeneration Ordinance | Outside the Coastal Zone and urban boundary limits of Santa Barbara County | 0 | 0 | **0** |
| Santa Barbara County Comprehensive Plan | Inland rural areas | 42 | 7 | **49** |
| Santa Barbara County Coastal Zone Ordinance | Santa Barbara County Coastal Zone | 32 | 18 | **50** |
| Ventura County Tree Protection Ordinance | *All areas outside the Ventura County Coastal Zone* | *64* | *13* | *78* |
| | *Scenic Resource Protection (SRP) Zone* | *3* | *0* | *3* |
| | *Total within Ventura County* | 67 | 13 | **81** |
| City of Carpinteria Street Tree Management Plan | Street trees within City limits | 0 | 0 | **0** |

*** An official determination of CDFW jurisdiction was not conducted in this study. No attempt was made to delineate all CDFW jurisdictional resources that may be impacted. There may be impacts to these and other riparian trees and other resources that are not included in this report that will require inclusion in a LSAA. This information alone should not be used to assess CDFW impacts or jurisdiction.**

# 5.0 LIST OF PREPARERS

*Report Preparation:*
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Keir Morse, M.S. – Botanist
Andrew McCadden, B.S. – Biologist
Sara McBee, B.S. – Botanist

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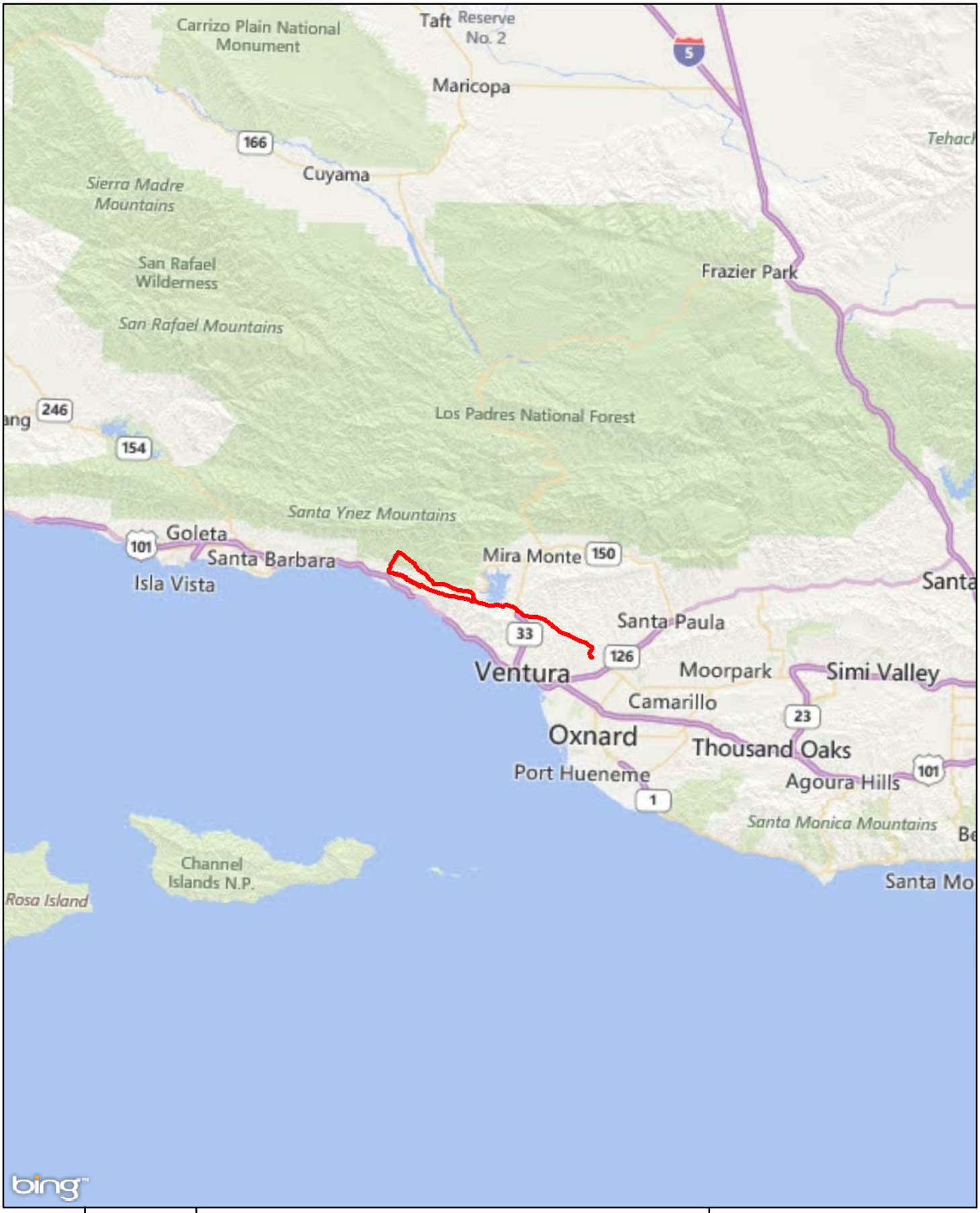
# APPENDIX A

## PROJECT AND TREE LOCATION MAPS




GANDA

SBCRP

Miles 0 10

Kilometers 0 20

1:750,000

**Figure 1. Project Vicinity Map**

Santa Barbara County Reliability Project

Santa Barbara and Ventura Counties, CA

October 2014

GANDA

**SBCRP**

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

Miles: 0 – 2

Kilometers: 0 – 2

1:175,000

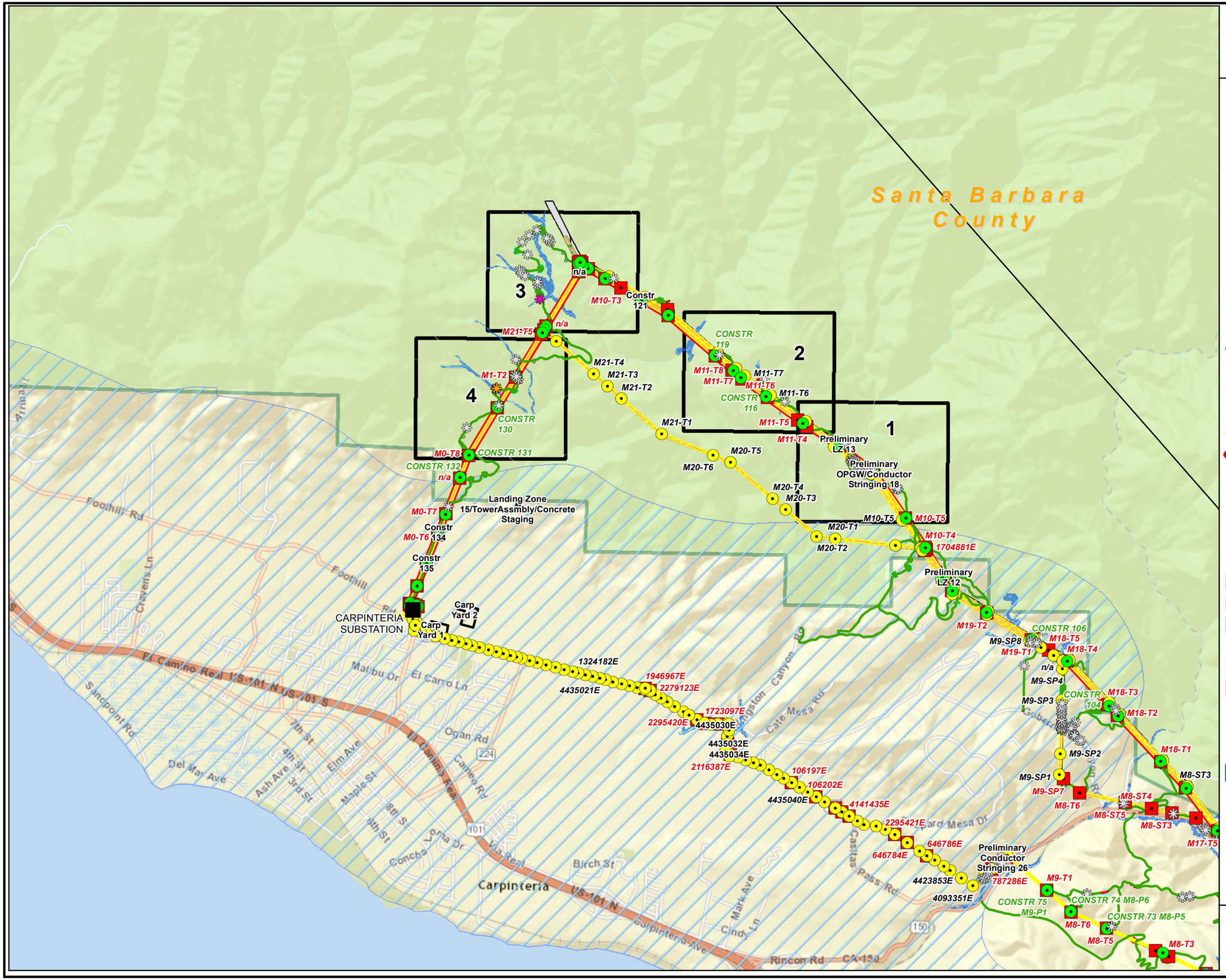
**Figure 2. Project Location Map**

Santa Barbara County Reliability Project

Santa Barbara and Ventura Counties, CA

October 2014

**Figure 3**
**SBCRP Protected Tree Locations**
**Overview Map**
**Santa Barbara County**
**October 2014**




## Protected Trees to be Impacted

- *Platanus racemosa*
- *Quercus agrifolia*
- *Salix lasiolepis*
- *Umbellularia californica*

## SCE Engineering

- Existing Structure Locations
- Substation Location
- Proposed Structure Locations
- Potential Structures To Be Removed

## Access Roads Centerline

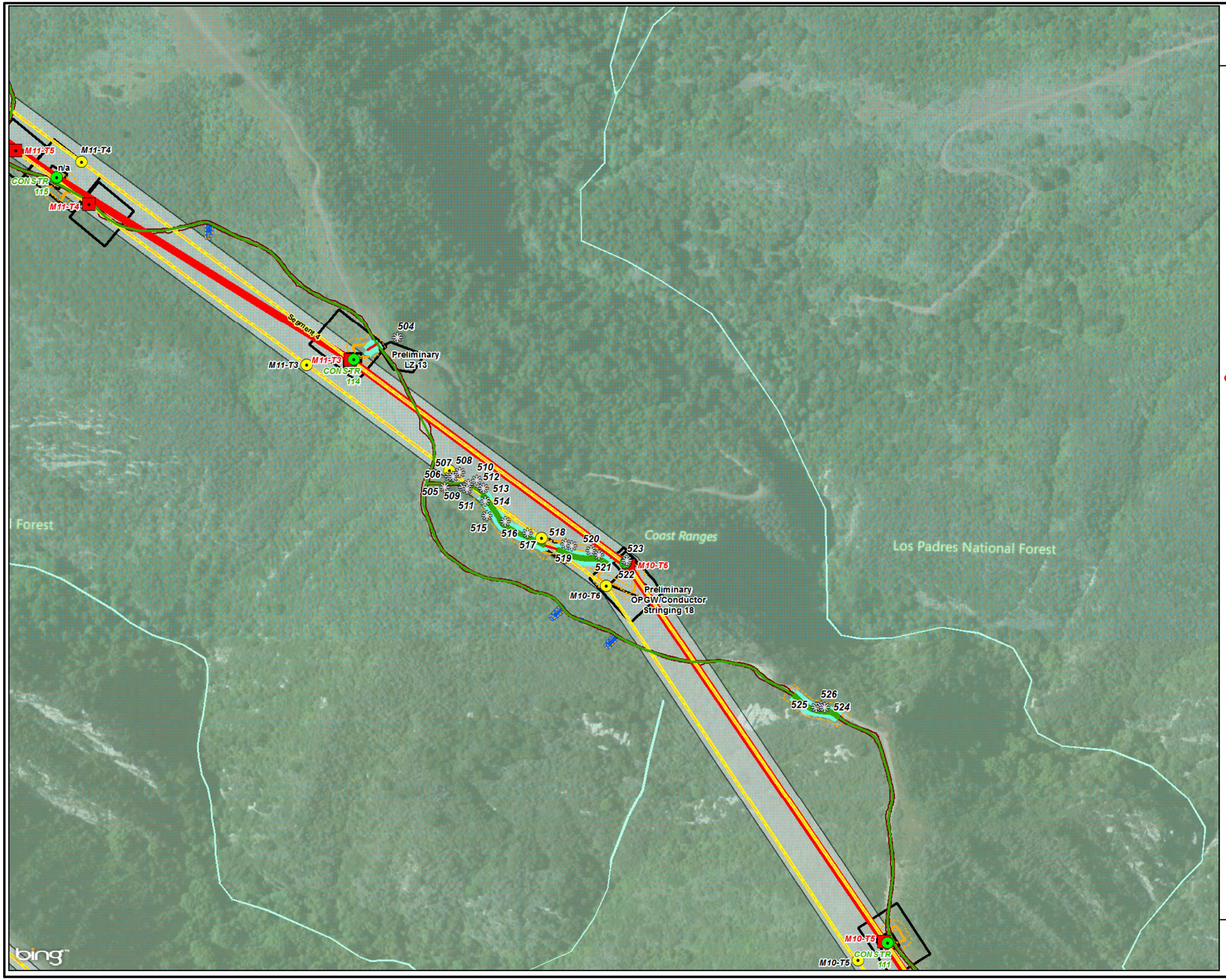
- Existing, 3 = Medium Improvement
- Existing, 4 = Heavy Improvement
- Existing, 5 = Design Road
- New, 5 = Design Road
- SBCRP Segment 4
- Proposed 66 kV Alignment
- Proposed OPGW Alignment
- Existing SubTrans 66 kV Lines
- Existing 230 kV
- Civil Erosion Control Line
- Access Roads Edge
- Disturbance Area Limit
- Civil Erosion Control Features
- Construction Material Yards
- Construction Disturbance Areas (From TPD)
- SCE Easement/ROW
- Grading Limits
- Guard Structures
- Coastal Zone Limits
- USACE Waters
- CDFW Waters
- Los Padres National Forest Boundary

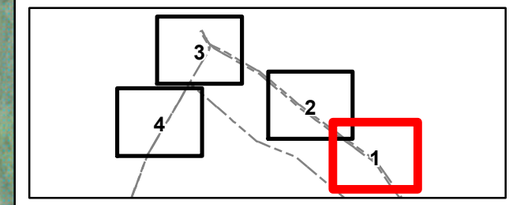
GANDA

Miles 0 0.5
Kilometers 0 0.5

**Figure 3**
**SBCRP Protected Tree Locations**
**Santa Barbara County**
**October 2014**

*Map 1 of 4*




**Protected Trees to be Impacted**

- *Quercus agrifolia*

**SCE Engineering**

- Existing Structure Locations
- Proposed Structure Locations
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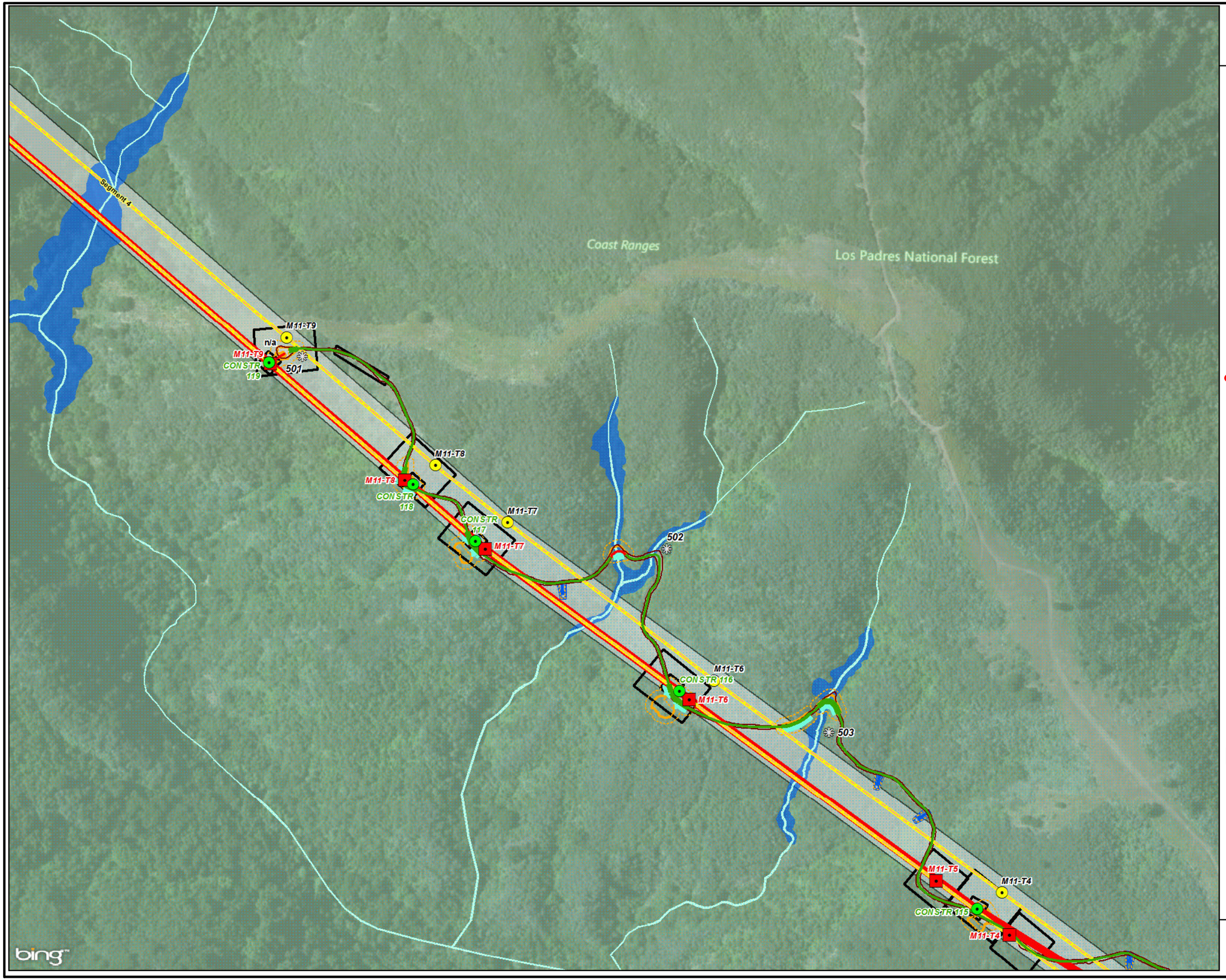
GANDA

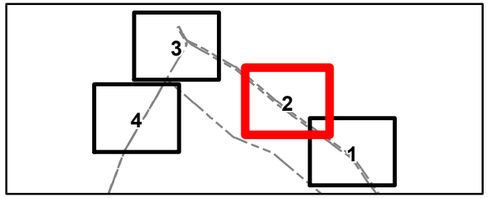
Meters 0 50
Feet 0 200

1 inch = 300 feet

**Figure 3**
**SBCRP Protected Tree Locations**
**Santa Barbara County**
**October 2014**

*Map 2 of 4*

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- *Quercus agrifolia*

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GANDA

Meters 0 50
Feet 0 200

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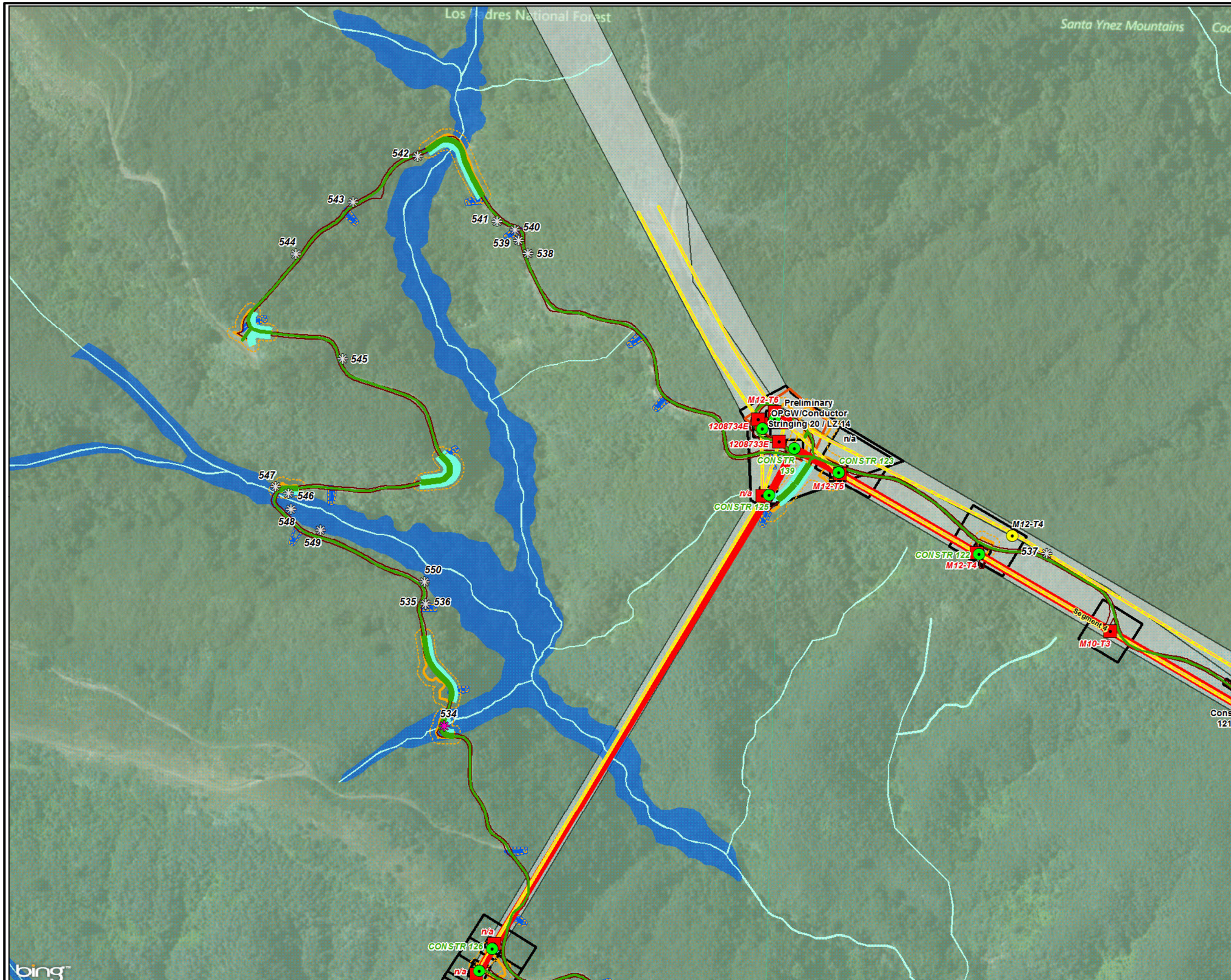
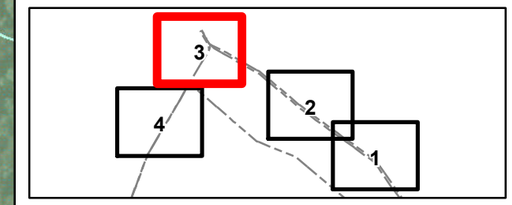
**Figure 3**
**SBCRP Protected Tree Locations**
**Santa Barbara County**
**October 2014**

*Map 3 of 4*




**Protected Trees to be Impacted**

- *Quercus agrifolia*
- *Umbellularia californica*

**SCE Engineering**

- Existing Structure Locations
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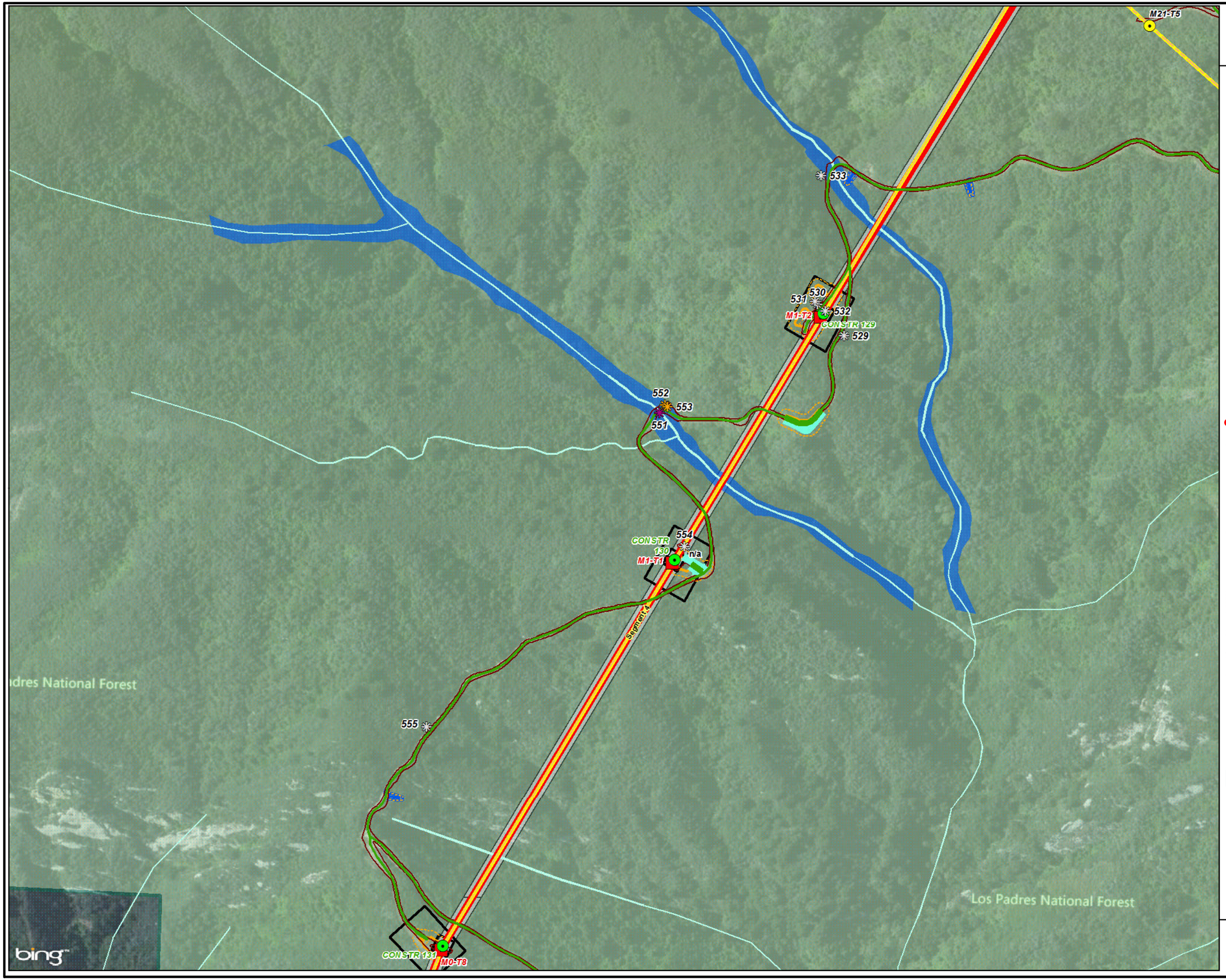
GANDA

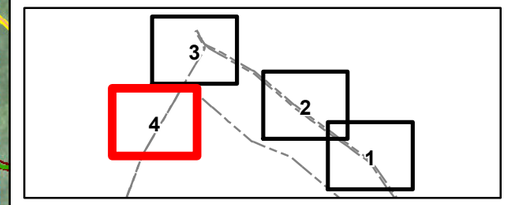
Meters 0 50
Feet 0 200

1 inch = 300 feet

**Figure 3**
**SBCRP Protected Tree Locations**
**Santa Barbara County**
**October 2014**

*Map 4 of 4*




**Protected Trees to be Impacted**

- *Platanus racemosa*
- *Quercus agrifolia*
- *Salix lasiolepis*

**SCE Engineering**

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- Grading Limits
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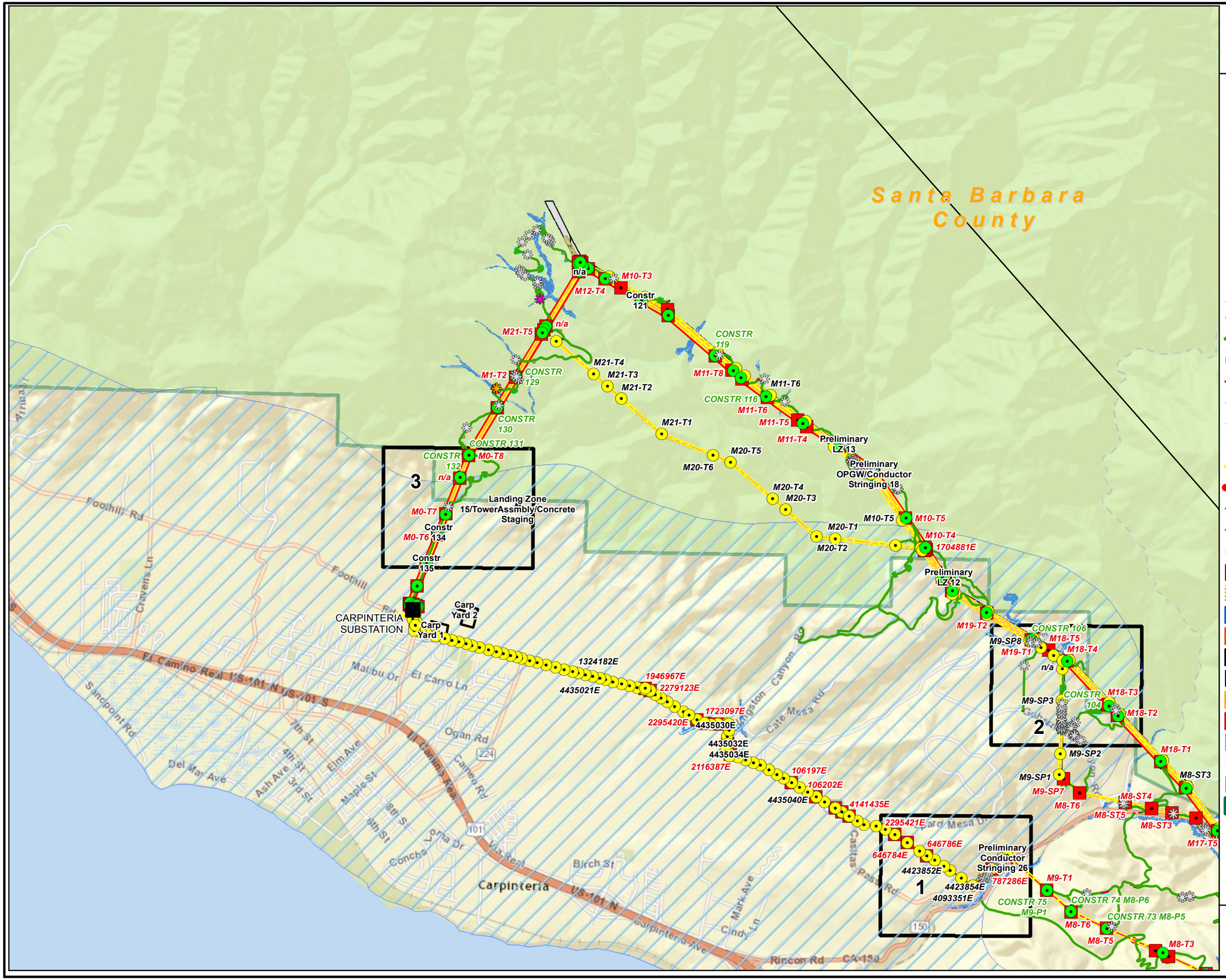
- CDFW Waters
- Los Padres National Forest Boundary

GANDA

Meters 0 50
Feet 0 200

1 inch = 300 feet

**Figure 4**
**SBCRP Protected Tree Locations**
**Santa Barbara County Coastal Zone**
**October 2014**




## Protected Trees to be Impacted

- *Platanus racemosa*
- *Quercus agrifolia*
- *Salix lasiolepis*
- *Umbellularia californica*

## SCE Engineering

- Existing Structure Locations
- Substation Location
- Proposed Structure Locations
- Potential Structures To Be Removed

## Access Roads Centerline

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- Existing, 4 = Heavy Improvement
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- New, 5 = Design Road
- SBCRP Segment 3a
- SBCRP Segment 3b
- SBCRP Segment 4
- Proposed 66 kV Alignment
- Proposed OPGW Alignment
- Existing SubTrans 66 kV Lines
- Existing 230 kV
- Civil Erosion Control Line
- Access Roads Edge
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- Civil Erosion Control Features
- Construction Material Yards
- Construction Disturbance Areas (From TPD)
- SCE Easement/ROW
- Grading Limits
- Guard Structures
- Coastal Zone Limits
- USACE Waters
- CDFW Waters
- Los Padres National Forest Boundary

GANDA

Miles 0 0.5
Kilometers 0 0.5

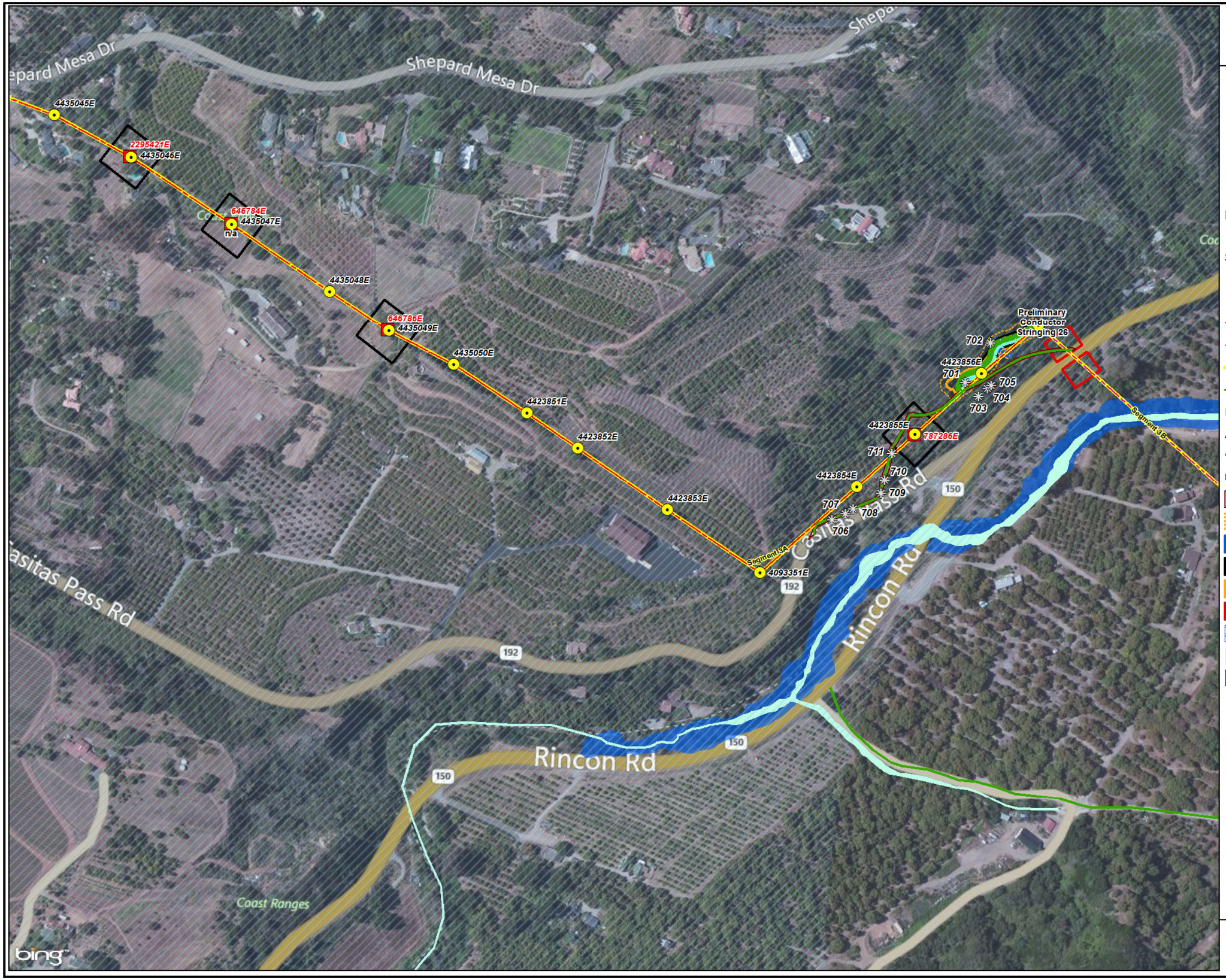
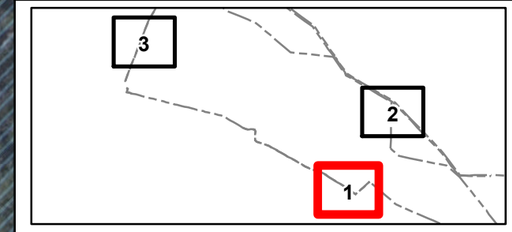



**Figure 4**
**SBCRP Protected Tree Locations**
**Santa Barbara County Coastal Zone**
**October 2014**

*Map 1 of 3*




**Protected Trees to be Impacted**

- *Quercus agrifolia*

**SCE Engineering**

- Existing Structure Locations
- Potential Structures To Be Removed
- SBCRP Segment 3a
- SBCRP Segment 3b
- Proposed 66 kV Alignment
- Existing SubTrans 66 kV Lines
- Civil Erosion Control Line

**Access Roads Centerline**

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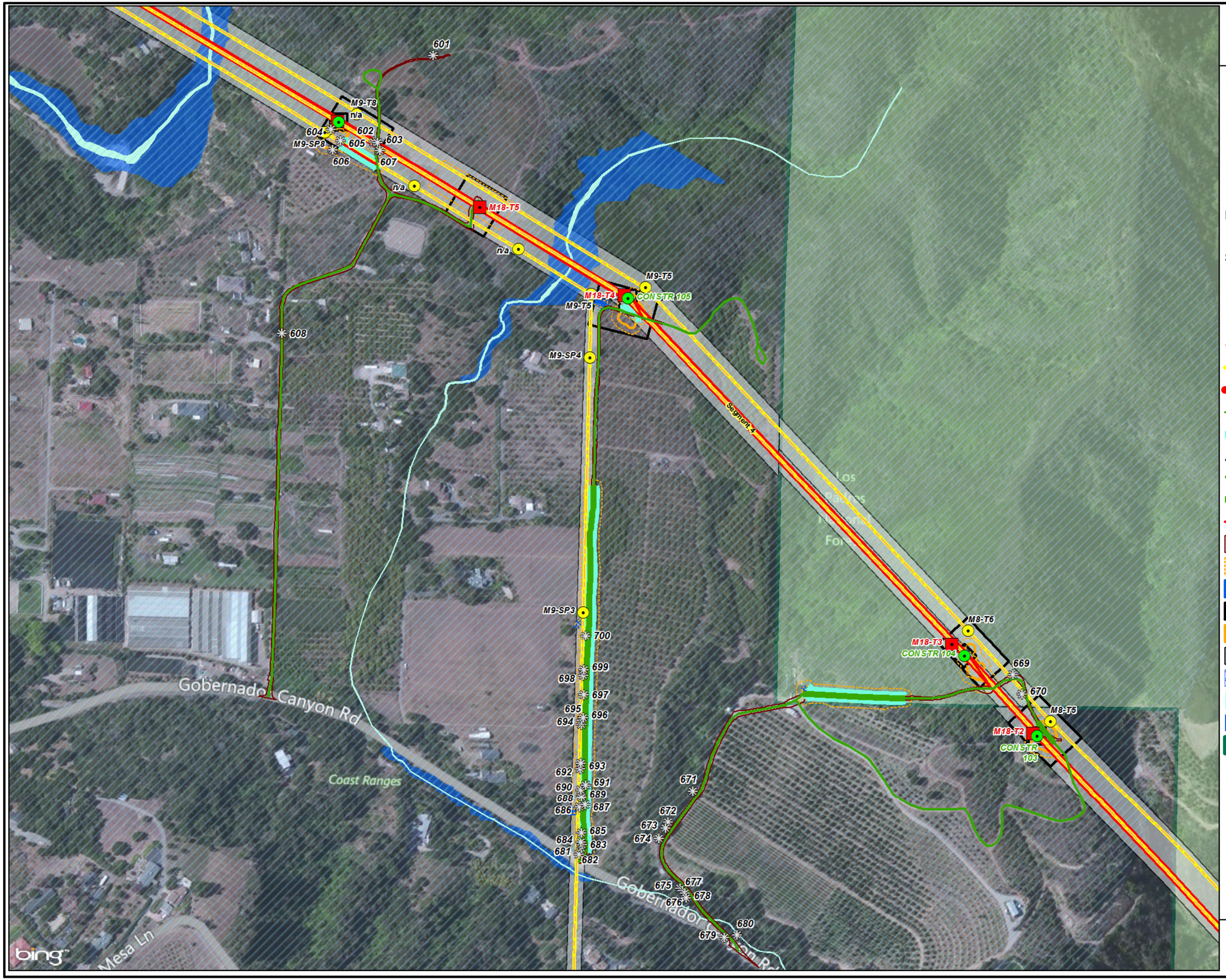
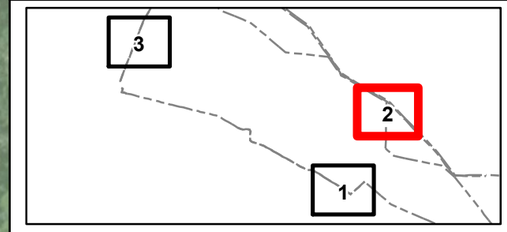
GANDA

Meters 0 50
Feet 0 200

1 inch = 300 feet

**Figure 4**
**SBCRP Protected Tree Locations**
**Santa Barbara County Coastal Zone**
**October 2014**
*Map 2 of 3*




**Protected Trees to be Impacted**

- *Quercus agrifolia*

**SCE Engineering**

- Existing Structure Locations
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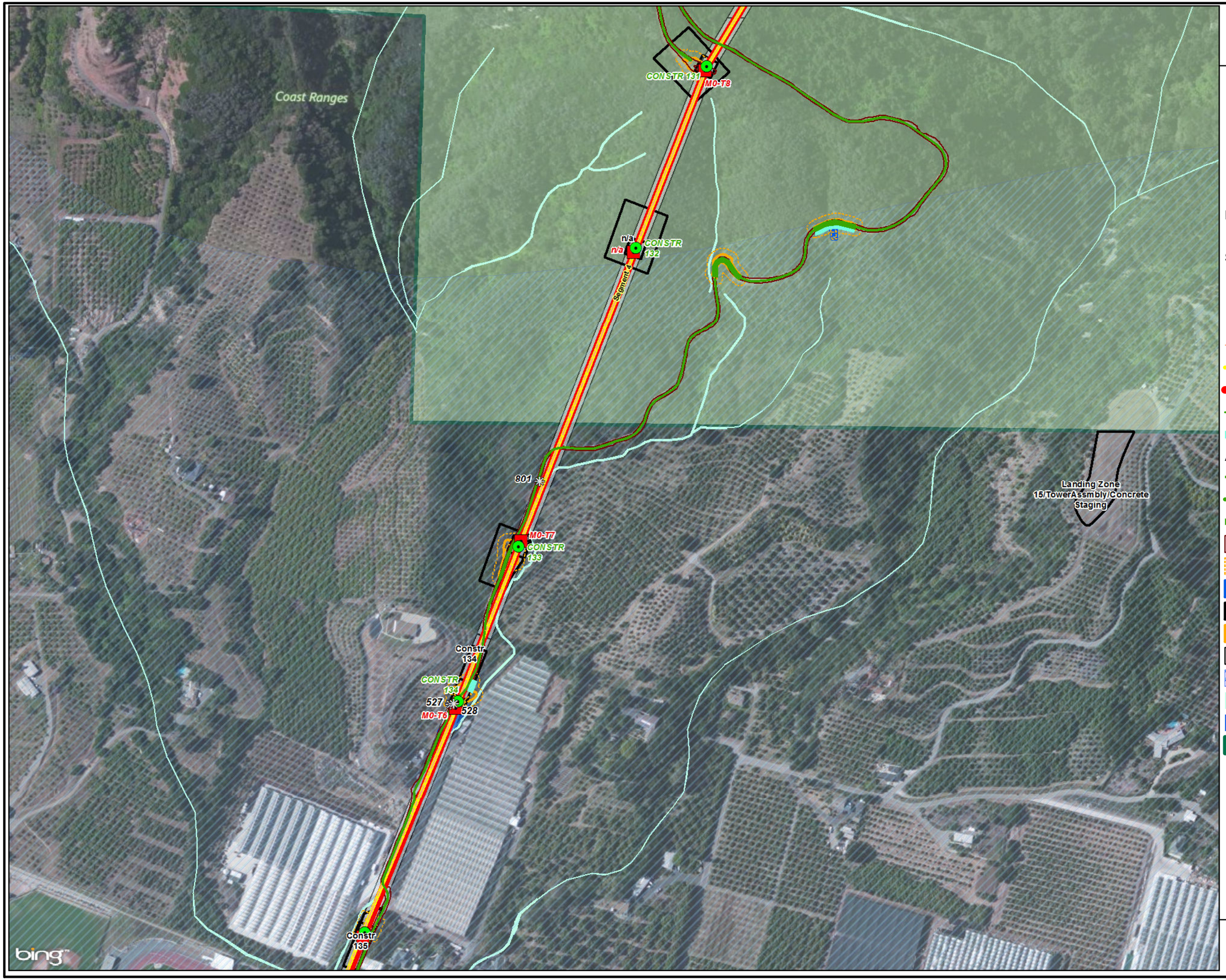
- Los Padres National Forest Boundary

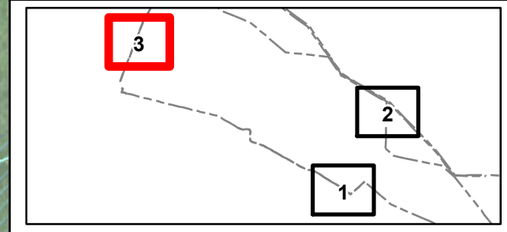
GANDA

Meters 0 50
Feet 0 200

1 inch = 300 feet

**Figure 4**
**SBCRP Protected Tree Locations**
**Santa Barbara County Coastal Zone**
**October 2014**
*Map 3 of 3*




**Protected Trees to be Impacted**

- *Quercus agrifolia*

**SCE Engineering**

- Existing Structure Locations
- Proposed Structure Locations
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- Coastal Zone Limits
- USACE Waters
- CDFW Waters
- Los Padres National Forest Boundary

GANDA

Meters 0 50
Feet 0 200

1 inch = 300 feet

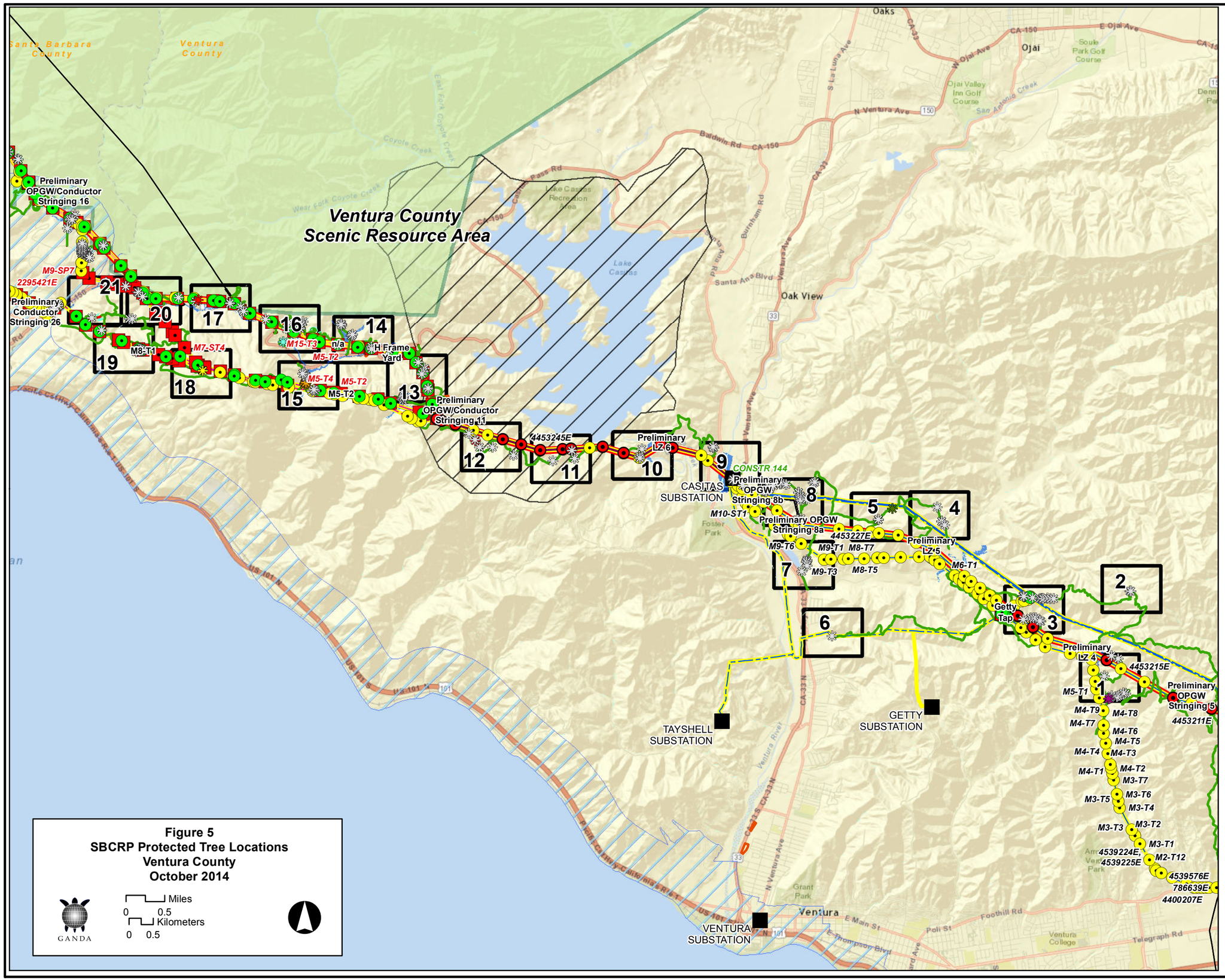
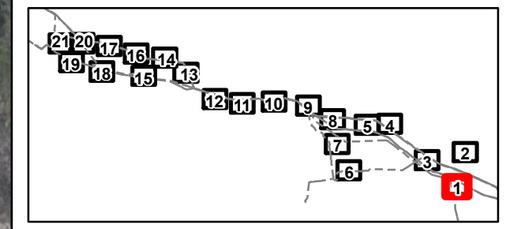



**Figure 5**
**SBCRP Protected Tree Locations**
**Ventura County**
**October 2014**

# Figure 5
## SBCRP Protected Tree Locations
## Ventura County
## October 2014

*Map 1 of 21*




**Protected Trees to be Impacted**

- *Platanus racemosa*
- *Quercus agrifolia*

**SCE Engineering**

- Existing Structure Locations
- Foundation to Be Removed
- SBCRP Segment 1
- Proposed 66 kV Alignment
- Proposed OPGW Alignment
- Existing SubTrans 66 kV Lines
- Existing 230 kV

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- Construction Disturbance Areas (From TPD)
- Guard Structures
- USACE Waters
- CDFW Waters

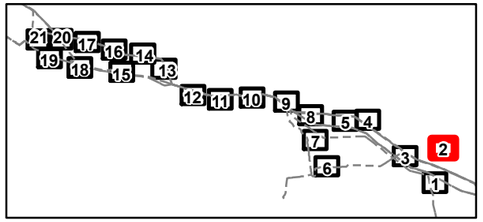
GANDA

Meters 0 50
Feet 0 200

1 inch = 300 feet

**Figure 5**
**SBCRP Protected Tree Locations**
**Ventura County**
**October 2014**

*Map 2 of 21*




**Protected Trees to be Impacted**

*Quercus agrifolia*

**SCE Engineering**

Existing Structure Locations

**Access Roads Centerline**

Existing, 3 = Medium Improvement

USACE Waters

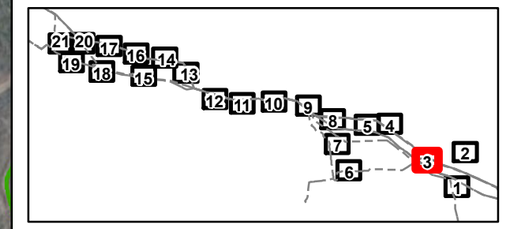
GANDA

Meters
0 50
Feet
0 200

1 inch = 300 feet

**Figure 5**
**SBCRP Protected Tree Locations**
**Ventura County**
**October 2014**

*Map 3 of 21*




**Protected Trees to be Impacted**

- *Quercus agrifolia*

**SCE Engineering**

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- Existing 230 kV

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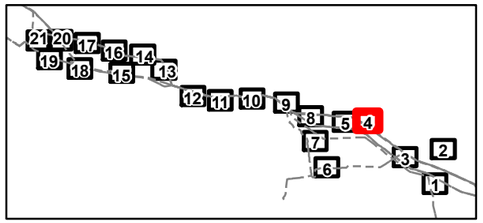
GANDA

Meters 0 50
Feet 0 200

1 inch = 300 feet

**Figure 5**
**SBCRP Protected Tree Locations**
**Ventura County**
**October 2014**

*Map 4 of 21*




**Protected Trees to be Impacted**

*Quercus agrifolia*

**SCE Engineering**

Existing Structure Locations

SBCRP Segment 1

Proposed 66 kV Alignment

Existing SubTrans 66 kV Lines

**Access Roads Centerline**

Existing, 3 = Medium Improvement

SCE Easement/ROW

USACE Waters

GANDA

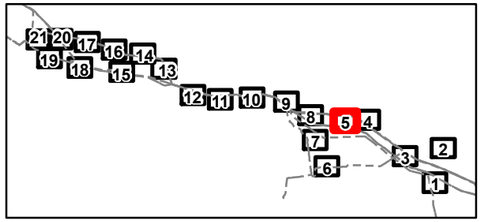
Meters 0 50

Feet 0 200

1 inch = 300 feet

**Figure 5**
**SBCRP Protected Tree Locations**
**Ventura County**
**October 2014**

*Map 5 of 21*




**Protected Trees to be Impacted**

- *Quercus agrifolia*
- *Salix laevigata*

**SCE Engineering**

- Existing Structure Locations
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- Existing 230 kV

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- USACE Waters

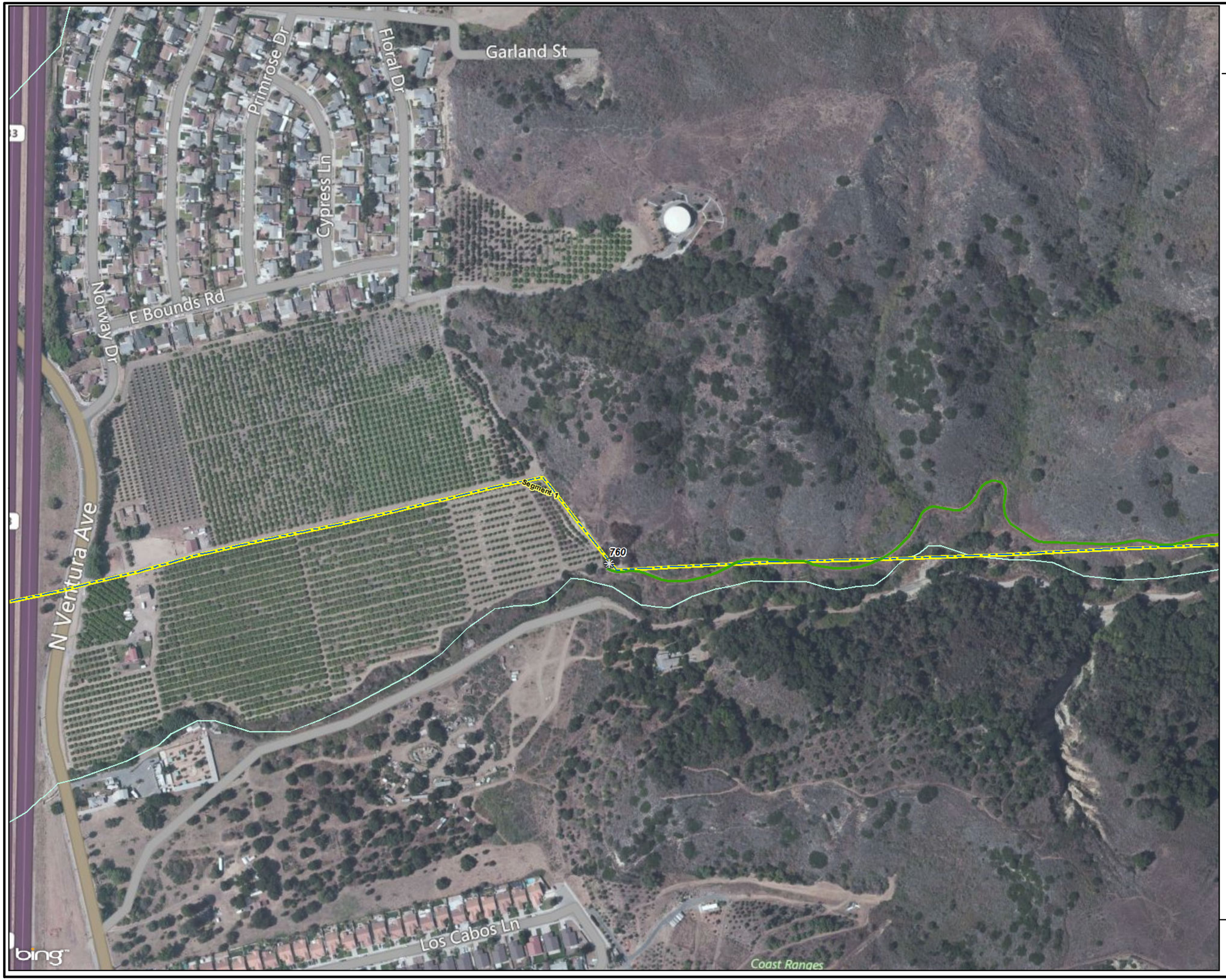
GANDA

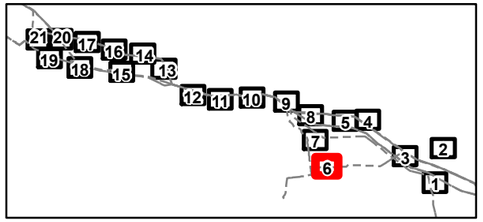
Meters 0 50
Feet 0 200

1 inch = 300 feet

**Figure 5**
**SBCRP Protected Tree Locations**
**Ventura County**
**October 2014**

*Map 6 of 21*




**Protected Trees to be Impacted**

*Quercus agrifolia*

**SCE Engineering**

Existing Structure Locations

SBCRP Segment 1

Proposed 66 kV Alignment

Existing SubTrans 66 kV Lines

**Access Roads Centerline**

Existing, 3 = Medium Improvement

USACE Waters

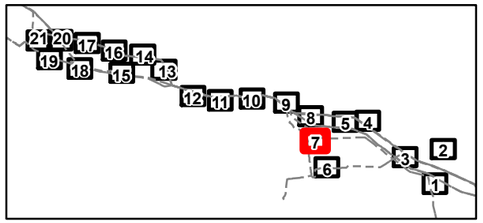
GANDA

Meters 0 50
Feet 0 200

1 inch = 300 feet

**Figure 5**
**SBCRP Protected Tree Locations**
**Ventura County**
**October 2014**

*Map 7 of 21*




**Protected Trees to be Impacted**

*Quercus agrifolia*

**SCE Engineering**

- Existing Structure Locations
- SBCRP Segment 1
- Proposed 66 kV Alignment
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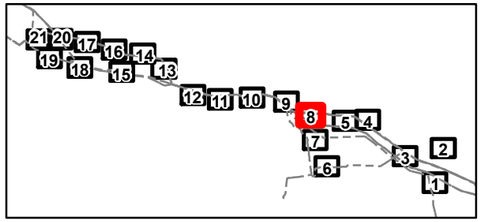
GANDA

Meters 0 50
Feet 0 200

1 inch = 300 feet

**Figure 5**
**SBCRP Protected Tree Locations**
**Ventura County**
**October 2014**

*Map 8 of 21*




**Protected Trees to be Impacted**

*Quercus agrifolia*

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- SBCRP Segment 1
- Proposed 66 kV Alignment
- Proposed OPGW Alignment
- Existing SubTrans 66 kV Lines
- Existing 230 kV

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- Construction Disturbance Areas (From TPD)
- SCE Easement/ROW

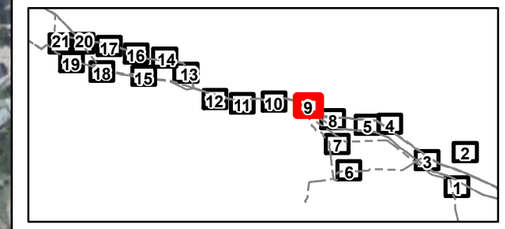
GANDA

Meters 0 50
Feet 0 200

1 inch = 300 feet

**Figure 5**
**SBCRP Protected Tree Locations**
**Ventura County**
**October 2014**

*Map 9 of 21*




**Protected Trees to be Impacted**

- *Quercus agrifolia*

**SCE Engineering**

- Existing Structure Locations
- Substation Location
- Foundation to Be Removed
- Proposed Structure Locations
- SBCRP Segment 1
- SBCRP Segment 2
- Proposed 66 kV Alignment
- Proposed OPGW Alignment
- Existing SubTrans 66 kV Lines
- Existing 230 kV

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- Construction Material Yards
- Construction Disturbance Areas (From TPD)
- Guard Structures
- SCE Easement/ROW
- USACE Waters
- CDFW Waters

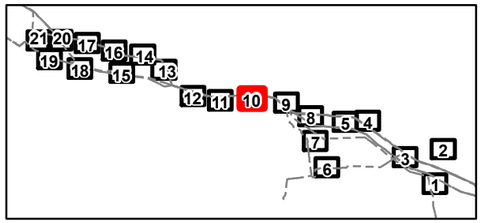
GANDA

Meters 0 50
Feet 0 200

1 inch = 300 feet

**Figure 5**
**SBCRP Protected Tree Locations**
**Ventura County**
**October 2014**

*Map 10 of 21*




**Protected Trees to be Impacted**

- *Quercus agrifolia*

**SCE Engineering**

- Existing Structure Locations
- Foundation to Be Removed
- SBCRP Segment 2
- Proposed 66 kV Alignment
- Proposed OPGW Alignment
- Existing SubTrans 66 kV Lines
- Existing 230 kV

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- Construction Disturbance Areas (From TPD)
- Guard Structures
- SCE Easement/ROW
- USACE Waters
- CDFW Waters
- Scenic Resource Area

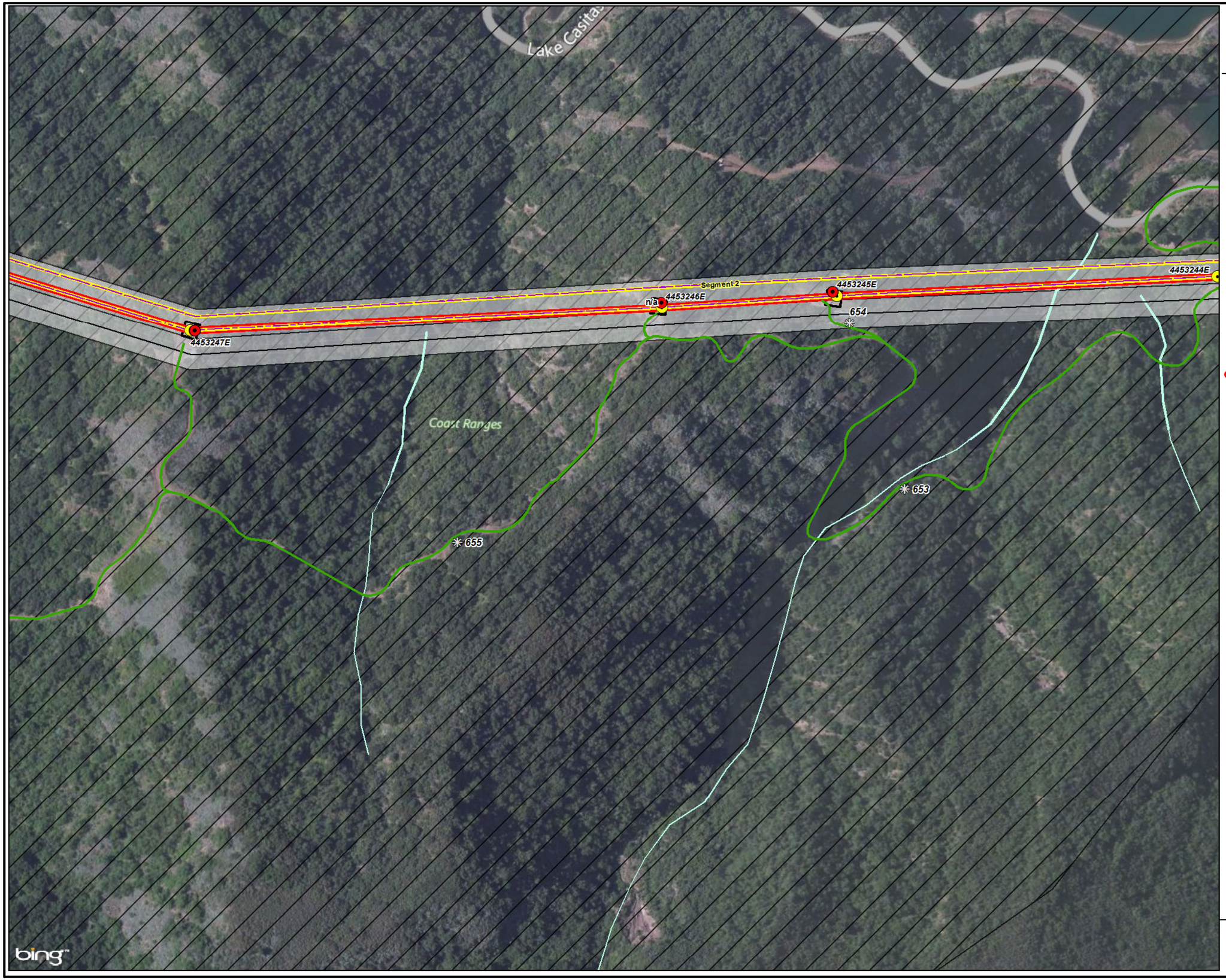
GANDA

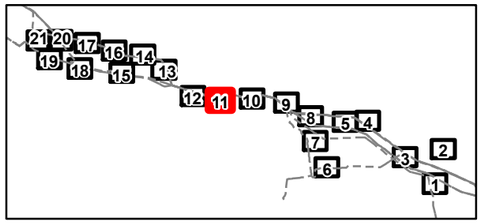
Meters 0 50
Feet 0 200

1 inch = 300 feet

**Figure 5**
**SBCRP Protected Tree Locations**
**Ventura County**
**October 2014**

*Map 11 of 21*




**Protected Trees to be Impacted**

- *Quercus agrifolia*

**SCE Engineering**

- Existing Structure Locations
- Foundation to Be Removed
- SBCRP Segment 2
- Proposed 66 kV Alignment
- Proposed OPGW Alignment
- Existing SubTrans 66 kV Lines
- Existing 230 kV

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- Construction Disturbance Areas (From TPD)
- SCE Easement/ROW
- USACE Waters
- Scenic Resource Area

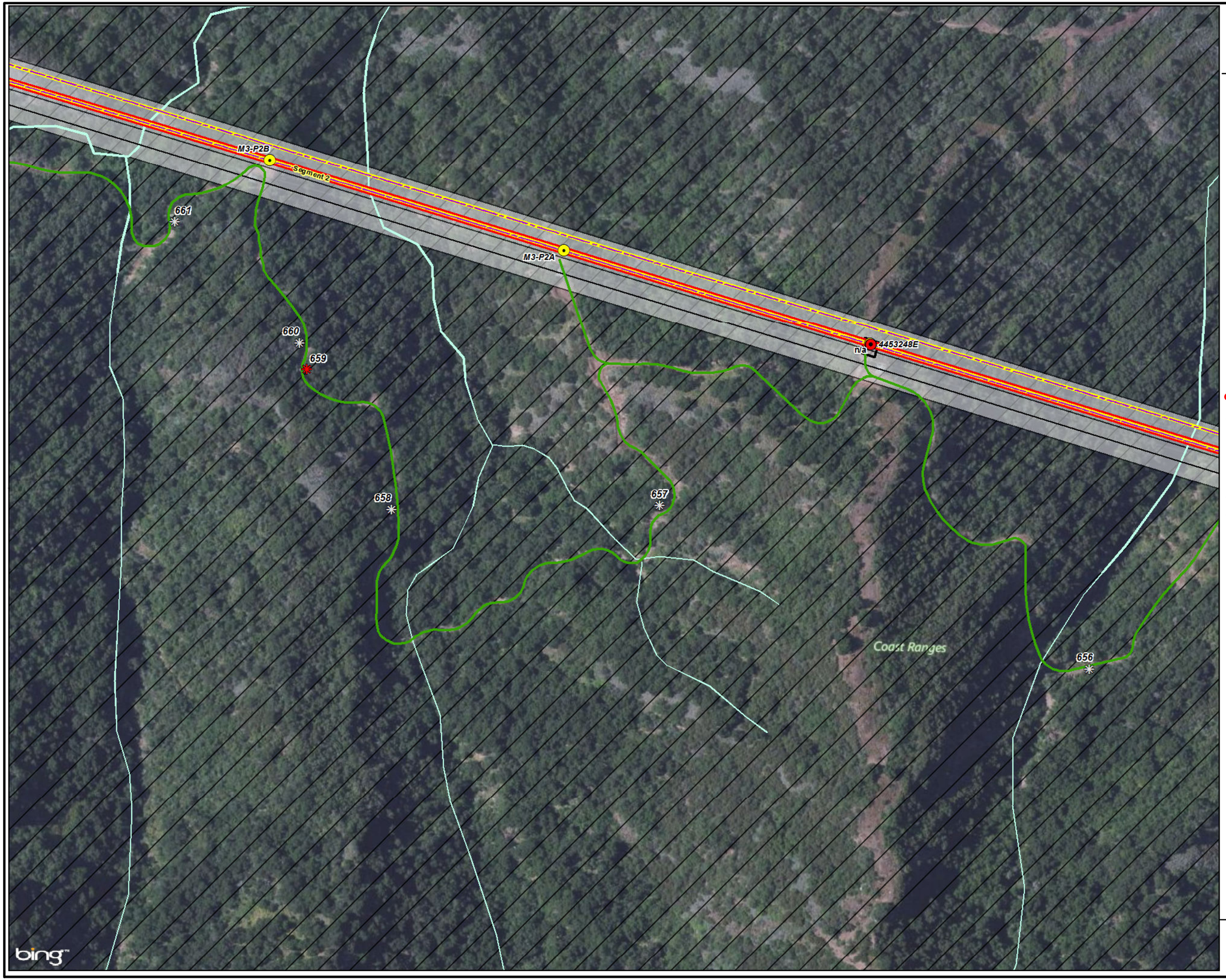
GANDA

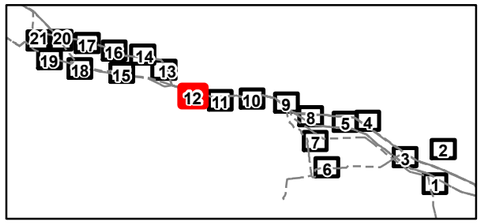
Meters 0 50
Feet 0 200

1 inch = 300 feet

**Figure 5**
**SBCRP Protected Tree Locations**
**Ventura County**
**October 2014**

*Map 12 of 21*




**Protected Trees to be Impacted**

- *Juglans californica*
- *Quercus agrifolia*

**SCE Engineering**

- Existing Structure Locations
- Foundation to Be Removed
- SBCRP Segment 2
- Proposed 66 kV Alignment
- Proposed OPGW Alignment
- Existing SubTrans 66 kV Lines
- Existing 230 kV

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- Construction Disturbance Areas (From TPD)
- SCE Easement/ROW
- USACE Waters
- Scenic Resource Area

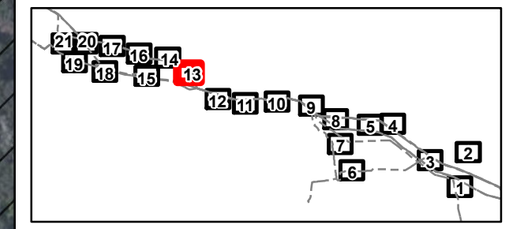
GANDA

Meters 0 50
Feet 0 200

1 inch = 300 feet

# Figure 5
## SBCRP Protected Tree Locations
## Ventura County
## October 2014

*Map 13 of 21*




**Protected Trees to be Impacted**

- *Quercus agrifolia*

**SCE Engineering**

- Existing Structure Locations
- Proposed Structure Locations
- Potential Structures To Be Removed
- SBCRP Segment 4
- Proposed 66 kV Alignment
- Proposed OPGW Alignment
- Existing SubTrans 66 kV Lines
- Existing 230 kV
- Civil Erosion Control Line

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- Existing, 5 = Design Road
- New, 5 = Design Road
- Access Roads Edge
- Disturbance Area Limit
- Civil Erosion Control Features
- Construction Material Yards
- Construction Disturbance Areas (From TPD)
- Grading Limits
- SCE Easement/ROW
- USACE Waters
- CDFW Waters
- Scenic Resource Area

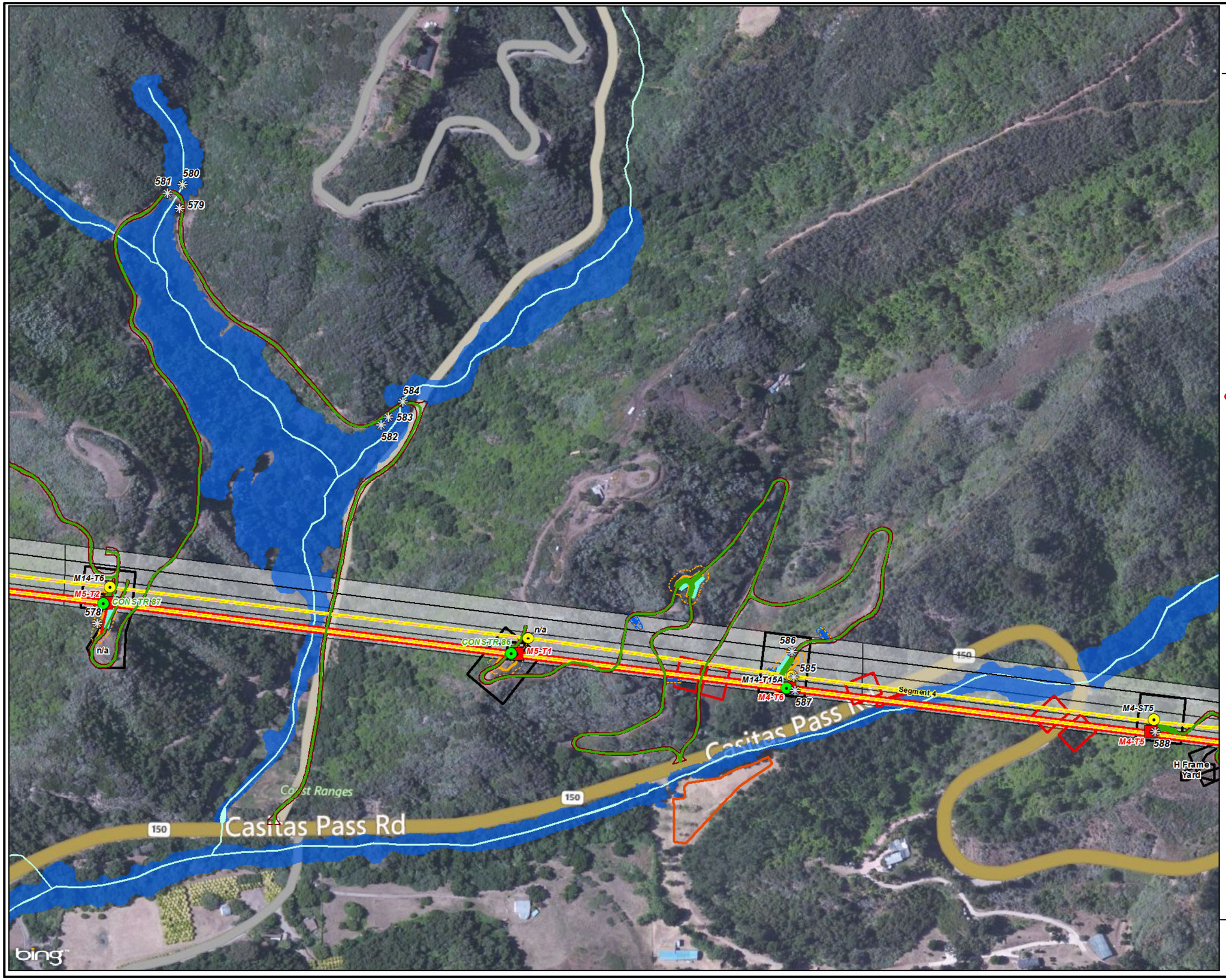
GANDA

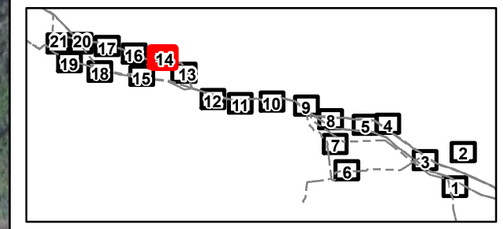
Meters 0 50
Feet 0 200

1 inch = 300 feet

**Figure 5**
**SBCRP Protected Tree Locations**
**Ventura County**
**October 2014**

*Map 14 of 21*




**Protected Trees to be Impacted**

- *Quercus agrifolia*

**SCE Engineering**

- Existing Structure Locations
- Proposed Structure Locations
- Potential Structures To Be Removed
- SBCRP Segment 4
- Proposed 66 kV Alignment
- Proposed OPGW Alignment
- Existing SubTrans 66 kV Lines
- Existing 230 kV
- Civil Erosion Control Line

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- Existing, 5 = Design Road
- New, 5 = Design Road
- Access Roads Edge
- Disturbance Area Limit
- Civil Erosion Control Features
- Construction Material Yards
- Construction Disturbance Areas (From TPD)
- Grading Limits
- Guard Structures
- SCE Easement/ROW
- USACE Waters
- CDFW Waters

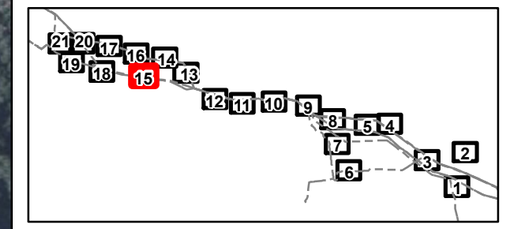
GANDA

Meters 0 50
Feet 0 200

1 inch = 300 feet

**Figure 5**
**SBCRP Protected Tree Locations**
**Ventura County**
**October 2014**

*Map 15 of 21*




**Protected Trees to be Impacted**

- *Quercus agrifolia*
- *Salix lasiolepis*

**SCE Engineering**

- Existing Structure Locations
- Proposed Structure Locations
- Potential Structures To Be Removed
- SBCRP Segment 3b
- Proposed 66 kV Alignment
- Existing SubTrans 66 kV Lines
- Civil Erosion Control Line

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- Existing, 5 = Design Road
- Access Roads Edge
- Disturbance Area Limit
- Civil Erosion Control Features
- Construction Disturbance Areas (From TPD)
- Grading Limits
- SCE Easement/ROW
- USACE Waters
- CDFW Waters

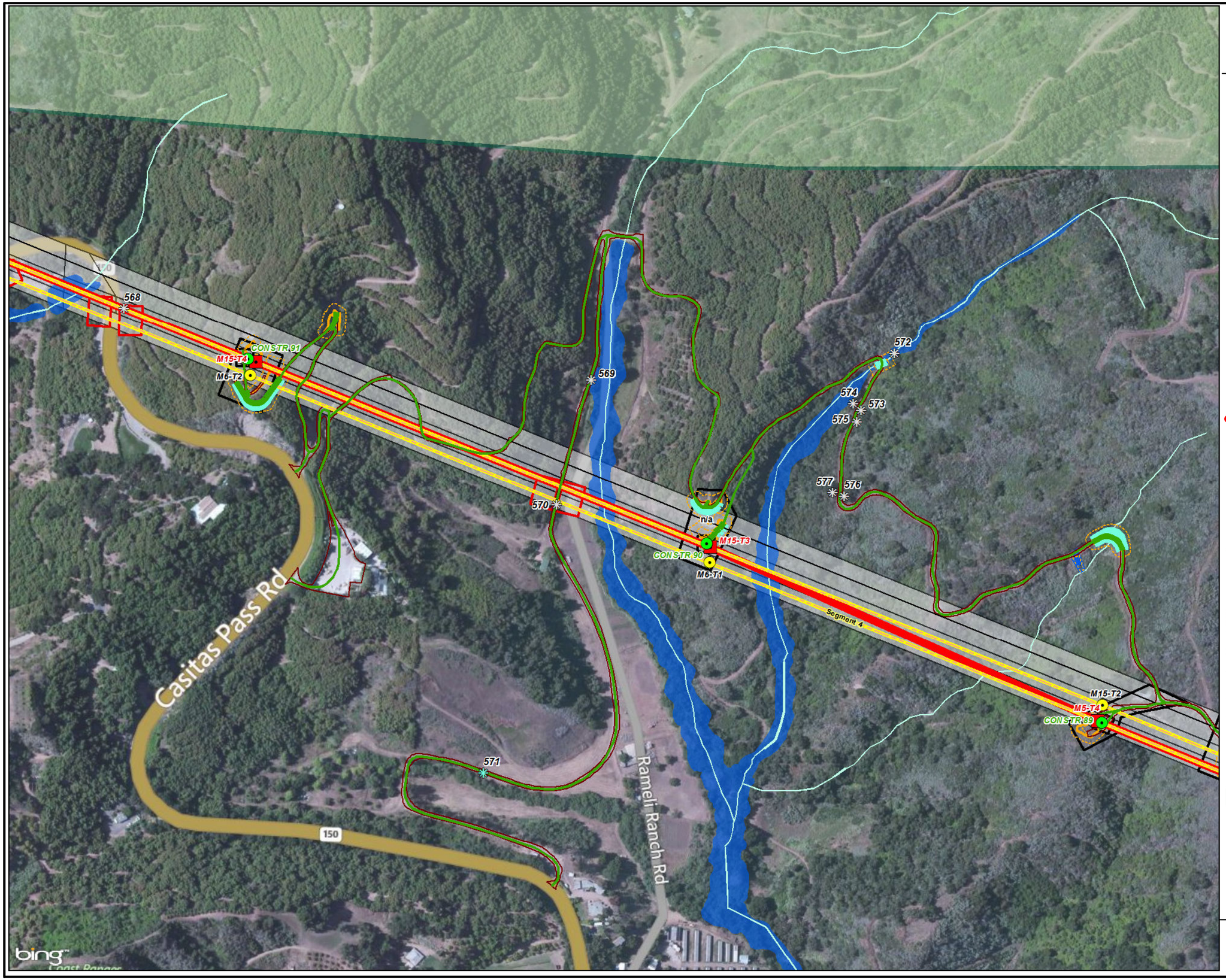
GANDA

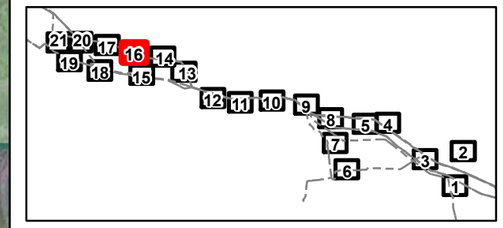
Meters 0 50
Feet 0 200

1 inch = 300 feet

**Figure 5**
**SBCRP Protected Tree Locations**
**Ventura County**
**October 2014**

*Map 16 of 21*




**Protected Trees to be Impacted**

- *Populus fremontii*
- *Quercus agrifolia*

**SCE Engineering**

- Existing Structure Locations
- Proposed Structure Locations
- Potential Structures To Be Removed
- SBCRP Segment 4
- Proposed 66 kV Alignment
- Proposed OPGW Alignment
- Existing SubTrans 66 kV Lines
- Existing 230 kV
- Civil Erosion Control Line

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- Existing, 4 = Heavy Improvement
- Existing, 5 = Design Road
- Access Roads Edge
- Disturbance Area Limit
- Civil Erosion Control Features
- Construction Disturbance Areas (From TPD)
- Grading Limits
- Guard Structures
- SCE Easement/ROW
- USACE Waters
- CDFW Waters
- Los Padres National Forest Boundary

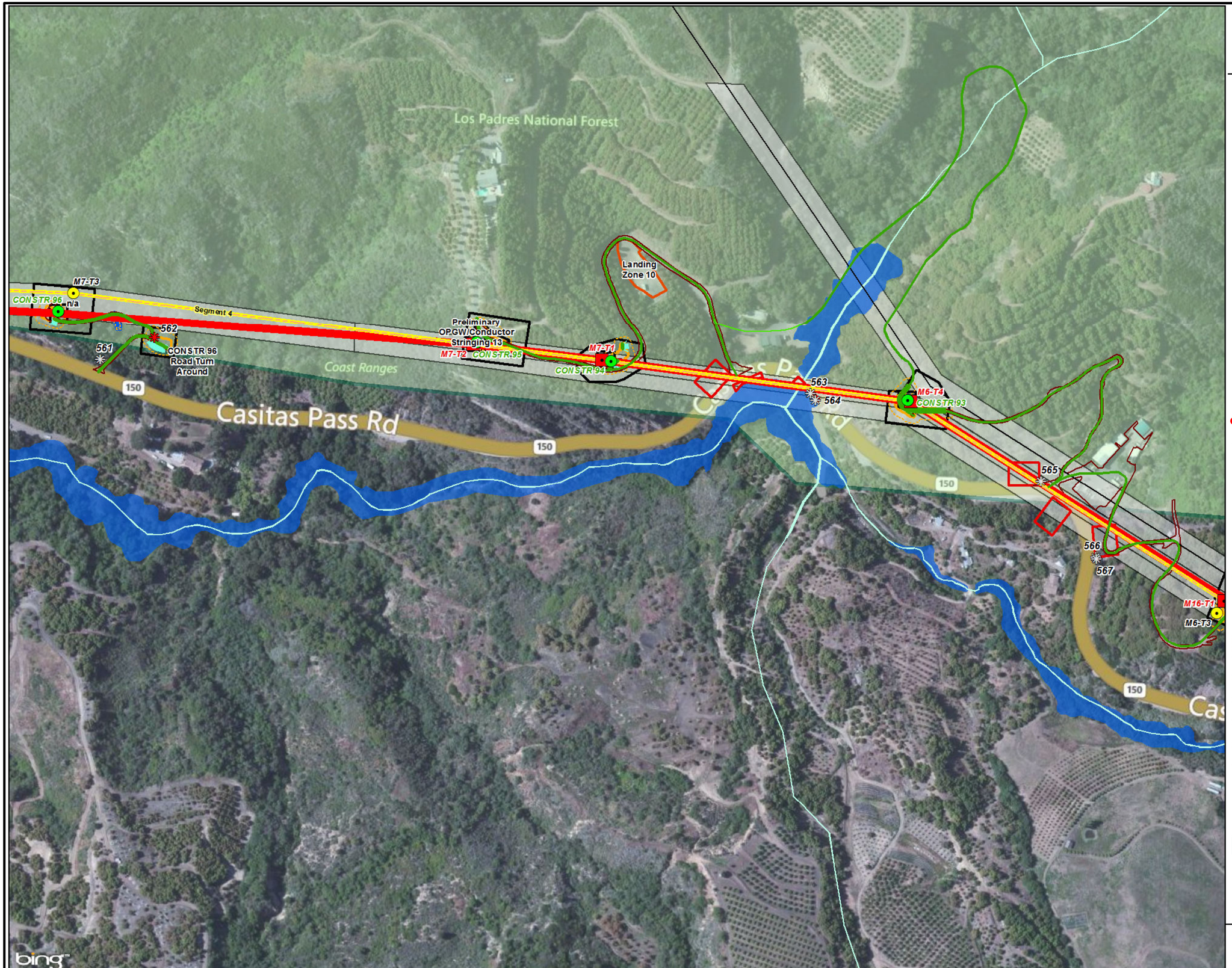
GANDA

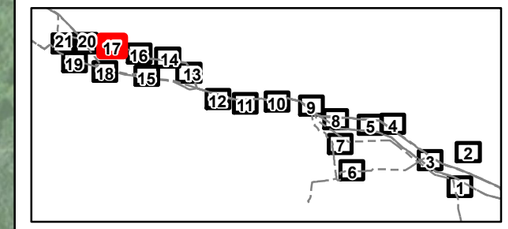
Meters 0 50
Feet 0 200

1 inch = 300 feet

**Figure 5**
**SBCRP Protected Tree Locations**
**Ventura County**
**October 2014**

*Map 17 of 21*




**Protected Trees to be Impacted**

- *Juglans californica*
- *Quercus agrifolia*

**SCE Engineering**

- Existing Structure Locations
- Proposed Structure Locations
- Potential Structures To Be Removed
- SBCRP Segment 4
- Proposed 66 kV Alignment
- Proposed OPGW Alignment
- Existing SubTrans 66 kV Lines
- Existing 230 kV
- Civil Erosion Control Line

**Access Roads Centerline**

- Existing, 0 = No Improvement
- Existing, 3 = Medium Improvement
- Existing, 4 = Heavy Improvement
- Existing, 5 = Design Road
- Access Roads Edge
- Disturbance Area Limit
- Civil Erosion Control Features
- Construction Material Yards
- Construction Disturbance Areas (From TPD)
- Grading Limits
- Guard Structures
- SCE Easement/ROW
- USACE Waters
- CDFW Waters
- Los Padres National Forest Boundary

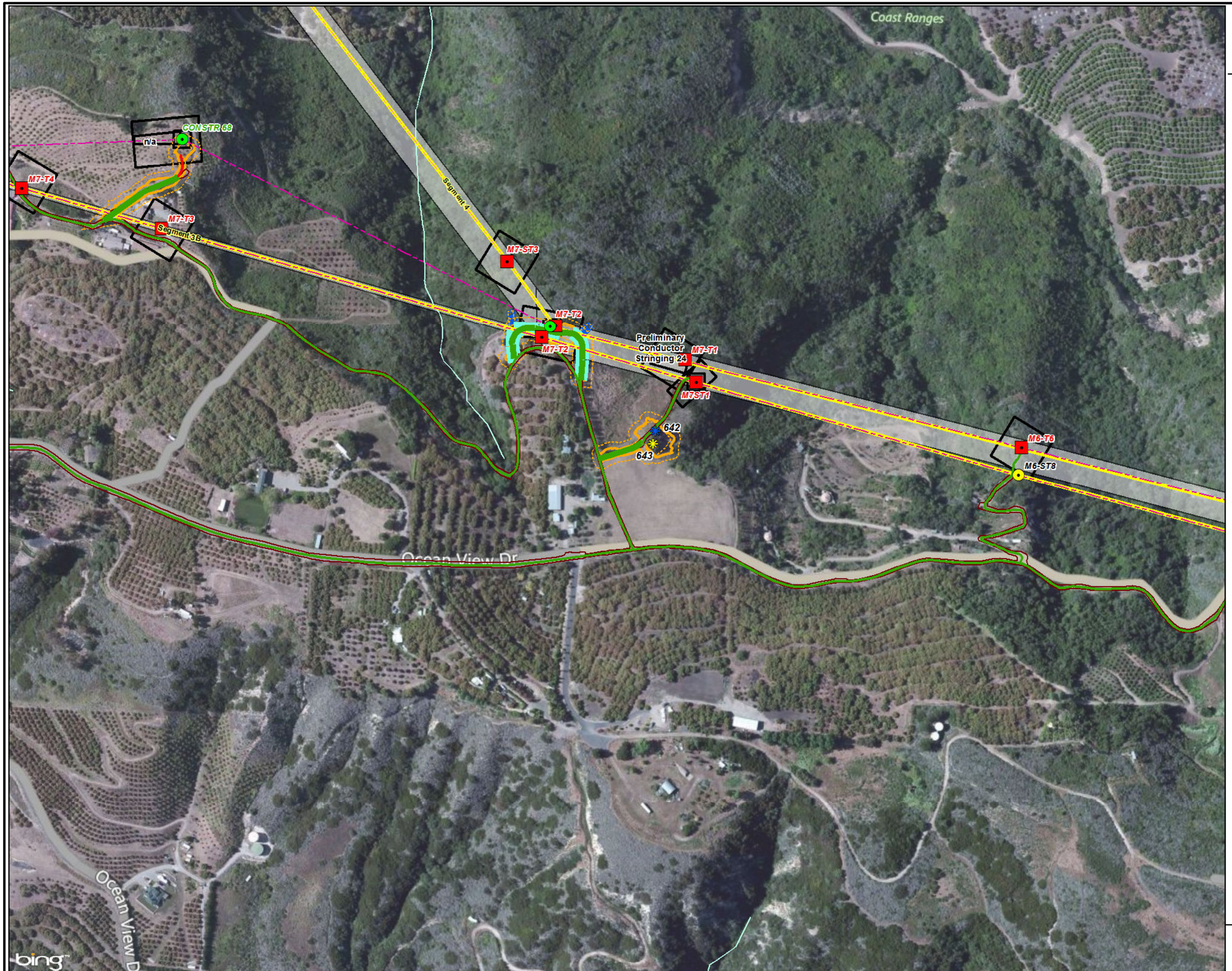
GANDA

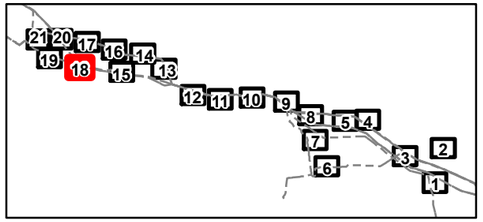
Meters 0 50
Feet 0 200

1 inch = 300 feet

**Figure 5**
**SBCRP Protected Tree Locations**
**Ventura County**
**October 2014**

*Map 18 of 21*




**Protected Trees to be Impacted**

- *Eucalyptus*
- *Schinus molle*

**SCE Engineering**

- Existing Structure Locations
- Proposed Structure Locations
- Potential Structures To Be Removed
- SBCRP Segment 3b
- SBCRP Segment 4
- Proposed 66 kV Alignment
- Existing SubTrans 66 kV Lines
- Civil Erosion Control Line

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- Existing, 5 = Design Road
- New, 5 = Design Road
- Access Roads Edge
- Disturbance Area Limit
- Civil Erosion Control Features
- Construction Disturbance Areas (From TPD)
- Grading Limits
- SCE Easement/ROW
- USACE Waters

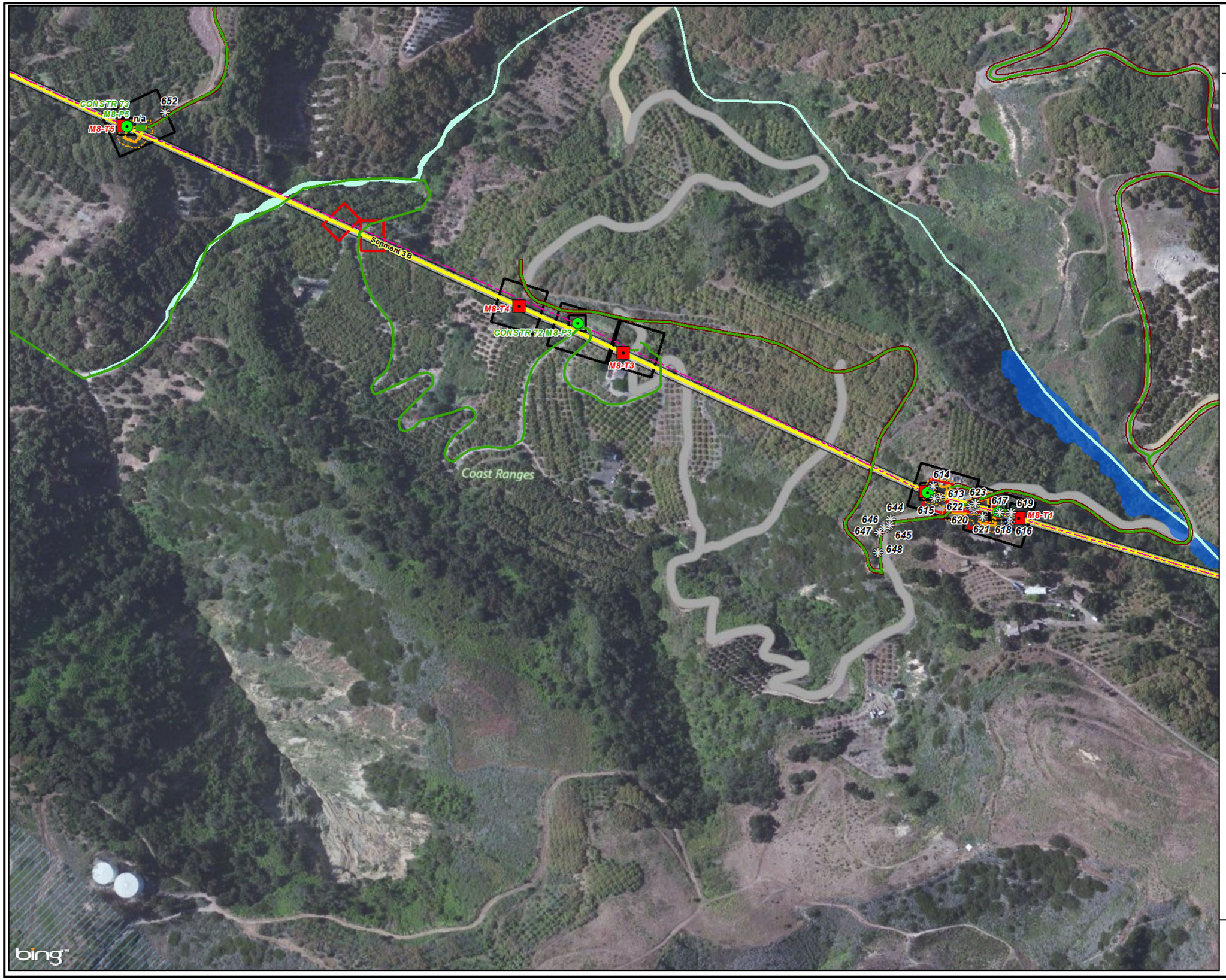
GANDA

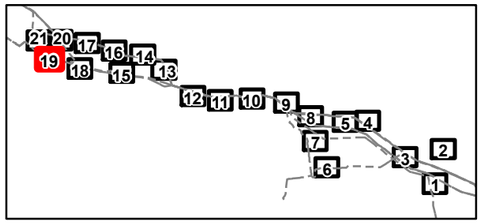
Meters 0 50
Feet 0 200

1 inch = 300 feet

**Figure 5**
**SBCRP Protected Tree Locations**
**Ventura County**
**October 2014**

*Map 19 of 21*




**Protected Trees to be Impacted**

- *Quercus agrifolia*

**SCE Engineering**

- Existing Structure Locations
- Proposed Structure Locations
- Potential Structures To Be Removed
- SBCRP Segment 3b
- Proposed 66 kV Alignment
- Existing SubTrans 66 kV Lines

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- Existing, 5 = Design Road
- New, 5 = Design Road
- Access Roads Edge
- Disturbance Area Limit
- Construction Disturbance Areas (From TPD)
- Grading Limits
- Guard Structures
- SCE Easement/ROW
- Coastal Zone Limits
- USACE Waters
- CDFW Waters

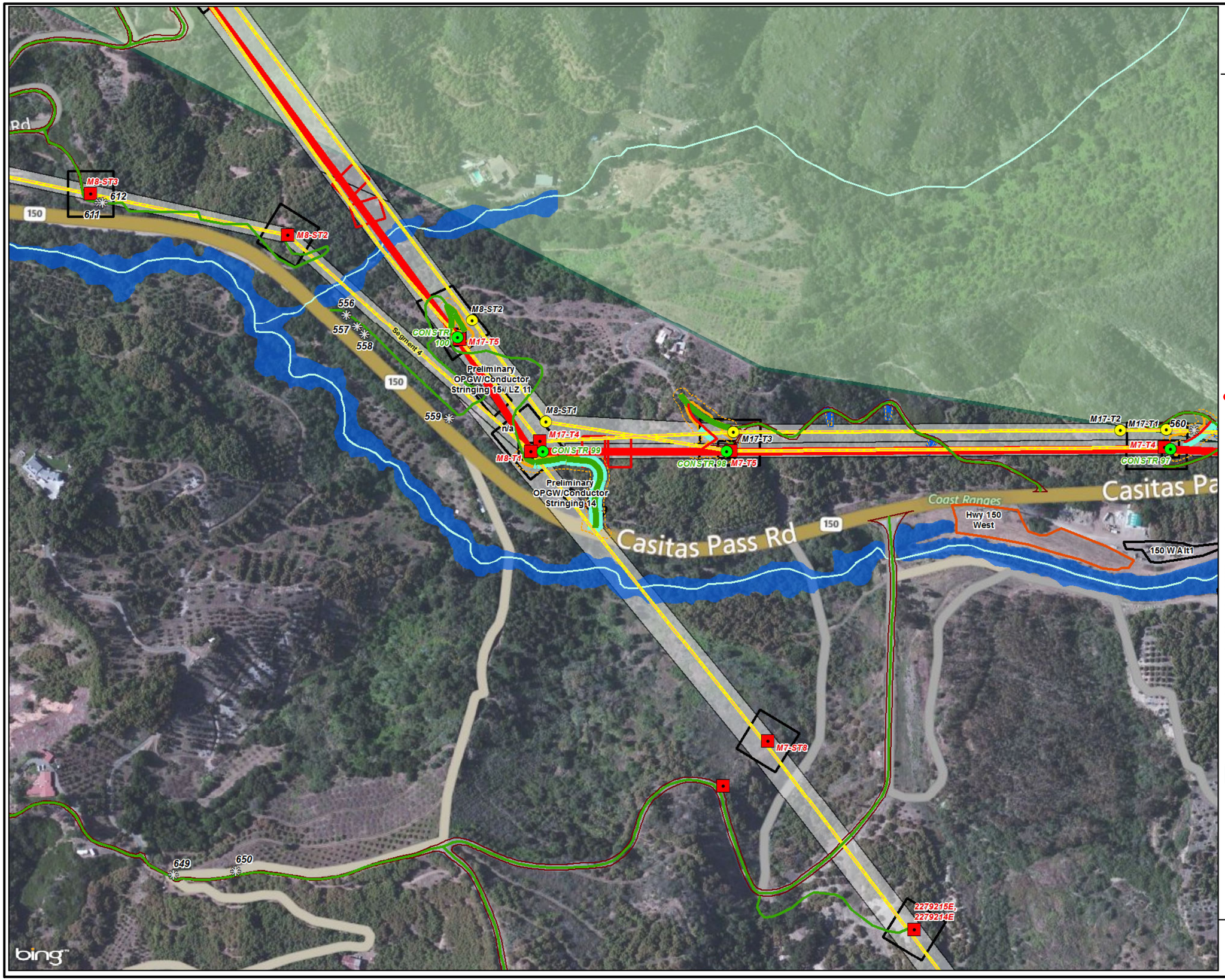
GANDA

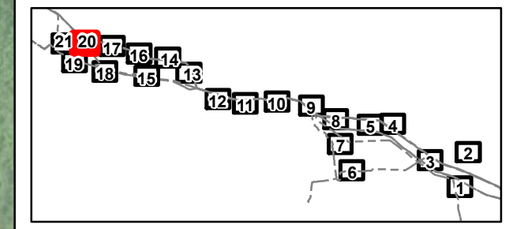
Meters 0 50
Feet 0 200

1 inch = 300 feet

# Figure 5
## SBCRP Protected Tree Locations
## Ventura County
## October 2014

*Map 20 of 21*




**Protected Trees to be Impacted**

- *Quercus agrifolia*

**SCE Engineering**

- Existing Structure Locations
- Proposed Structure Locations
- Potential Structures To Be Removed
- SBCRP Segment 4
- Proposed 66 kV Alignment
- Proposed OPGW Alignment
- Existing SubTrans 66 kV Lines
- Civil Erosion Control Line

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- Existing, 5 = Design Road
- New, 5 = Design Road
- Access Roads Edge
- Disturbance Area Limit
- Civil Erosion Control Features
- Construction Material Yards
- Construction Disturbance Areas (From TPD)
- Grading Limits
- Guard Structures
- SCE Easement/ROW
- USACE Waters
- CDFW Waters
- Los Padres National Forest Boundary

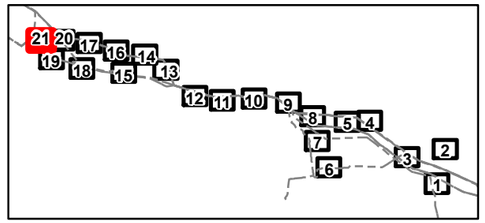
GANDA

Meters 0 50
Feet 0 200

1 inch = 300 feet

**Figure 5**
**SBCRP Protected Tree Locations**
**Ventura County**
**October 2014**

*Map 21 of 21*




**Protected Trees to be Impacted**

- *Quercus agrifolia*

**SCE Engineering**

- Existing Structure Locations
- Proposed Structure Locations
- Potential Structures To Be Removed
- SBCRP Segment 3b
- SBCRP Segment 4
- Proposed 66 kV Alignment
- Existing SubTrans 66 kV Lines
- Civil Erosion Control Line

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- New, 5 = Design Road
- Access Roads Edge
- Disturbance Area Limit
- Construction Disturbance Areas (From TPD)
- Grading Limits
- SCE Easement/ROW
- Coastal Zone Limits
- USACE Waters
- CDFW Waters
- Los Padres National Forest Boundary

GANDA

Meters 0 50
Feet 0 200

1 inch = 300 feet

# APPENDIX B

# TREE PHOTOGRAPHS

## Appendix B-1: Santa Barbara County Protected Trees

**Tree 501**

**Tree 502**

**Tree 503**

**Tree 504**

**Tree 505**

**Tree 506**

**Tree 507**

**Tree 508**

**Tree 509**

**Tree 510**

**Tree 511**

**Tree 512**

**Tree 513**

**Tree 514**

**Tree 515**

**Tree 516**

**Tree 517**

**Tree 518**

**Tree 519**

**Tree 520**

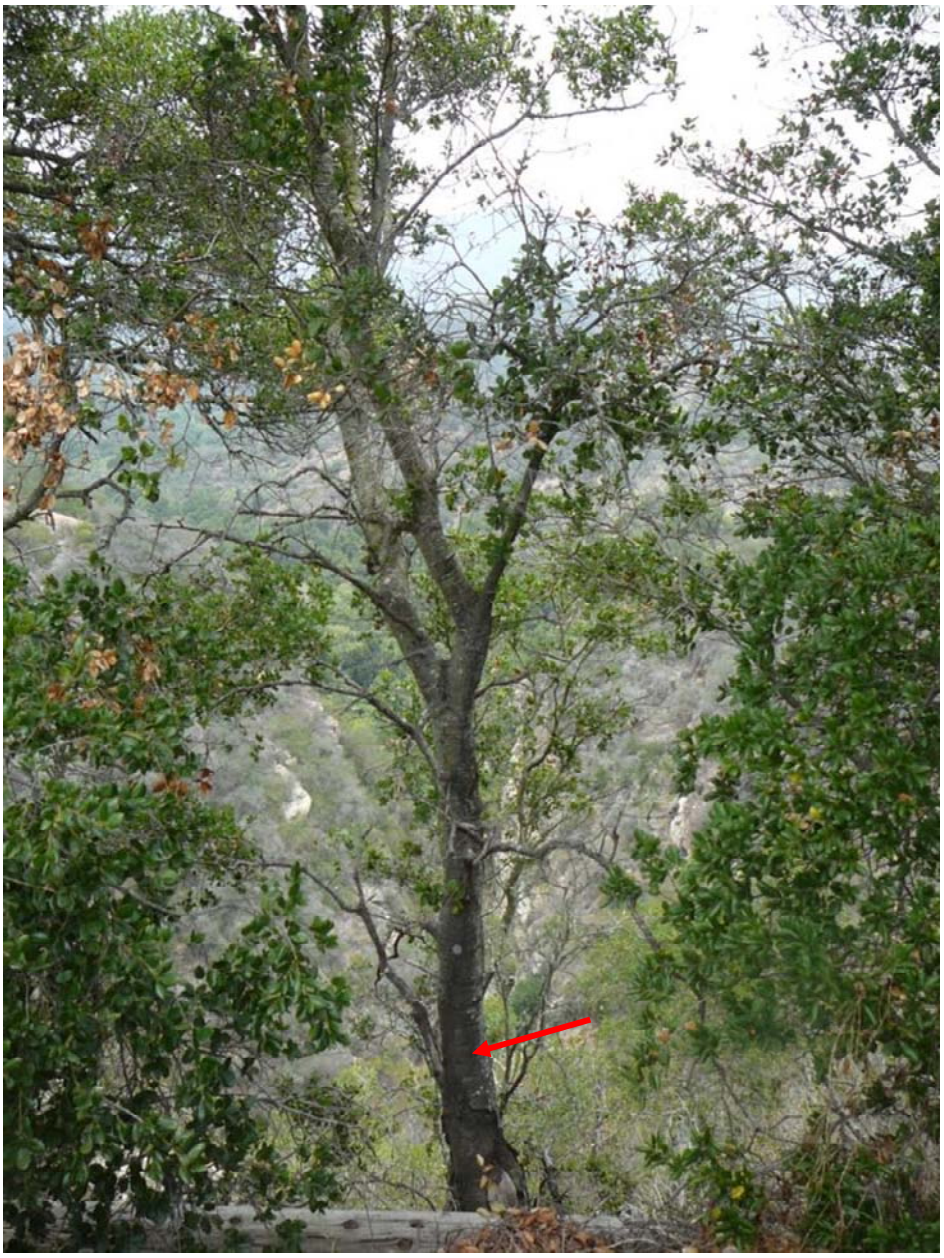
**Tree 521**

**Tree 522**

**Tree 523**

**Tree 524**

**Tree 525**



**Tree 526**

**Tree 529**

**Tree 530**

**Tree 531**

**Tree 532**

**Tree 533**

**Tree 534**

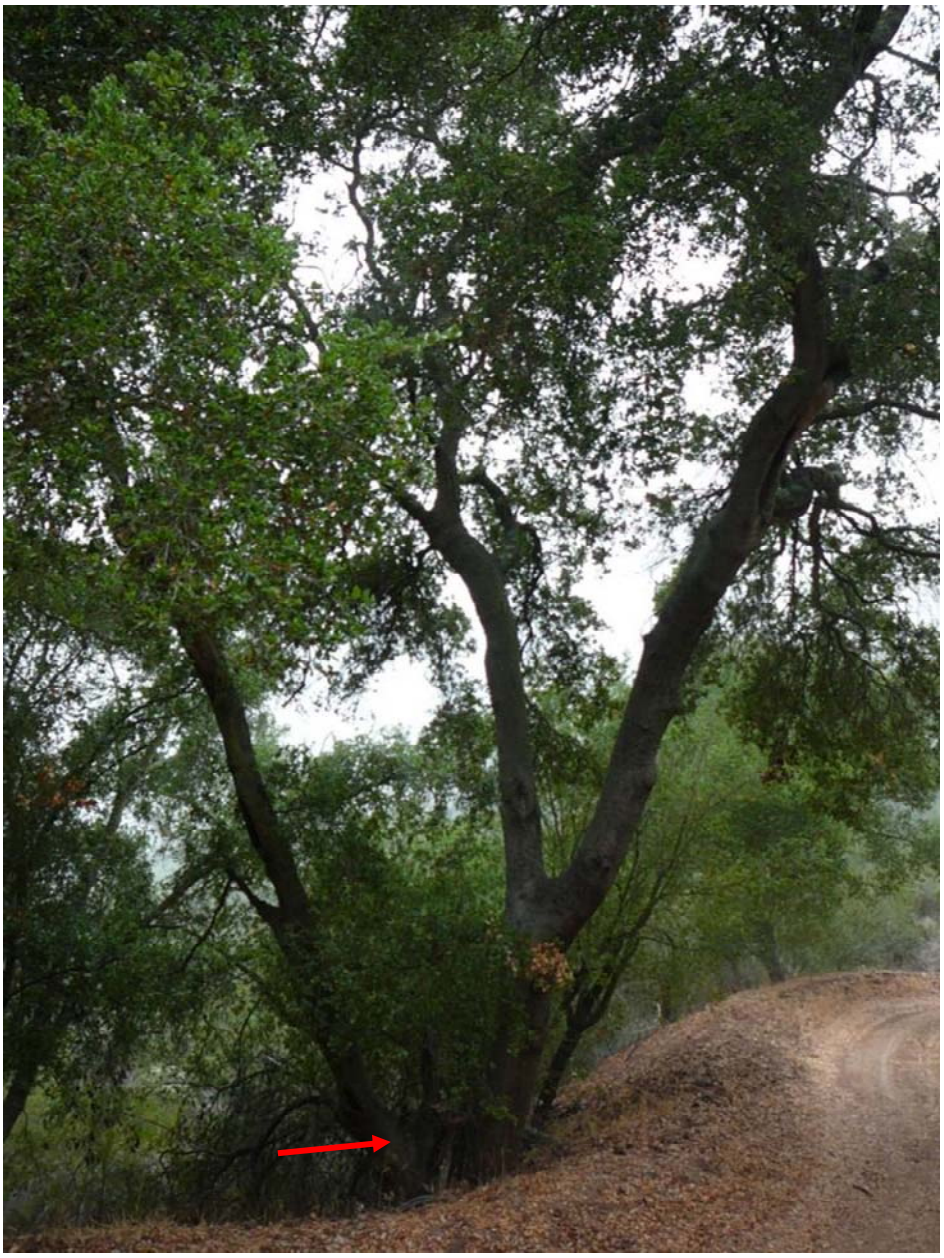
**Tree 535**

**Tree 536**

**Tree 537**

**Tree 538**

**Tree 539**



**Tree 540**

**Tree 541**

**Tree 542**

**Tree 543**

**Tree 544**

**Tree 545**

**Tree 546**

**Tree 547**

**Tree 548**

**Tree 549**

**Tree 550**

**Tree 551**

**Tree 552**

**Tree 553**

**Tree 554**

**Tree 555**

## Appendix B-2: Santa Barbara County Coastal Zone Protected Trees

**Tree 527**

**Tree 528**

**Tree 601**

**Tree 602**

**Tree 603**

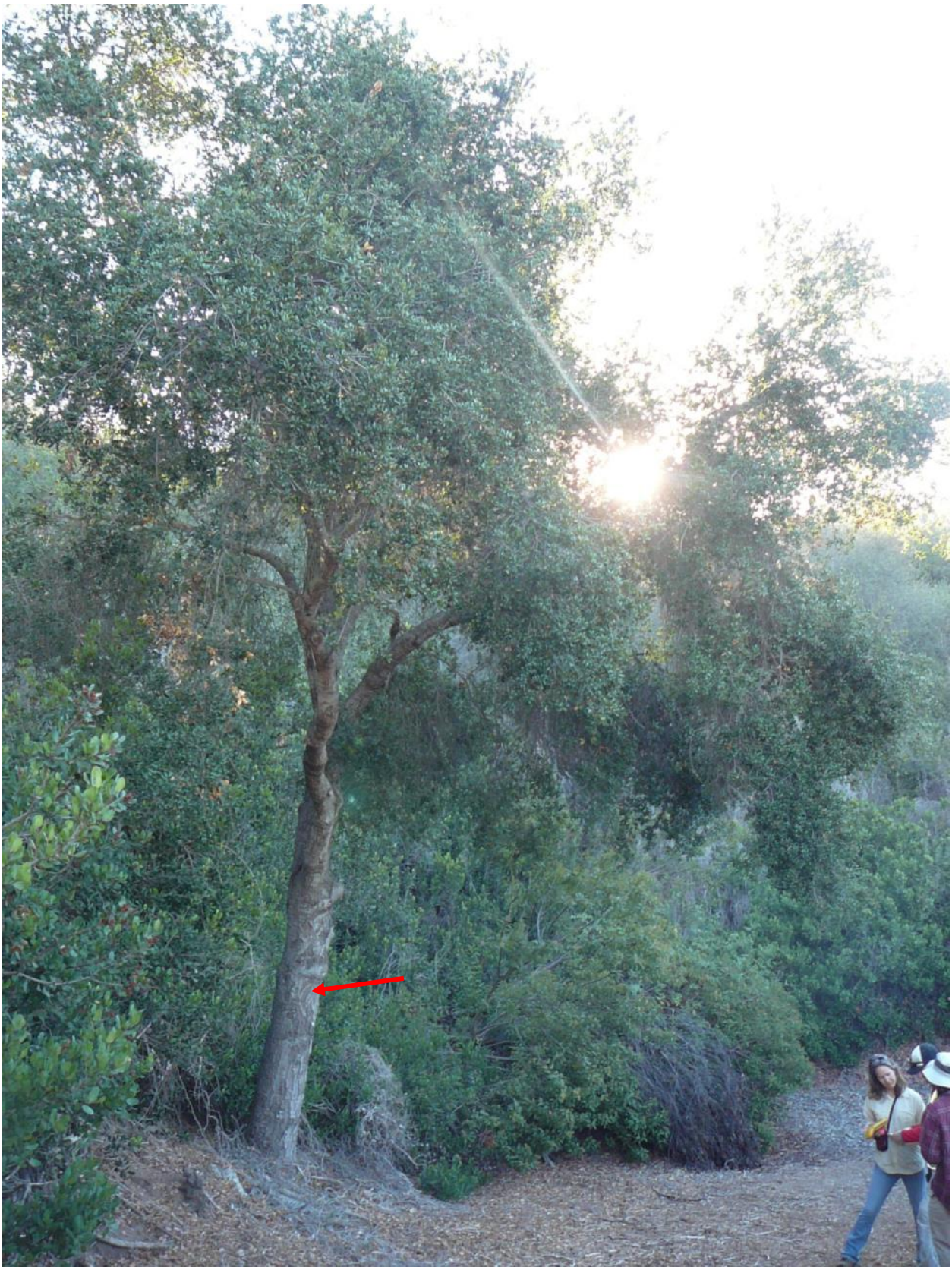
**Tree 604**

**Tree 605**

**Tree 606**

**Tree 607**

**Tree 608**



**Tree 669**

**Tree 670**

**Tree 671**

**Tree 672**

**Tree 673**

**Tree 674**

**Tree 675**

**Tree 676**

**Tree 677**

**Tree 678**

**Tree 679**

**Tree 680** (single stem originates below road grade on slope (branches appear as 2 stems from up on road)

**Tree 681**

**Tree 682**

**Tree 683**

**Tree 684**

**Tree 685**

**Tree 686**

**Tree 687**

**Tree 688**

**Tree 689**

**Tree 690**

**Tree 691**

**Tree 692**

**Tree 693**

**Tree 694**

**Tree 695**

**Tree 696**

**Tree 697**

**Tree 698**

**Tree 699**

**Tree 700**

**Tree 701**

**Tree 702**

**Tree 703**

**Tree 704**

**Tree 705**

**Tree 706**

**Tree 707**

**Tree 708**

**Tree 709**

**Tree 710**

**Tree 711**

**Tree 801**

## Appendix B-3: Ventura County Protected Trees

**Tree 556**

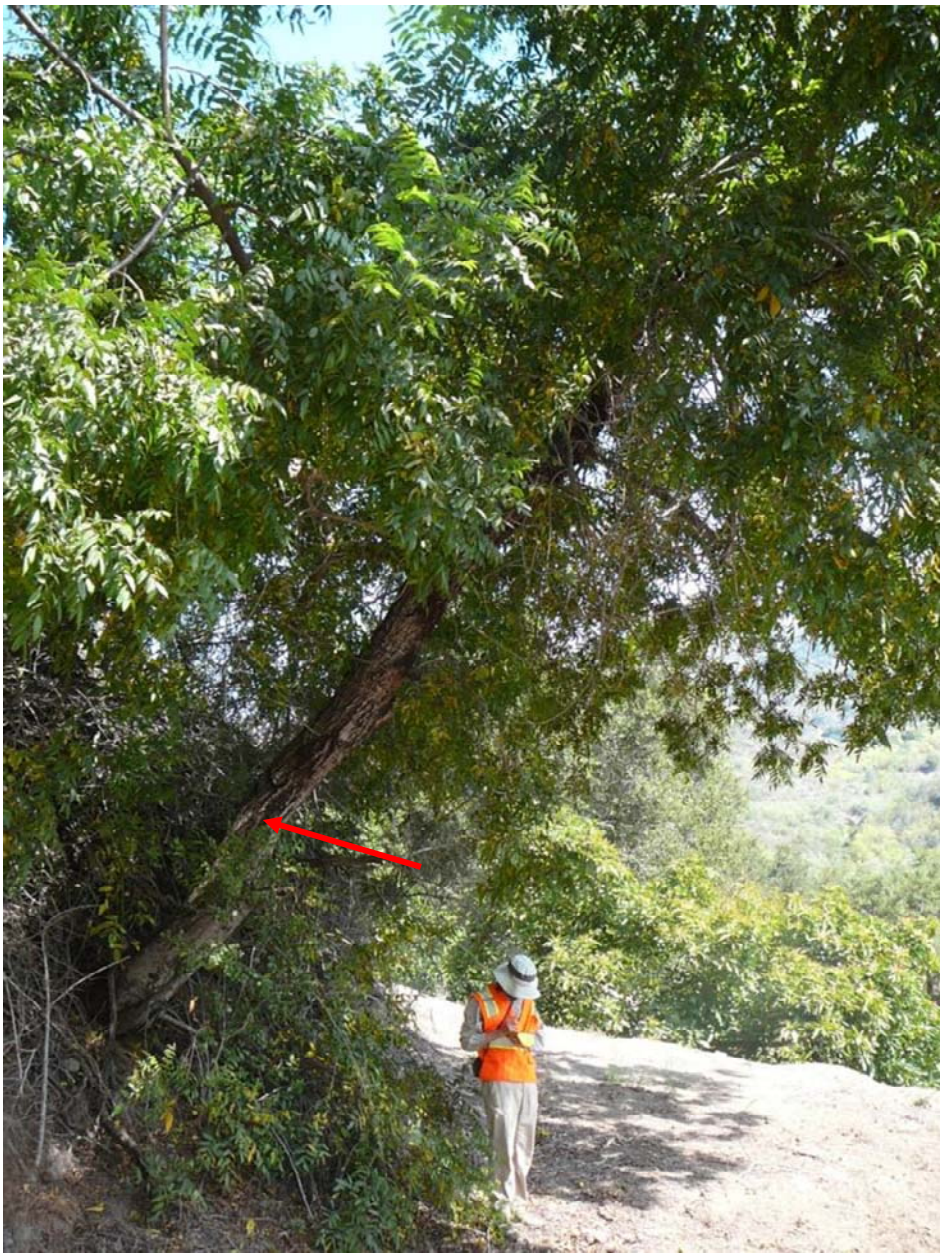
**Tree 557**

**Tree 558**

**Tree 559** (second stem obscured by front stem)

**Tree 560**

**Tree 561**



**Tree 562**

**Tree 563**

**Tree 564**

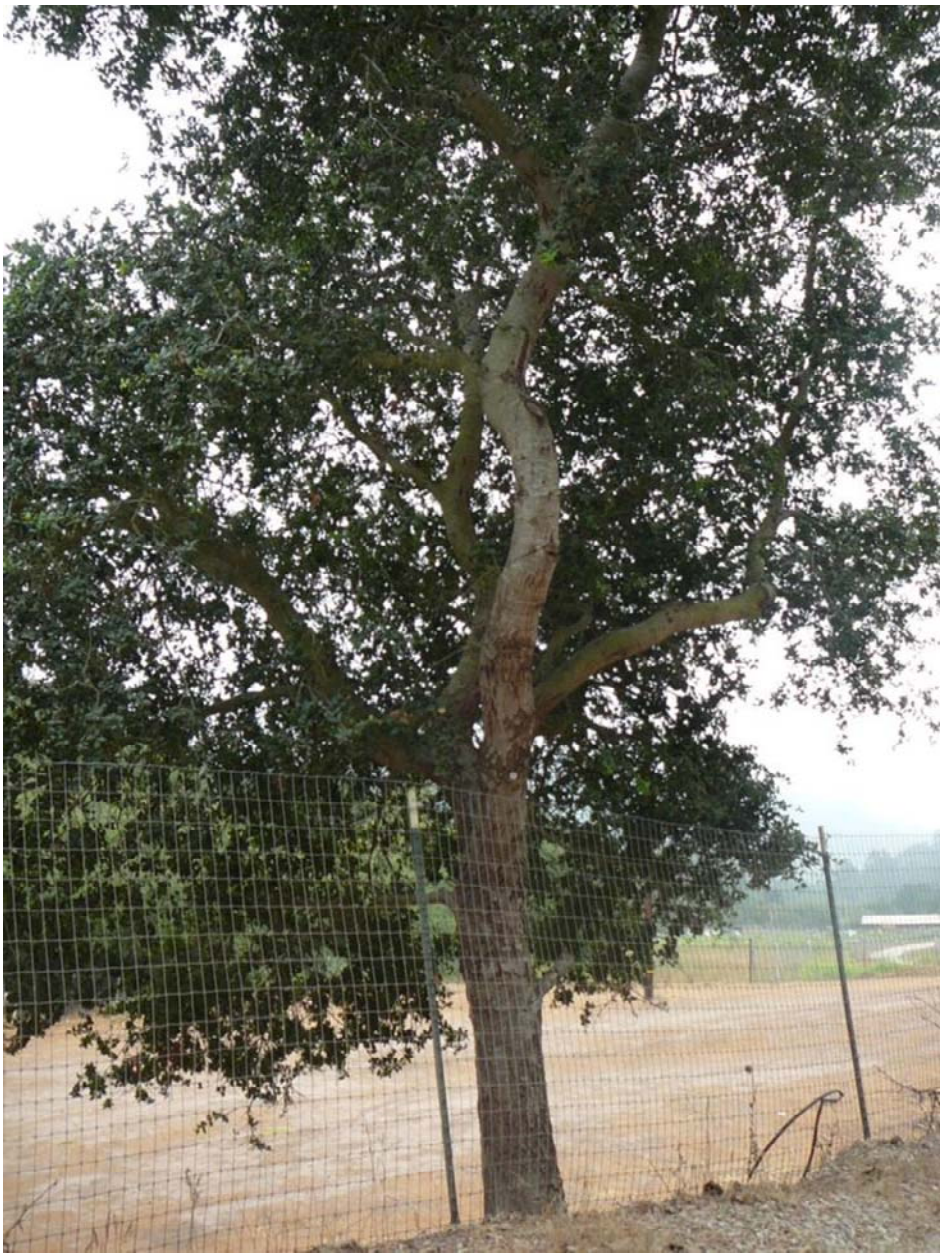
**Tree 565**

**Tree 566**

**Tree 567**

**Tree 568**

**Tree 569**



**Tree 570**

**Tree 571**

**Tree 572**

**Tree 573**

**Tree 574**

**Tree 575**

**Tree 576**

**Tree 577**

**Tree 578**

**Tree 579**

**Tree 580**

**Tree 581**

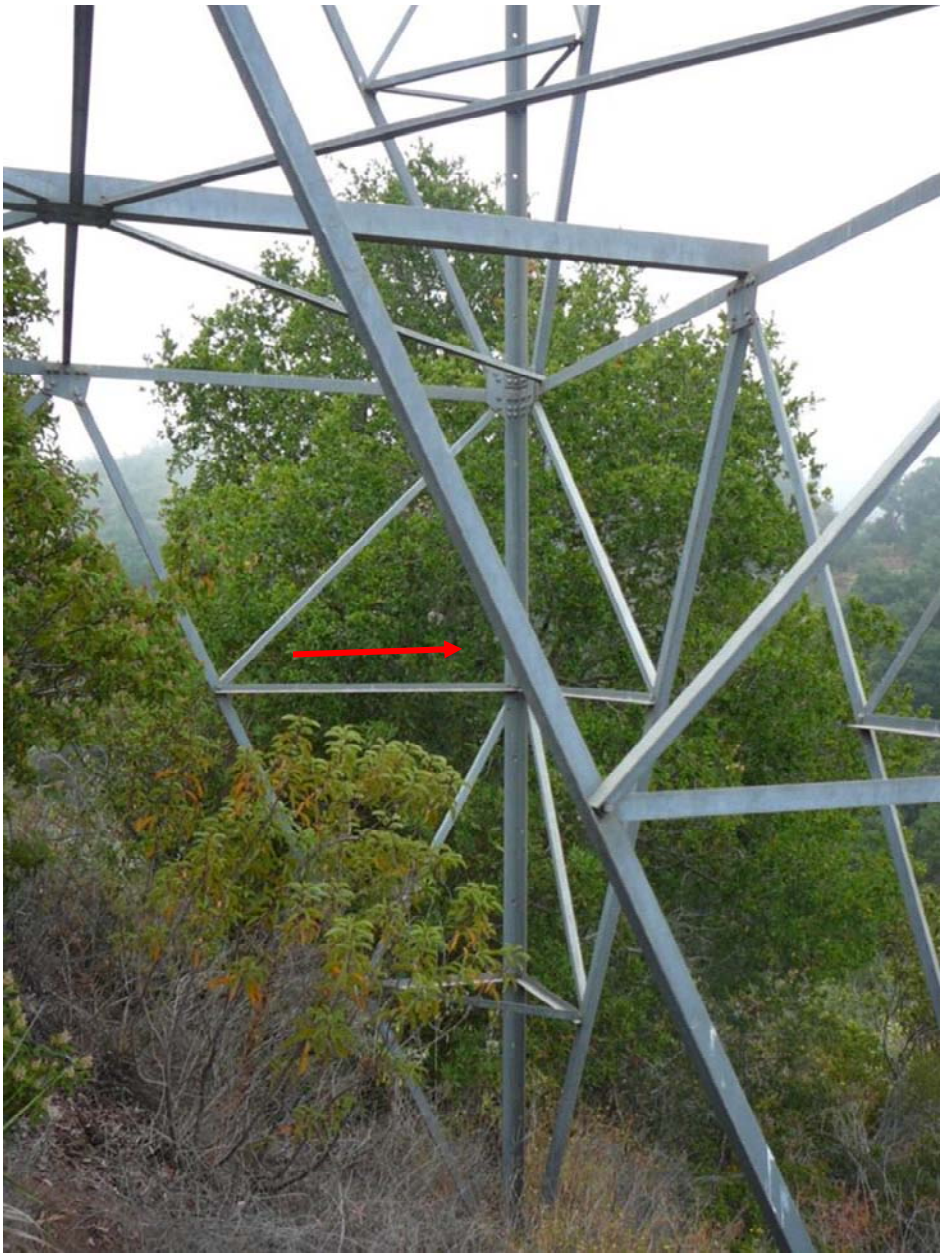
**Tree 582**

**Tree 583**

**Tree 584**

**Tree 585**

**Tree 586**



**Tree 587**

**Tree 588**

**Tree 589**

**Tree 590**

**Tree 591**

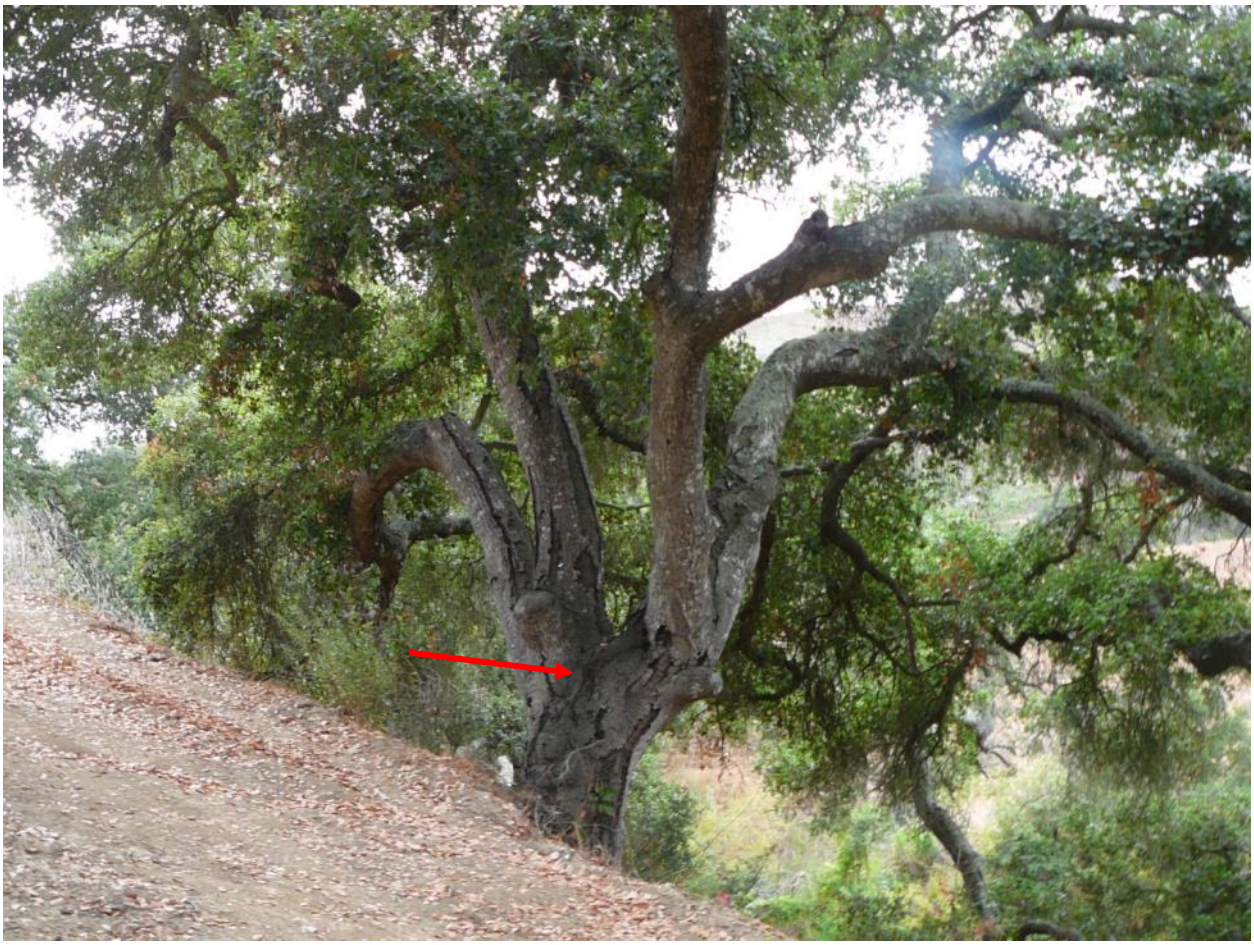
**Tree 592**

**Tree 593**

**Tree 594**

**Tree 595**

**Tree 596**



**Tree 597**

**Tree 598**

**Tree 599**

**Tree 600**

**Tree 609**

**Tree 610**

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**Tree 612**

**Tree 613**

**Tree 614**

**Tree 615**

**Tree 616**

**Tree 617**

**Tree 618**

**Tree 619**

**Tree 620**

**Tree 621**

**Tree 622**

**Tree 623**

**Tree 624**

**Tree 625**

**Tree 626**

**Tree 627**

**Tree 628**

Photo Unavailable

**Tree 629**

**Tree 630**

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**Tree 632**

**Tree 633**

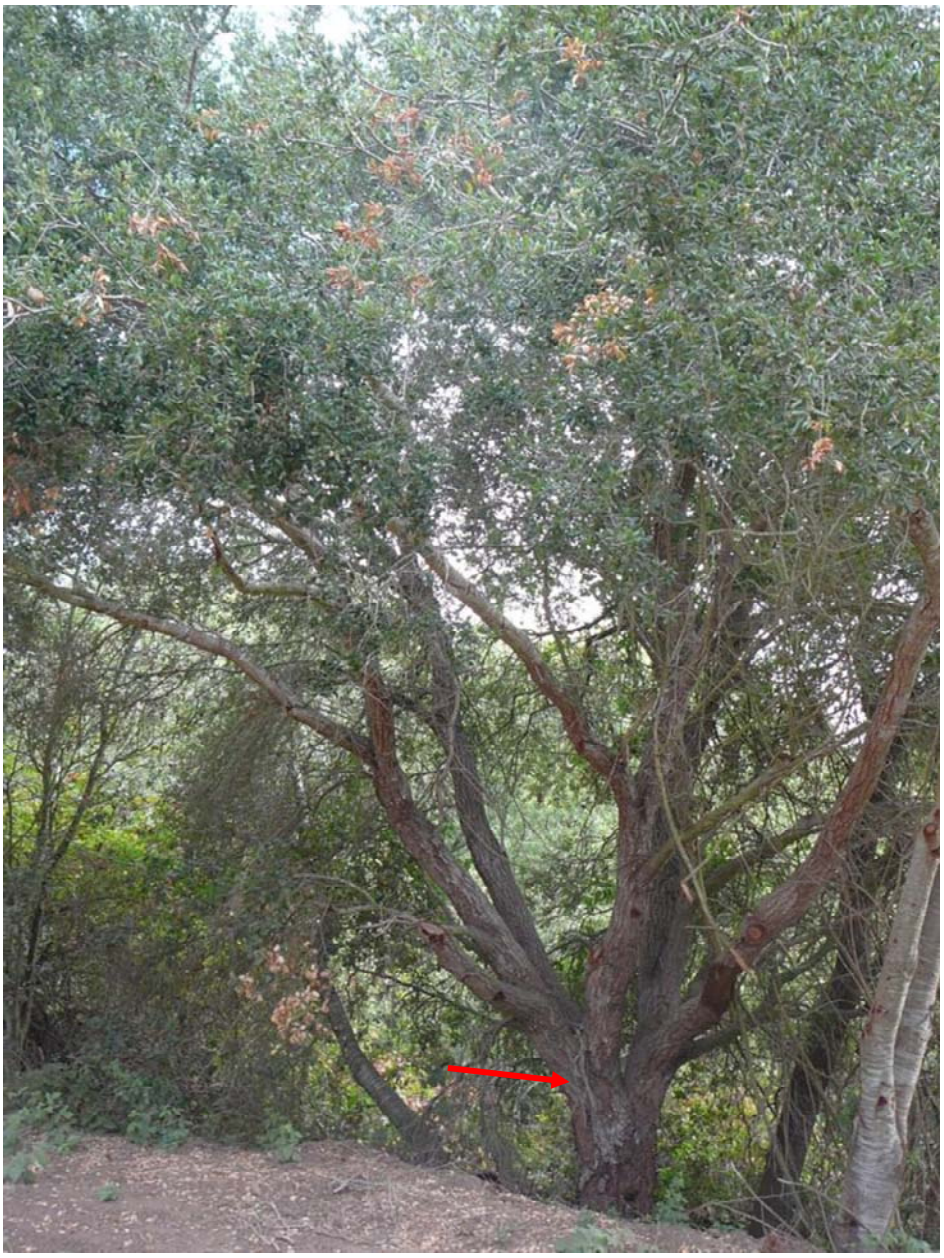
**Tree 634**

**Tree 635**

**Tree 636**

**Tree 637**

**Tree 638**

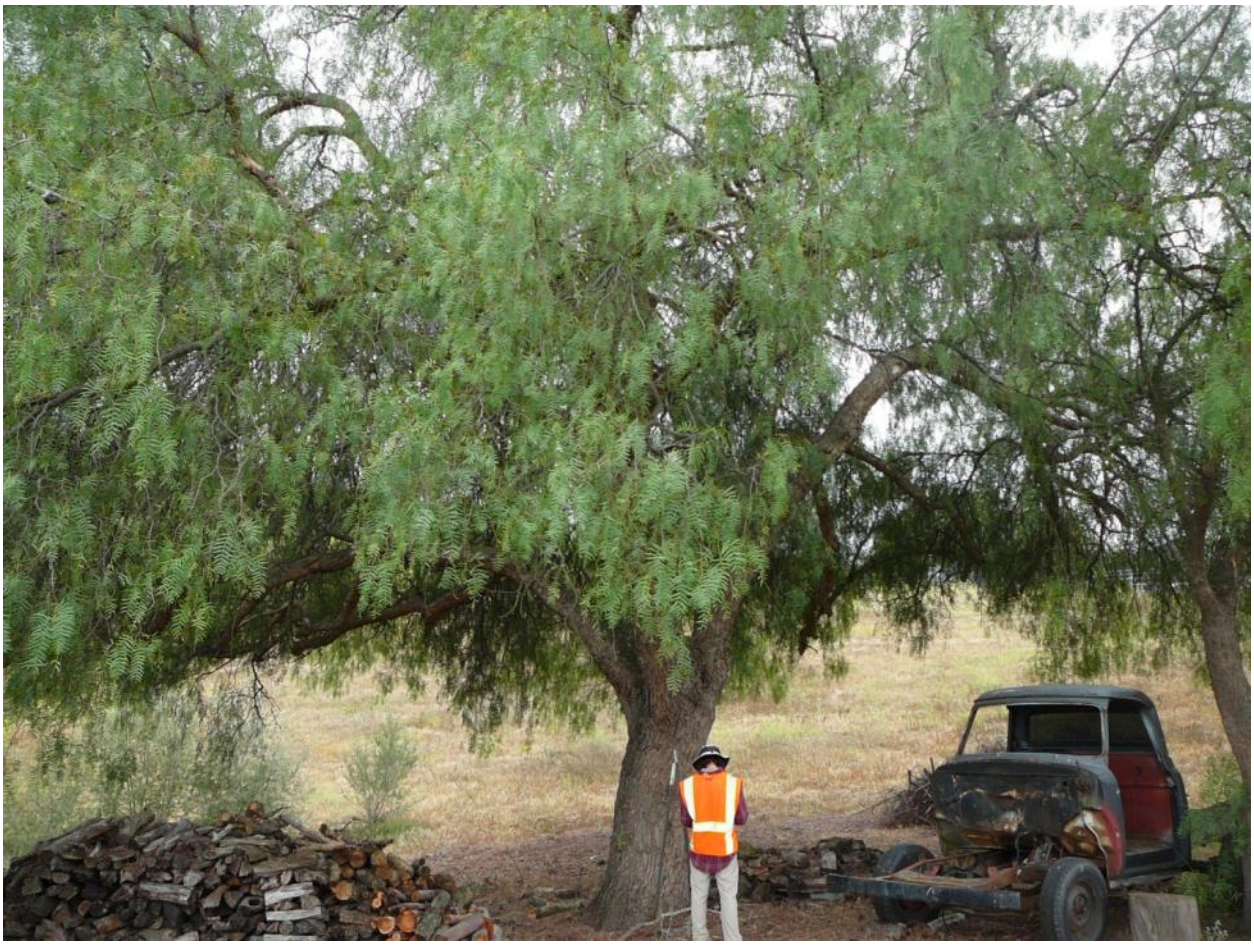


**Tree 639**

**Tree 640**

**Tree 641**

**Tree 642**



**Tree 643**

**Tree 644**

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**Tree 646**

**Tree 647**

**Tree 648**

**Tree 649**

**Tree 650**

**Tree 651**

**Tree 652**

**Tree 653**

**Tree 654**

**Tree 655**

**Tree 656**

**Tree 657**

**Tree 658**

**Tree 659**

**Tree 660**

**Tree 661**

**Tree 662**

**Tree 663**

Photo Unavailable

**Tree 664**

**Tree 665**

**Tree 666** (single stem originates down slope, out of view)

**Tree 667**

**Tree 668** (stem group is all same tree)

**Tree 712**

**Tree 713**

**Tree 714**

**Tree 715**

**Tree 716**

**Tree 717**

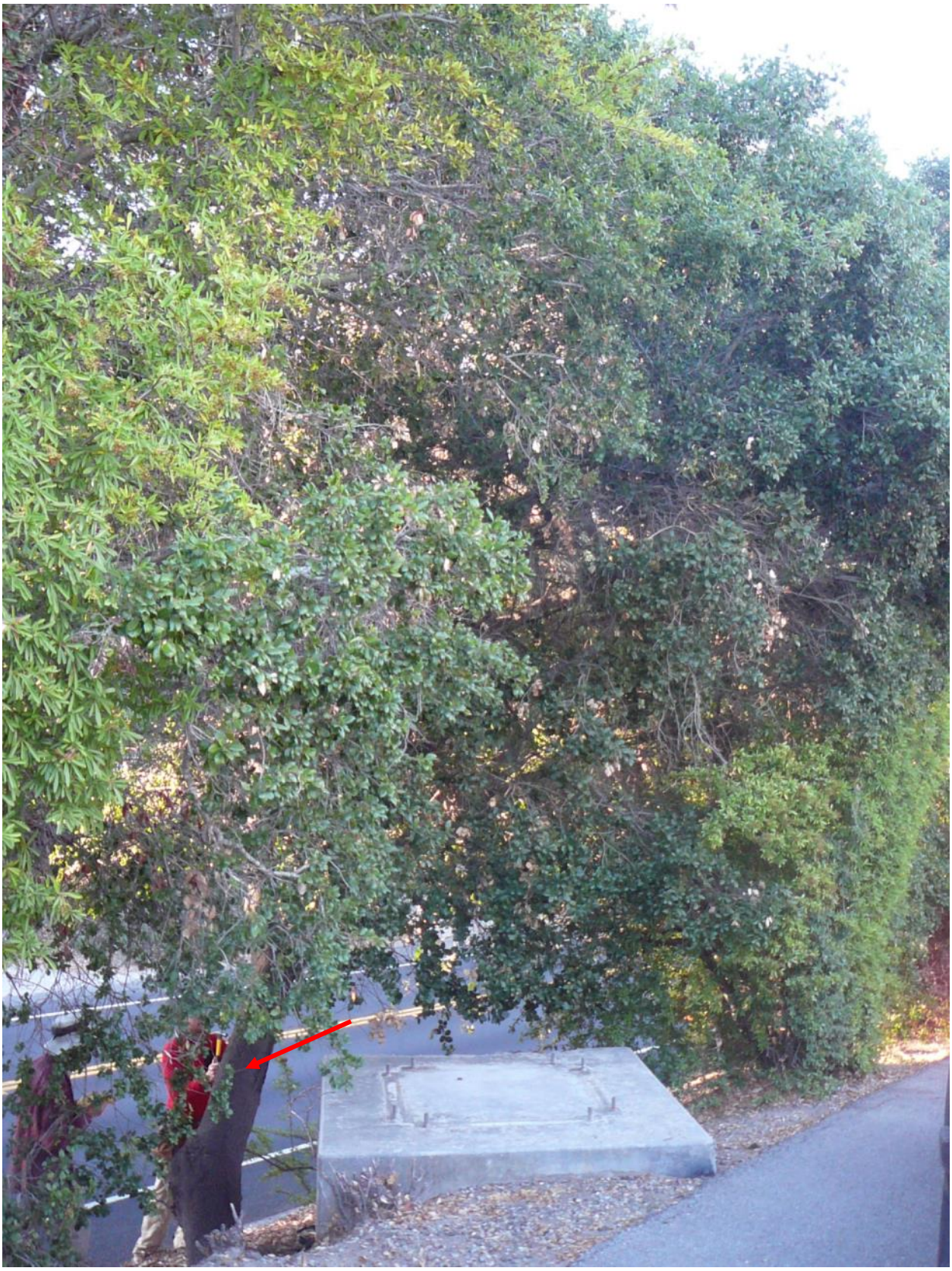
**Tree 718**

**Tree 719**

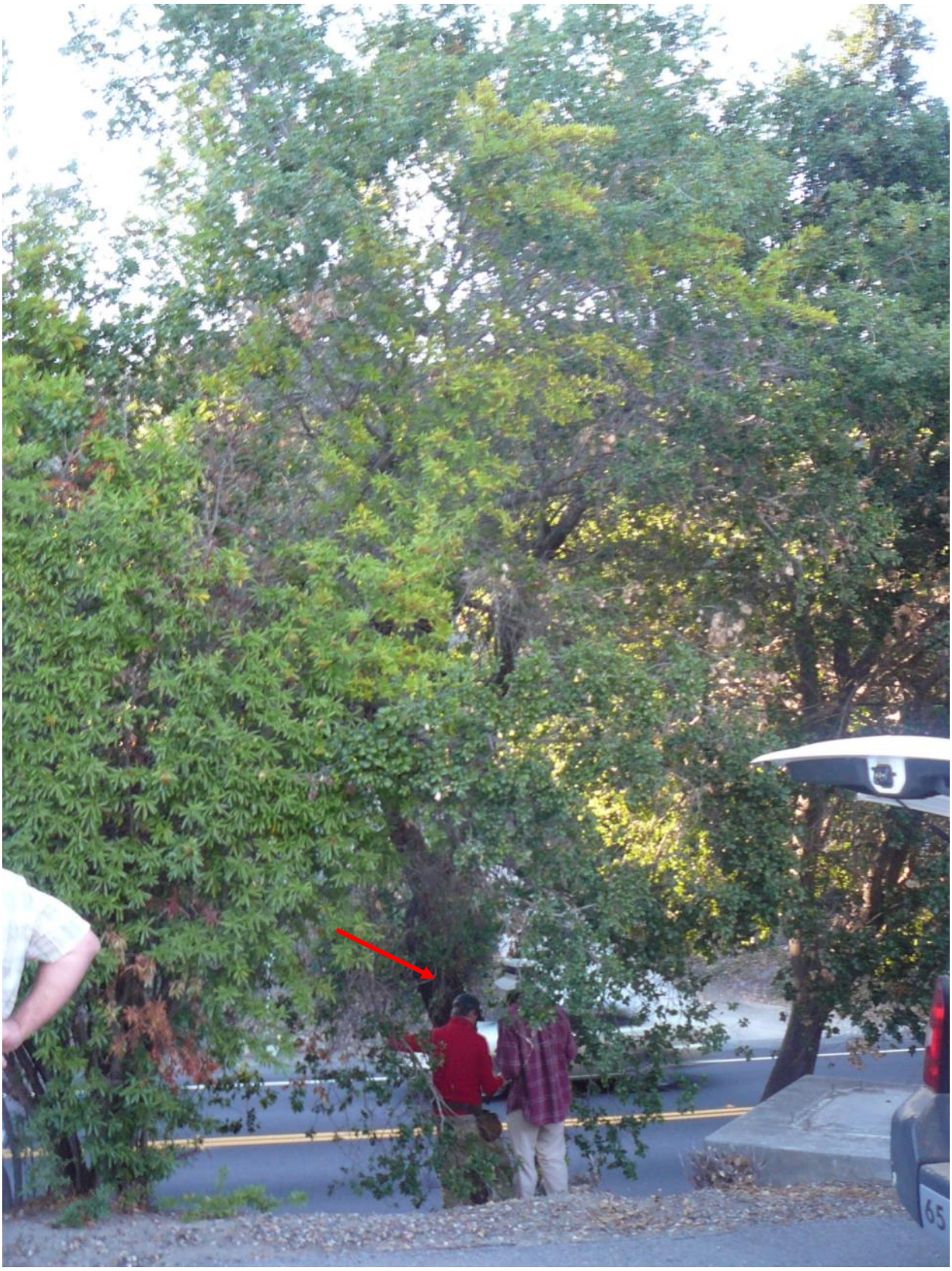
**Tree 720**

**Tree 721**

**Tree 722**



**Tree 723**



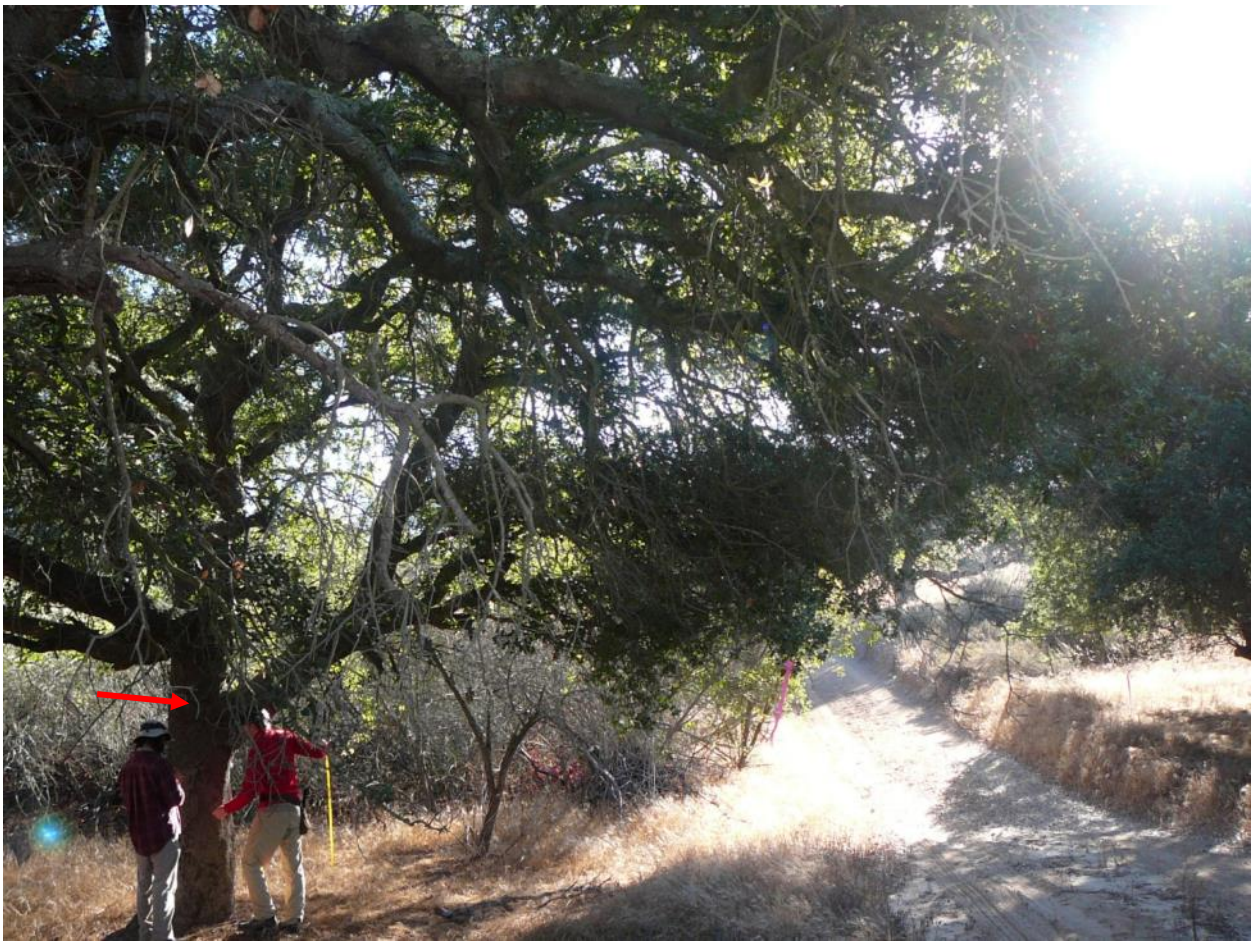

**Tree 724**

**Tree 725** (tree down slope, behind brush, near busy road; difficult to photograph)

**Tree 726**

**Tree 727**

**Tree 728**



**Tree 729**

**Tree 730**

**Tree 731**

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**Tree 733**

**Tree 734**

**Tree 735**

**Tree 736**

**Tree 737**

**Tree 738**

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**Tree 742**

**Tree 743**

**Tree 744**

**Tree 745**

**Tree 746**

**Tree 747**

**Tree 748**

**Tree 749**

**Tree 750**

**Tree 751**

**Tree 752**

**Tree 753**

**Tree 754**

**Tree 755**

**Tree 756**

**Tree 757**

**Tree 758**

**Tree 759**

**Tree 760**

**Tree 761**

**Tree 762** (second stem not shown)

**Tree 763**

**Tree 764**

**Tree 765**

**Tree 766**

**Tree 767**

**Tree 768**

**Tree 769**

**Tree 770**

**Tree 771**

**Tree 772** (trunk not shown)

**Tree 773**

**Tree 774**

**Tree 775**

**Tree 776**

**Tree 777**

**Tree 802**

**Tree 803**

**Tree 804**

**Tree 805**

**Tree 806**

**Tree 807**

# 2014 NESTING RAPTOR SURVEY REPORT

# SANTA BARBARA COUNTY RELIABILITY PROJECT VENTURA AND SANTA BARBARA COUNTIES, CALIFORNIA

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**September 2014**

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# 1. INTRODUCTION

This report presents the results of 2014 focused raptor surveys conducted for the Santa Barbara County Reliability Project (SBCRP; Project) in Santa Barbara and Ventura counties. The survey was conducted for all raptor species with potential to occur in the Project Area, including golden eagle, bald eagle and burrowing owl.

## 1.1 Project Description

In 1998, the Southern California Edison Company (SCE) initiated the Project to increase reliability by reinforcing its existing 66 kilovolt (kV) sub-transmission system in northwestern Ventura County and southeastern Santa Barbara County to meet the electrical demands of the south coast of Santa Barbara County during emergency conditions while also enhancing operational flexibility (Figure 1).

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

The Project includes the following physical elements:

- Reconstruction of the existing 66-kV sub-transmission facilities primarily within existing utility rights-of-way (ROW) between the existing Santa Clara Substation in Ventura County and the existing Carpinteria Substation in Santa Barbara County.
- Installation of marker balls on overhead wire where necessary.
- Modification of utility equipment within the existing Carpinteria Substation, Casitas Substation, Getty Substation, Goleta Substation, Ortega Substation, Santa Barbara Substation, and Santa Clara Substation.
- Installation of telecommunications facilities to connect the Project to SCE's existing telecommunications system for the protection, monitoring, and control of sub-transmission and substation equipment. Installation of new telecommunications facilities along Segments

1, 2, and 4, and at Carpinteria Substation, Casitas Substation, Santa Clara Substation, and Ventura Substation[1].

- The transfer of distribution lines (and third-party infrastructure as necessary) to sub-transmission structures along Segment 3A.
- Removal of sub-transmission infrastructure in Segments 1 and 2.

## 1.2 Environmental Setting

The Project lies north and west of U.S. Highway 101 (US-101), between 1 and 6 miles from the coastline. Elevations vary through the Project Area from 31 feet above sea level (ASL) near the Carpinteria Substation, which lies in the coastal plain, to 1,500 feet ASL along Segment 4 in the foothills of the western Transverse Ranges, to more than 1,800 feet ASL along portions of Segment 3B near Rincon Peak.

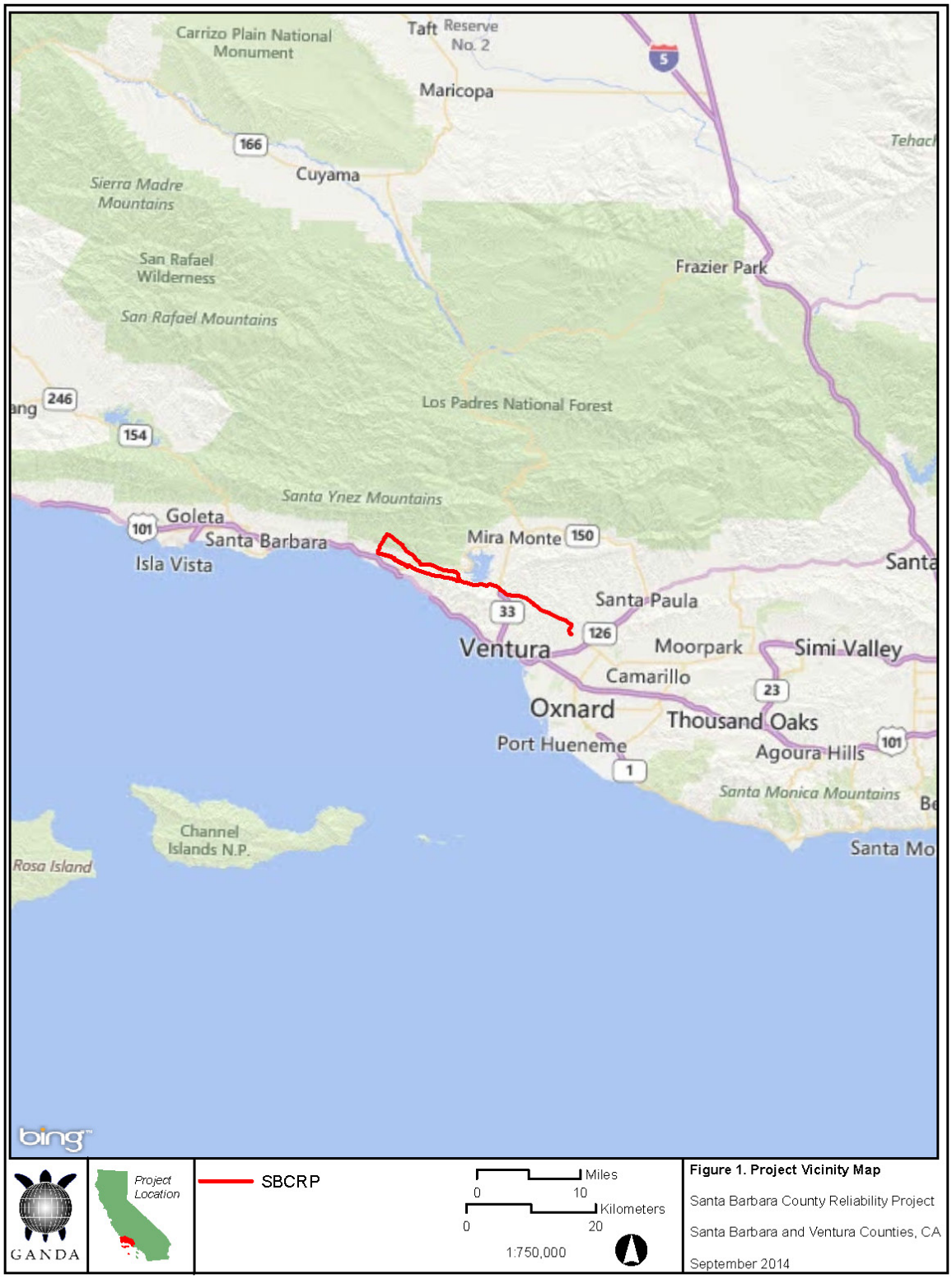
The Project crosses the headwaters of multiple small streams and creeks that flow through agricultural and urban areas before reaching the ocean, and is located in lower gradient reaches of the Santa Clara River and Ventura River watersheds, including Cañada Larga, which is a tributary to the Ventura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

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

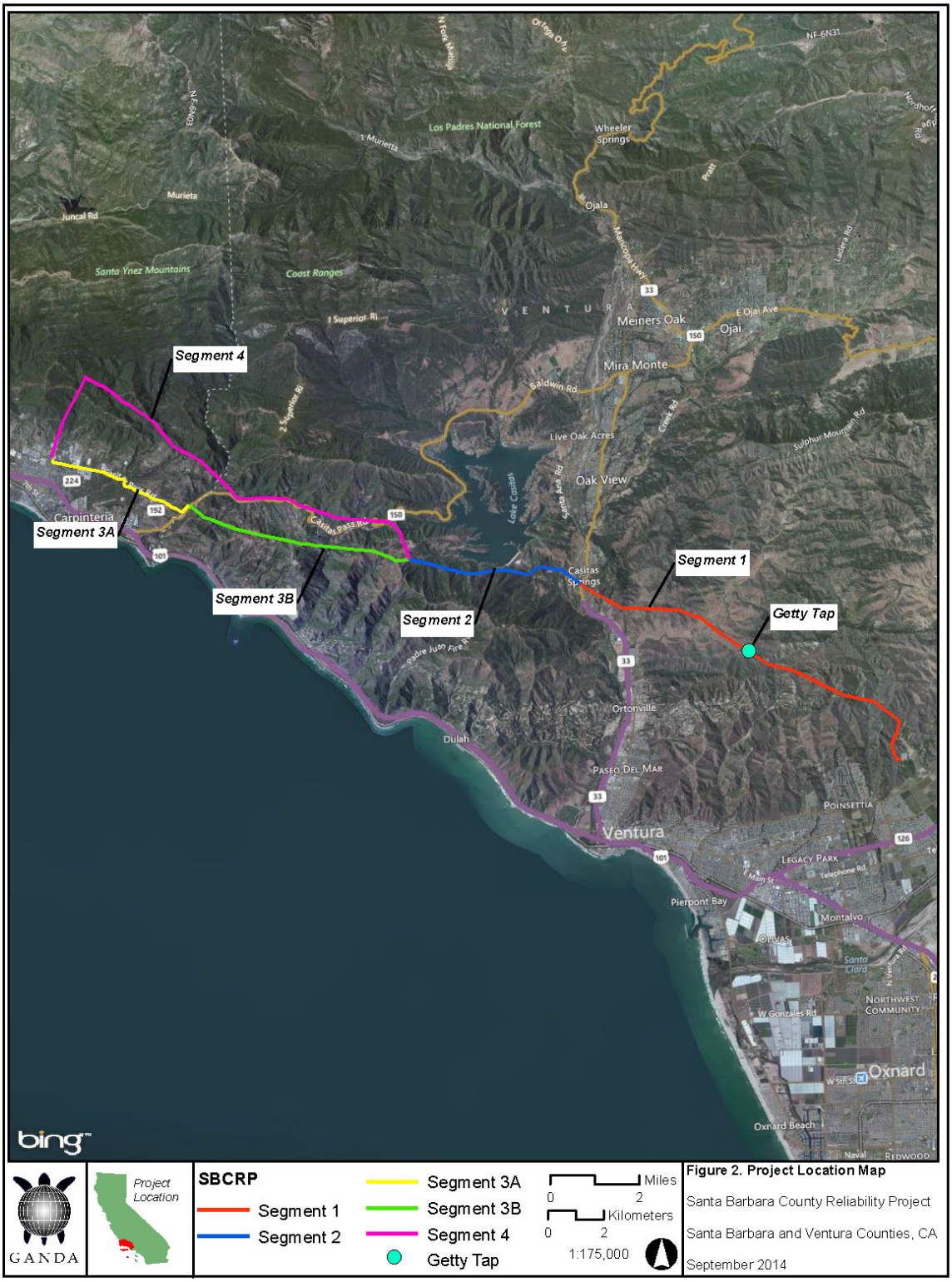
Temperatures in the area average 50°F to 71° F, with an average annual temperature of 60° F. Average rainfall ranges from 15.4 to 17.7 inches. The east-west orientation of the mountains, combined with the distinct Mediterranean/marine climate, results in a unique botanic zone and mix of species. Predominately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

[1] The Project also includes additional telecommunications-related work at Getty Substation, Goleta Substation, Ortega Substation, Santa Barbara Substation, and Ventura Substation; this work would be conducted exclusively within the mechanical and electrical equipment rooms (MEERs) or on substation property, and thus would have no impact to biological resources. Therefore, this work is not addressed further in this report.

**Figure 1. Project Vicinity**



## Figure 2. Project Location



## 1.3 Regulatory Setting

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

***Endangered Species Act***

The Endangered Species Act of 1973 (ESA) provides for the protection of plant and animal species listed by the federal government as "endangered" or "threatened," and protects "the ecosystems upon which they depend." Pursuant to Section 9 of the ESA, it is unlawful for any person to "take" a federally listed species. "Take," as defined by the ESA, "means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." This can also include the modification of a species' habitat.

When non-federal entities, such as states, counties, local governments, and private landowners, wish to conduct an otherwise lawful activity that might incidentally, but not intentionally, "take" a listed species, an incidental take permit must first be obtained via formal consultation with the U.S. Fish and Wildlife Service (USFWS) using one of two methods. If a federal nexus is available, an incidental take permit must be obtained for the Project by the federal agency involved in the nexus via formal consultation with USFWS via Section 7 of the ESA (ESA § 7). If no federal nexus is available, then an incidental take permit must be obtained following formal consultation with the USFWS via Section 10a of the ESA (ESA § 10(a)(1)(B).

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

The Migratory Bird Treaty Act of 1918 (MBTA) protects species of native, non-game, migratory birds by making "take" illegal except under the terms of a valid permit issued pursuant to federal regulations.

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

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

The Bald and Golden Eagle Protection Act of 1940 (BGEPA) provides protection of bald and golden eagles through established criminal penalties for persons who "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle ... [or any golden eagle], alive or dead, or any part, nest, or egg thereof."

The BGEPA defines "take" as "to pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb."

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

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

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

The Secretary of Agriculture's Policy on Fish and Wildlife directs the USFS to "manage habitats for all native and desired non-native plants, fish and wildlife species to maintain viable populations of each species; identify and recover threatened and endangered plant and animal species" and to avoid actions "which may cause species to become threatened or endangered."

***U.S. Forest Service Manual***

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

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

***California Endangered Species Act (CFG Code § 2050, et seq.)***

The California Endangered Species Act (CESA) generally parallels the provisions of the federal ESA, and states that "all native species of fishes, amphibians, reptiles, birds, mammals, invertebrates, and plants, and their habitats, threatened with extinction and those experiencing a significant decline which, if not halted, would lead to a threatened or endangered designation, will be protected or preserved." The California Department of Fish and Wildlife (CDFW) administers the CESA, and has committed to work with all interested persons, agencies, and organizations to protect and preserve such sensitive resources and their habitats.

Under the CESA, "endangered" is defined as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all,

or a significant portion, of its range." "Threatened" is defined as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts." "Take" is defined as "to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill" an individual of a species, but the definition does not include "harm" or "harass," as the ESA does. As a result, the threshold for a take under the CESA is higher than that under the federal ESA.

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

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

As stated in the Los Padres National Forest Strategy (USFS 2005), the objective of USFS threatened, endangered, proposed, candidate, and sensitive species management is to "manage habitat to move listed species toward recovery and de-listing" and to "prevent listing of proposed and sensitive species." For management of species of concern, the primary objective is to "maintain and improve habitat for fish, wildlife, and plants, including those with the following designations: game species, harvest species, management indicator species and watch list species."

The Los Padres National Forest Strategy includes specific measures to meet the six goals of the USFS National Strategic Plan. These goals include:

- Goal 1- Reduce the risk from catastrophic wildland fire;
- Goal 2 - Reduce the impacts from invasive species;
- Goal 3 - Provide outdoor recreation opportunities;
- Goal 4 - Help meet energy resource needs;
- Goal 5 - Improve watershed conditions; and
- Goal 6 – Mission-related work in addition to that which supports the agency's goals.

# 2. METHODOLOGY

Prior to conducting surveys, Garcia and Associates (GANDA) conducted desktop reviews that included database searches and a review of previous surveys in the area to obtain known locations of nesting raptors in the region, and to identify habitat suitable for nesting raptors. The results of these database searches provided a basis for addressing general raptor species within 500 feet of the Project footprint, bald eagles within 500 feet of the Project footprint, golden eagles within two miles of the Project footprint, and burrowing owls within 500 feet of the Project footprint. For the purposes of this report, the Project footprint includes existing infrastructure (i.e., towers, electrical lines, substations, and access roads) and proposed additional workspace (spur roads, temporary and permanent drill and crane pads, pulling and stringing sites) of the SBCRP.

Surveys encompassing the entire Project footprint were conducted using a variety of methods to maximize raptor detection in an efficient manner. As the Project spans a multitude of habitat

types, survey methods were adjusted to appropriately account for differences in topography, vegetation, and anthropogenic disturbance levels.

## 2.1 Literature and Database Review

Information about documented special-status raptor species, including burrowing owl (*Athene cunicularia*), golden eagle (*Aquila chrysaetos*), and bald eagle (*Haliaeetus leucocephalus*) occurrence, was obtained from the California Natural Diversity Database, RareFind 5 (CNDDB; CDFW 2014). The CNDDB search included Santa Barbara and Ventura counties. A query of special-status raptor species sightings was performed using the eBird website (Cornell Lab of Ornithology and National Audubon Society 2012 [queried May 2014]). Additionally, the BioResource Consultants (BRC; 2012, 2013) technical reports were utilized for review of known raptor nests within the Project Area. A desktop review of previous reports was also conducted to provide background information regarding potential bald eagle, golden eagle and burrowing owl habitat near and within the Project Area. The burrowing owl habitat and protocol-level survey technical report prepared by BRC (2014) was also reviewed prior to conducting ground surveys.

Additional literature and databases referenced include: *The Sibley Field Guide to Birds of Western North America* (Sibley 2003); *The Birds of North America Online* (Poole 2005); *Interim Golden Eagle Inventory and Monitoring Protocols; and Other Recommendations* (Pagel et al. 2010); and *Protocol for Evaluating Bald Eagle Habitat and Populations in California* (Jackman and Jenkins 2004).

## 2.2 Field Survey Methods

The habitat assessment focused on presence of nesting substrate (cliffs, trees, buildings, utility towers) and prey base habitat. In addition, GANDA utilized 2012 and 2013 data collected by BRC that identified raptor nests within 500 feet of the Project Area.

***General Raptor Surveys***

GANDA Wildlife Biologist Ben Bridegroom conducted surveys in May and June 2014 for the entire Project alignment and Project components, as well as a 500-foot buffer based on the current (May 2014) design plan. To determine the presence of active raptor nesting in the Project Area, focused nesting raptor surveys were conducted during the late breeding season. Surveys consisted of “windshield” surveys in areas with little tree and canopy cover, the use of open elevated areas as observation points and foot surveys in areas of dense tree canopy where raptors are likely to be found nesting.

Nesting raptor surveys included a general survey to look for newly constructed nests, nests that had not been detected in the previous surveys or raptors and behaviors that might indicate a nest that is not visually detectable. During the 2014 survey, previously documented nests (observed during 2012 and 2013 surveys conducted by BRC) were revisited to determine their use during the 2014 nesting season. The 2014 surveys included Segments 1, 2, and 3A, which were not previously surveyed.

### *Bald and Golden Eagle Surveys*

Golden and bald eagle surveys were conducted in conjunction with the general raptor surveys and followed general protocol methodologies. Ground bald eagle survey efforts focused on the areas surrounding Lake Casitas, and golden eagle survey efforts focused on Segment 1 at the Cañada Larga area and the grasslands southeast of Lake Casitas near the Segment 3B/4 split (Figure 2).

### *Burrowing Owl Survey*

Habitat assessments were conducted by GANDA wildlife biologists Howard Clark on May 13, 14, 19, and 20, 2014, and by Ben Bridegroom on June 30, 2014. The assessments were conducted on foot and by vehicle along all Project components, plus a 500-foot buffer in Segments 1 (other than the Getty Tap), 2 and 3A. Biologists surveyed for sign of burrowing owls, particularly in the vicinity of mammal burrows. The assessments confirmed these areas lacked sign and habitat requirements to support nesting burrowing owls. Therefore, protocol surveys were not conducted in Segments 1, 2 and 3A.

In February and March 2012, BRC conducted a habitat assessment for burrowing owl in Segments 3B, 4, and the Getty Tap portion of Segment 1; suitable habitat for burrowing owl was identified in the Cañada Larga area near the Getty Tap portion of Segment 1 and near the Segment 3B/4 split. Because suitable habitat for burrowing owl was determined to be present at these two locations, protocol surveys were conducted in 2012 to 2014 by BRC (2014) (see Appendix B for the BRC's technical report).

## 3. RESULTS

Six raptor species were observed in the Project Area during 2014 surveys: Cooper's hawk (*Accipiter cooperii*), golden eagle, bald eagle, red-tailed hawk (*Buteo jamaicensis*), red-shouldered hawk (*Buteo lineatus*), and American kestrel (*Falco sparverius*). Four other species observed during previous surveys included great horned owl (*Bubo virginianus*), northern harrier (*Circus cyaneus*), white-tailed kite (*Elanus leucurus*), and barn owl (*Tyto alba*) (BRC, 2012).

Of the six species observed by GANDA in 2014, three (Cooper's hawk, golden eagle, and bald eagle) are special-status species and are addressed in Table 1 (below), along with five other species considered to have a moderate or high potential to occur in the Project Area, based on previous reports and database information for the region: sharp-shinned hawk (*Accipiter striatus*), burrowing owl, northern harrier, white-tailed kite, and peregrine falcon (*Falco peregrinus anatum*). The common species red-tailed hawk, red-shouldered hawk, and American kestrel are not included the special-status species table (Table 1).

**Table 1. Special-status Raptor Species Documented to Occur or with the Potential to Occur within the Project Area.**

| Common Name | Scientific Name | Habitat Preference | Status | Likelihood to Occur within Project Area | Documented or Potential Occurrence Determination |
|---|---|---|---|---|---|
| Cooper's hawk | *Accipiter cooperii* | Nest sites mainly in deciduous trees in oak woodlands and riparian communities, in canyon bottoms and on floodplains. | MBTA, CWL | Present | During the 2014 raptor surveys, Cooper's hawk was observed in an oak woodland adjacent to Cañada Larga Creek in Segment 1, and in the woodlands along SR 150 in the vicinity of Segment 3B (GANDA 2014). |
| Sharp-shinned hawk | *Accipiter striatus* | Ponderosa pine, black oak, riparian deciduous, mixed conifer forest and Jeffrey pine habitats. Prefers riparian areas. | MBTA, CWL | Moderate | Wintering habitat in riparian woodlands. Documented winter visitor in Project vicinity on eBird. |
| Golden eagle | *Aquila chrysaetos* | Uses rolling foothills and mountain terrain, broad plateaus deeply cut by streams and canyons, open mountain slopes, and cliffs and rock outcrops. | BGEPA, MBTA, CFP, CWL | Present | An incidental sighting of a golden eagle was recorded during the 2014 botanical surveys in May of 2014 in the Sexton Canyon area (Segment 1) just south of the project transmission lines (GANDA 2014). |
| Burrowing owl | *Athene cunicularia* | Open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably the California ground squirrel. | MBTA, CSC | Moderate | None documented during 2014 raptor survey. Breeding and foraging habitat in the Cañada Larga area, and near Segment 3B/4 split. Owls not documented during 2012 to 2014 protocol surveys. Documented winter visitor in the Cañada Larga area on eBird. |
| Northern harrier | *Circus cyaneus* | Coastal salt and freshwater marsh. Nests and forages in grasslands, from salt grass in desert sink to mountain cienegas. | FSS MBTA, CSC | High | Observed in the Cañada Larga area during 2013 surveys in Project Area. Documented year-round throughout Project Area on eBird. |
| White-tailed kite | *Elanus leucurus* | Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. | MBTA, CFP, CSC | High | Observed south of Shepard's Mesa in Segment 3A, during 2013 surveys in Project Area. Documented year-round in the Project vicinity, with occurrences in the Cañada Larga area on eBird. |
| Peregrine falcon | *Falco peregrinus anatum* | Breeding sites located on cliffs. Forages far afield, even to marshlands and ocean shores. | FSS, MBTA, CFP, | Moderate | Foraging habitat present in Project Area. Documented year-round in the Project vicinity, with occurrences in the Cañada Larga area on eBird. |

| Common Name | Scientific Name | Habitat Preference | Status | Likelihood to Occur within Project Area | Documented or Potential Occurrence Determination |
|---|---|---|---|---|---|
| Bald eagle | *Haliaeetus leucocephalus* | Lakes, reservoirs, rivers, and some rangelands and coastal wetlands. Breeding habitats are mainly in mountain and foothill forests and woodlands near reservoirs, lakes, and rivers. | BGEPA, MBTA, SE | Present | Two bald eagles were observed foraging over Lake Casitas during the 2014 raptor surveys, approximately 500 feet from the Project (GANDA 2014). No suitable nesting habitat is present within the Project Area. |

**Key:** BGEPA = Protected by Bald and Golden Eagle Protection Act
CDFW = Special protection by CDFW
SE = State-listed as Endangered
CFP = CDFW Fully Protected
CSC = CDFW Species of Concern
CWL = CDFW Watch List
FSS = Forest Service Sensitive Species
MBTA = Protected under the Migratory Bird Treaty Act

Below are discussions of general raptors in Section 3.1, followed by the special-status raptors in Sections 3.2 through 3.4.

## 3.1 General Raptor Surveys#

During the May and June 2014 nesting season focused raptor surveys conducted by GANDA, 28 nests were identified within the Project Area (Table 2, Figures 3a - 3d), including 14 nests that were not identified during previous surveys in Segments 1, 2 and 3A. The 28 nests are described in Table 2, and photographs of most of the nests appear in Appendix A. It should be noted that one great horned owl nest was inaccessible in 2014. A photo of that nest (Photo 11 in Appendix A), taken the previous year (2013,) is included in Appendix A. Two other nest structures, photographed in 2013 and reported as a likely red-tailed hawk nest and a likely red-shouldered hawk nest, no longer existed and could not be relocated during the 2014 raptor survey; these photographs are not included in Appendix A. Overall, GANDA observed the locations of 28 nests (Table 2) and photographed all but the two nests that were not located. With the addition of the photograph of the inaccessible great horned owl nest from 2013, 26 photographs appear in Appendix A. The series of Figure 3 maps provide locations for all nests, including the two not located during the 2014 survey.

Twenty-seven of the 28 nests were found to be inactive. The only active nest identified during the 2014 survey was an American kestrel nest located in a sycamore tree cavity on the south bank of Cañada Larga Creek near Manuel Canyon Road (Figure 3b Photo 4).

Red-tailed hawk (*Buteo jamaicensis*) was the most common raptor observed during the 2014 surveys. Twenty (20) of the inactive nests observed during the 2014 survey were likely red-tailed hawks nests. These nests were observed to be active red-tailed hawk nests in the past, and/or are consistent in size, shape, and material with those built by red-tailed hawks. Approximately four juvenile red-tailed hawks (exact number uncertain because the birds were not individually marked) were observed near the project. Two were identified near Cañada Larga Road, and two were identified along SR 192, near Segment 3A. In these locations, juvenile red-tailed hawks were observed foraging and/or displaying territorial behavior. Observed behaviors did not indicate nesting activity or dependence on mature red-tailed hawks.

The nests identified during the 2014 raptor surveys are scattered throughout the Project Area (Figures 3a – 3d). Eleven nests were identified in Segment 1, including the active American kestrel nest, eight likely red-tailed hawk nests, one likely Cooper's hawk and one likely great horned owl. Two nests were identified in Segment 2, including one likely Cooper's hawk nest and an unidentified stick nest. Four nests were identified on Segment 3A; three are likely red-tailed hawk and one is likely red-shouldered hawk. Five nest locations were identified on Segment 3B, including four likely red-tailed hawk nests and one nest that was previously observed is no longer in existence. Six nest locations were identified on Segment 4; four are likely red-tailed hawk nests, one is likely a great horned owl nest and one nest previously observed is no longer in existence.

Cooper's hawk was also observed during the 2014 surveys. One was observed in oak woodland adjacent to the Cañada Larga drainage in Segment 1, and another in the woodlands along SR 150 in the vicinity of Segment 3B. In both cases, the Cooper's hawks were perched and flushed as the biologists approached.

## 3.2 Bald Eagle Survey

Topographic review of the Project Area revealed one substantial water body provides habitat for nesting bald eagles and a number of foraging areas that may provide wintering habitat. Lake Casitas, which is approximately 0.10 mile from the nearest Project component (Segment 2) and 150 feet from the nearest access road (Lake Casitas Fire Road), is a large lake with substantial conifer stands and food supplies suitable for nesting bald eagles.

During the 2014 survey, one adult bald eagle was observed perching on a eucalyptus tree adjacent to the nest tree on May 27 (approximately 2.4 miles from the nearest Project component). Three days later, on May 30, one tagged fifth-year bald eagle was observed foraging with an adult bald eagle near the Lake Casitas dam, approximately 500 feet northeast of the Santa Clara–Ojai–Santa Barbara line. Nesting activities were not observed during the 2014 survey, and though a previously reported nest was observed, no fledglings were observed, nor were any displays indicating nesting in 2014.

An active bald eagle nest was observed by BRC during 2013 surveys on the north bank of Lake Casitas, approximately 3.5 miles to the northeast of the Project Area. The nest was reported to have two fledglings in May 2013.

## 3.3 Golden Eagle Survey#

Areas that were determined to have potential habitat for nesting golden eagles within 2 miles of the proposed alignment were studied in 2014 as part of a desktop review. Two areas, the Cañada Larga Creek area and the Segment 3B/4 split (Figure 4), were determined to warrant field surveys based on basic habitat requirements for nesting golden eagles, including open spaces that provide hunting habitat and that supply nesting sites such as cliffs, trees and anthropogenic structures (windmills, transmission towers, etc.) (Poole 2005). There was an incidental sighting of a golden eagle during the 2014 botanical surveys on May 22, 2014 in the Sexton Canyon area (Segment 1) just south of the Project transmission lines. The eagle was perched on a wooden distribution line pole, left the pole and soared overhead. The nearest constructs are M5-T1 and M5-T2.

Golden eagle occurrences have been documented in the vicinity of Cañada Larga, Lake Casitas and the Ventura Valley on eBird (Cornell 2014). A 2014 CNDDB search for records of historical golden eagle nest sites and golden eagle foraging sites in Santa Barbara and Ventura counties produced two records that were both 25 years old.

Golden eagles were observed by BRC (2013) in Segments 3b and 4. Overall, the nesting raptor survey results indicated an absence of nesting golden eagles within the Project vicinity and surrounding areas.

## 3.4 Burrowing Owl Survey

During habitat evaluations conducted by GANDA in 2014, no suitable habitat was found for burrowing owls in Segments 1, 2 and 3A. Based on habitat evaluations and previous surveys conducted on Segments 3B and 4, and the Getty Tap portion of Segment 1 in 2012 to early 2014, potential habitat for burrowing owl was found at two locations. Protocol surveys were conducted within the Getty Tap area of Segment 1 and near the Segment 3B/4 split (Figures 5a – 5b), but evidence of burrowing owl was not detected, and no owls or sign were observed during protocol surveys (BRC 2014). Documented winter occurrences for burrowing owl in Cañada Larga near the Getty Tap portion of Segment 1 were found during an eBird database search (Cornell 2014).

## Table 2. Raptor Nests Observed within the Project Area

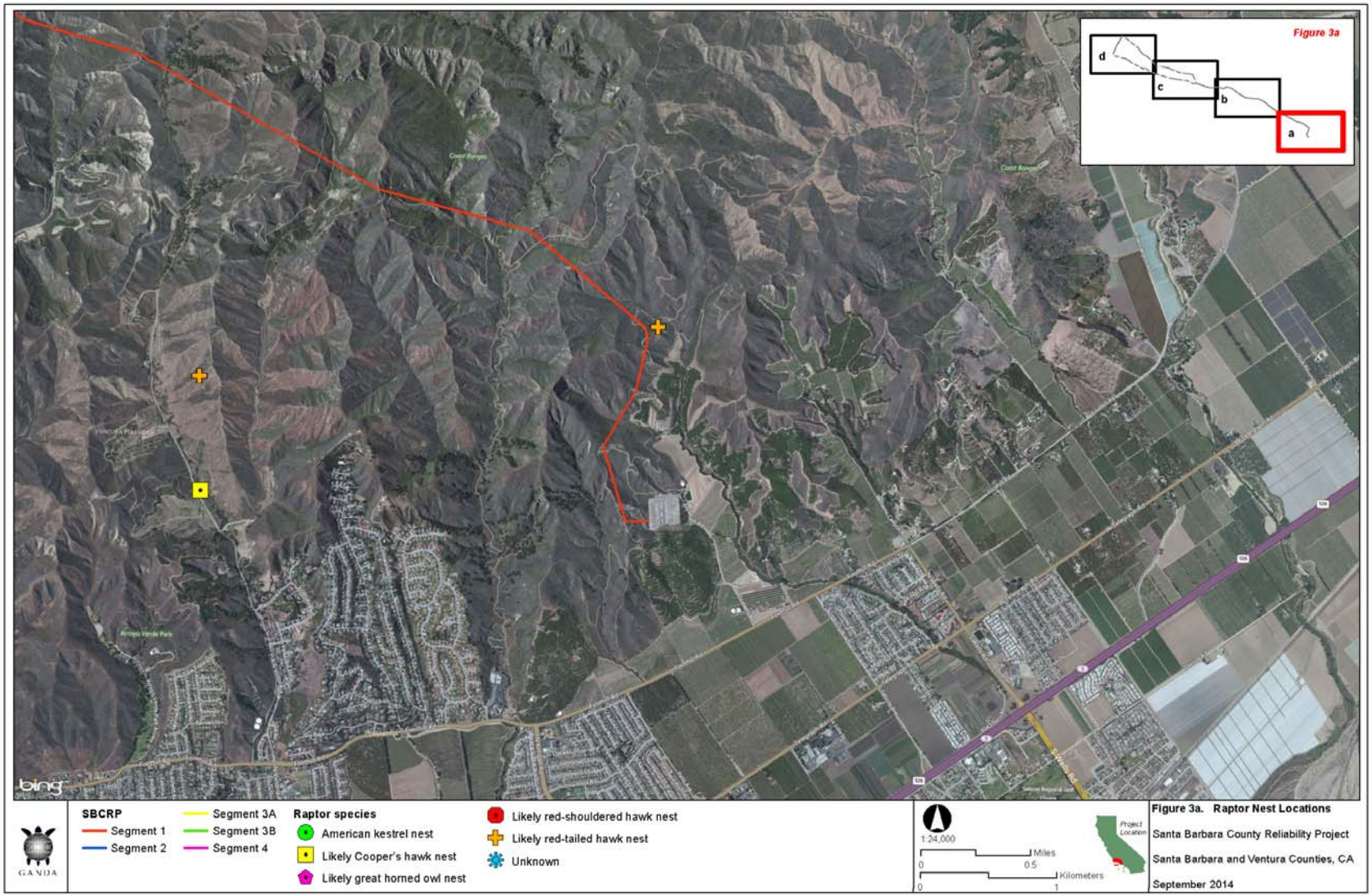
| Nearest Construct/Project Facility | Project Segment | Location | GPS Coordinates | Species | Active (Y/N/NA) at Time of Survey | | |
|---|---|---|---|---|---|---|---|
| | | | | | 2014 | 2013 | 2012 |
| Approximately 583 feet west of M3-T5 | 1 | Sycamore tree 100 feet east of Sexton Canyon Road. (Photo 1). | 34.303038, -119.222431 | Likely Cooper's hawk* | N | NA | NA |
| Lattice tower M4T3 | 1 | Near the top of lattice tower M4-T3 on the Santa Clara–Getty line. (Photo 2). | 34.310552, -119.222697 | Likely red-tailed hawk* | N | NA | NA |
| Approximately 330 feet east of Structure 4453207E | 1 | Distally located on uppermost west arm of lattice tower approximately 150 feet south of Long Canyon Road and 200 feet east of the Santa Clara–Ojai–Santa Barbara Line. (Photo 3). | 34.314445 -119.186240 | Likely red-tailed hawk* | N | NA | NA |
| Approximately 830 feet north of structure M7-ST7 | 1 | Sycamore tree cavity on south bank of Cañada Larga Creek, and approximately 200 feet northwest of Manuel Canyon Road. (Photo 4). | 34.347376 -119.259258 | American kestrel* | Y | NA | NA |
| Approximately 630 feet north of structure 4453219E | 1 | In coast live oak tree between the Santa Clara–Carpinteria–Casitas Line and the Santa Clara–Tayshell Line approximately 80 feet south of the access road. (Photo 5). | 34.337512 -119.240564 | Likely red-tailed hawk* | N | NA | NA |
| Lattice tower approximately 95 feet east of Construct 147 | 1 | In lattice tower on the Goleta–Santa Clara #1 Line, approximately 6 feet below lowest northwest arm and approximately 100 feet northeast of Construct 147. (Photo 6). | 34.338909 -119.245437 | Likely red-tailed hawk* | N | NA | NA |
| Approximately 0.5 mile SW of structure 4453225E | 1 | In coast live oak tree between Cañada de Alisos Road (approximately 389 feet south of Canada de Alisos Road) and the Santa Clara–Ojai–Santa Barbara Line on a north-facing hillside. (Photo 7). | 34.357222 -119.266301 | Likely red-tailed hawk* | N | NA | NA |
| Lattice tower M6-T2 | 1 | Middle north arm of lattice tower on the Goleta–Santa Clara # 1 Line, and adjacent to (approximately 65 feet northeast of M6-T2) lattice tower M6-T2 (Photo 8). | 34.350155 -119.263354 | Likely red-tailed hawk* | N | NA | NA |
| Approximately 0.28 mile northeast of structure 4453223E | 1 | Lattice tower on the Santa Clara–San Marcos Line, approximately 450 feet southwest from unnamed access road. (Photo 9). | 34.346635 -119.250681 | Likely red-tailed hawk | N | Y | Y |
| Lattice tower M8-T5 | 1 | In top quarter of Tower M8-T5, ~ 665 feet north of Cañada Larga Road. (Photo 10). | 34.348238 -119.276288 | Likely red-tailed hawk | N | Y | NA |
| Approximately 0.22 mile southwest of M8-T1 | 1 | Cavity in cliff wall along Cañada Larga Creek, and approximately 160 feet southeast of Cañada Larga Road (Photo 11). | 34.345864 -119.266531 | Likely great horned owl | Unknown – no access | Y | NA |

| Nearest Construct/Project Facility | Project Segment | Location | GPS Coordinates | Species | Active (Y/N/NA) at Time of Survey | | |
|---|---|---|---|---|---|---|---|
| | | | | | 2014 | 2013 | 2012 |
| Approximately 0.14 mile south of structure 4453245E | 2 | Tall cottonwood tree approximately 60 feet southwest of Edison Road. (Photo 12). | 34.365126 -119.346187 | Likely Cooper's hawk* | N | NA | NA |
| Approximately 0.12 mile northeast of structure 4453241E | 2 | Coast live oak tree on east margin of Casitas Vista Road, and approximately 25 feet north of the Santa Clara–Ojai–Santa Barbara Line. (Photo 13). | 34.366972 -119.329088 | Unknown. Nest platform overgrown with mistletoe.* | N | NA | NA |
| Approximately 0.24 mile southwest of structure 4093351E | 3A | West-facing top quarter of prominent eucalyptus tree near SR 150, approximately 0.4 mile southwest of the SR 150–SR 192 junction. (Photo 14) | 34.387962 -119.468474 | Likely red-tailed hawk | N | Y | NA |
| Approximately 0.24 mile northeast of structure 4479529E | 3A | Approximately 190 feet west of Lillingston Canyon Road in top quarter of second sycamore tree from the west in a group of six. (Photo 15). | 34.404843 -119.483687 | Likely red-shouldered hawk* | N | NA | NA |
| Approximately 0.23 mile south of structure 4479529E | 3A | Top quarter of tall eucalyptus tree on south shoulder of Casitas Pass Road. (Photo 16) | 34.390864 -119.475241 | Likely red-tailed hawk* | N | NA | NA |
| Approximately 0.25 mile south of structure M9-SP1 | Between 3A and 3B | In sycamore tree on northeast margin of Casitas Pass Road (SR 150) ~ 230 feet southwest of Gobernador Canyon Road. (Photo 17) | 34.395811 -119.454629 | Likely red-tailed hawk | N | Y | NA |
| Approximately 216 feet northeast of structure 4435044E | 3A | In crotch of top quarter of eucalyptus tree, Approximately 300 feet north of the SR 192–Shepard Mesa Road junction. (Photo 18) | 34.395543 -119.475624 | Likely red-tailed hawk | N | Y | NA |
| Construct M5-T4 | 3B | Top cross arm of Lattice Tower M5-T4. (Photo 19). | 34.377233 -119.402907 | Likely red-tailed hawk | N | N | N |
| Access road between Constructs 61 and 62 | 3B | Narrow eucalyptus tree, approximately 50 feet southeast of the access road from the Y to Anderson Canyon. (Photo 20). | 34.376787 -119.408013 | Likely red-tailed hawk | N | Y | Y |
| Construct M5-T3 | 3B | Lattice tower M5-T3, approximately 20 feet north of the access road from the Y to Anderson Canyon. (Photo 21). | 34.376898 -119.399962 | Likely red-tailed hawk | N | N | N |
| Lattice Tower M7-T6 | 3B | Top of Lattice Tower M7-T6. (**No photo – nest no longer exists**). | 34.38351 -119.439568 | Likely red-tailed hawk | N | N | N |
| Casitas Pass Road near Construct 95 | 4 | South-facing cliff wall cavity on Casitas Pass Road, approximately 300 feet southwest of Construct 95. (Photo 22). | 34.393251 -119.427587 | Likely great horned owl – active in 2011. | N | N | N |
| Construct M15-T3 | 4 | Top of Lattice Tower M15-T3. (Photo 23). | 34.388221 -119.409173 | Likely red-tailed hawk | N | Y | Y |
| Approximately 0.17 | 4 | Sycamore tree approximately 90 feet north | 34.384120 | Likely red-tailed hawk* | N | NA | NA |

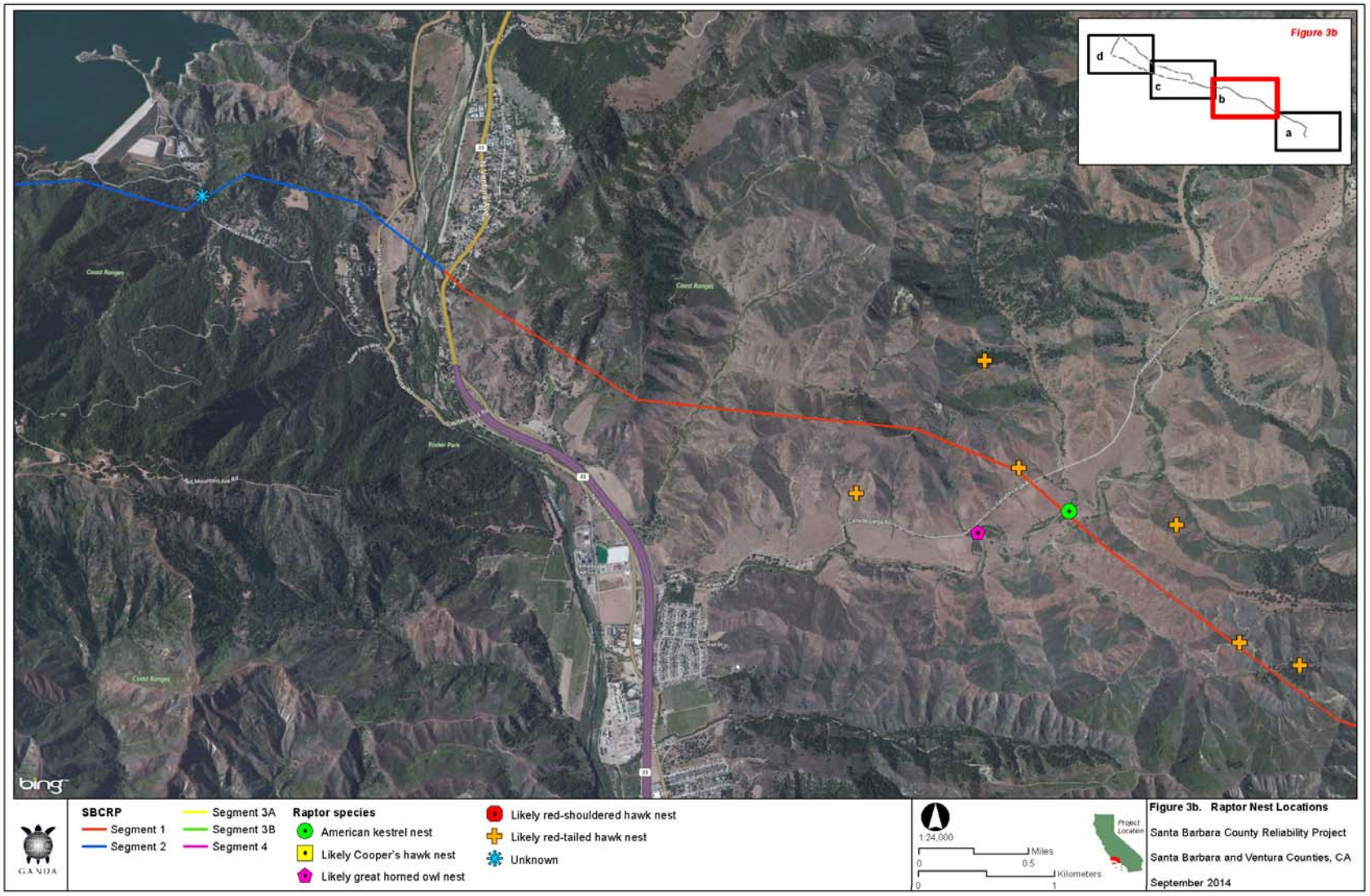
| Nearest Construct/Project Facility | Project Segment | Location | GPS Coordinates | Species | Active (Y/N/NA) at Time of Survey | | |
|---|---|---|---|---|---|---|---|
| | | | | | 2014 | 2013 | 2012 |
| mile southeast of construct 87 | | of SR 190. (Photo 24). | -119.397191 | | | | |
| Construct M4-T5 | 4 | Lattice Tower M4-T5; uppermost south arm. (Photo 25). | 34.385020<br>-119.387676 | Likely red-tailed hawk | N | N | N |
| Approximately 0.27 mile southwest of construct 108 | 4 | Pine tree. (**No photo – nest no longer exists**). | 34.409007<br>-119.470974 | Likely red-shouldered hawk | N | Y | NA |
| Access road t near construct M19-T6 | 4 | In eucalyptus tree in the canyon bottom approximately 0.2 mile southeast of construct M19-T6. (Photo 26). | 34.412587<br>-119.474852 | Likely red-tailed hawk;<br>Red-tailed hawk activity observed in vicinity* | N | NA | NA |

*Active/inactive status not indicated in BRC report.

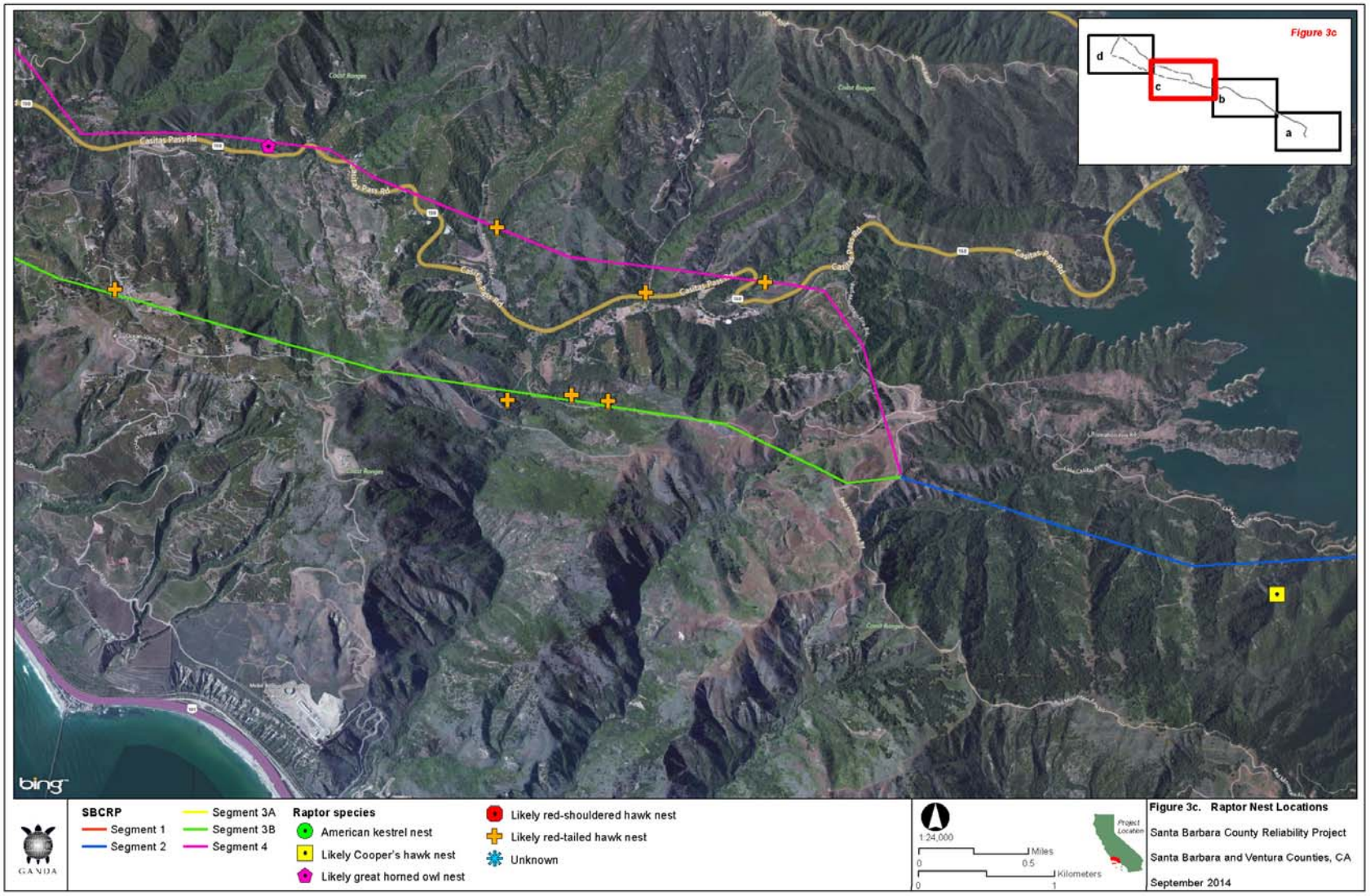
## Figure 3a. Raptor Nest Locations



## Figure 3b. Raptor Nest Locations



## Figure 3c. Raptor Nest Locations



## Figure 3d. Raptor Nest Locations

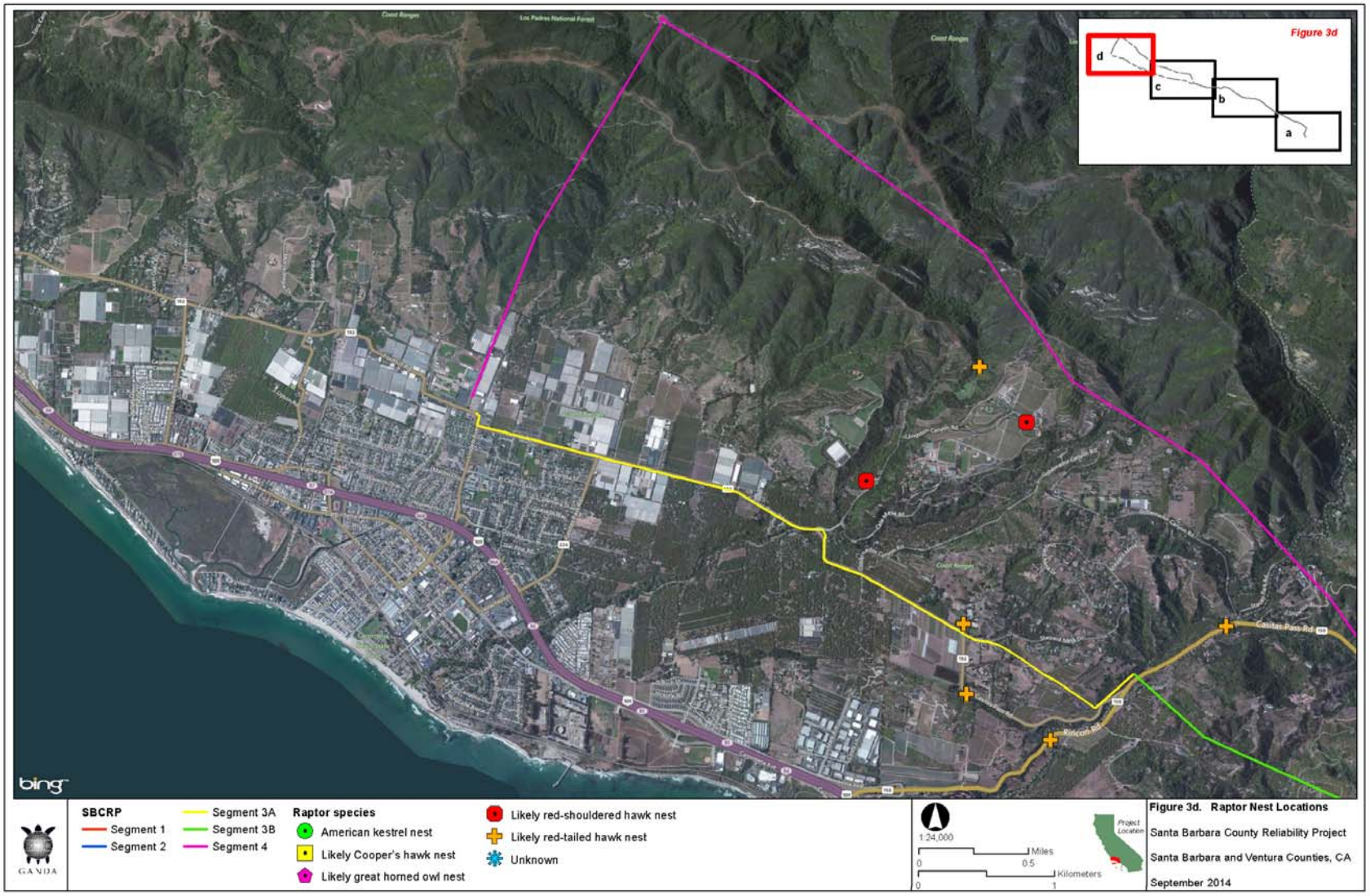
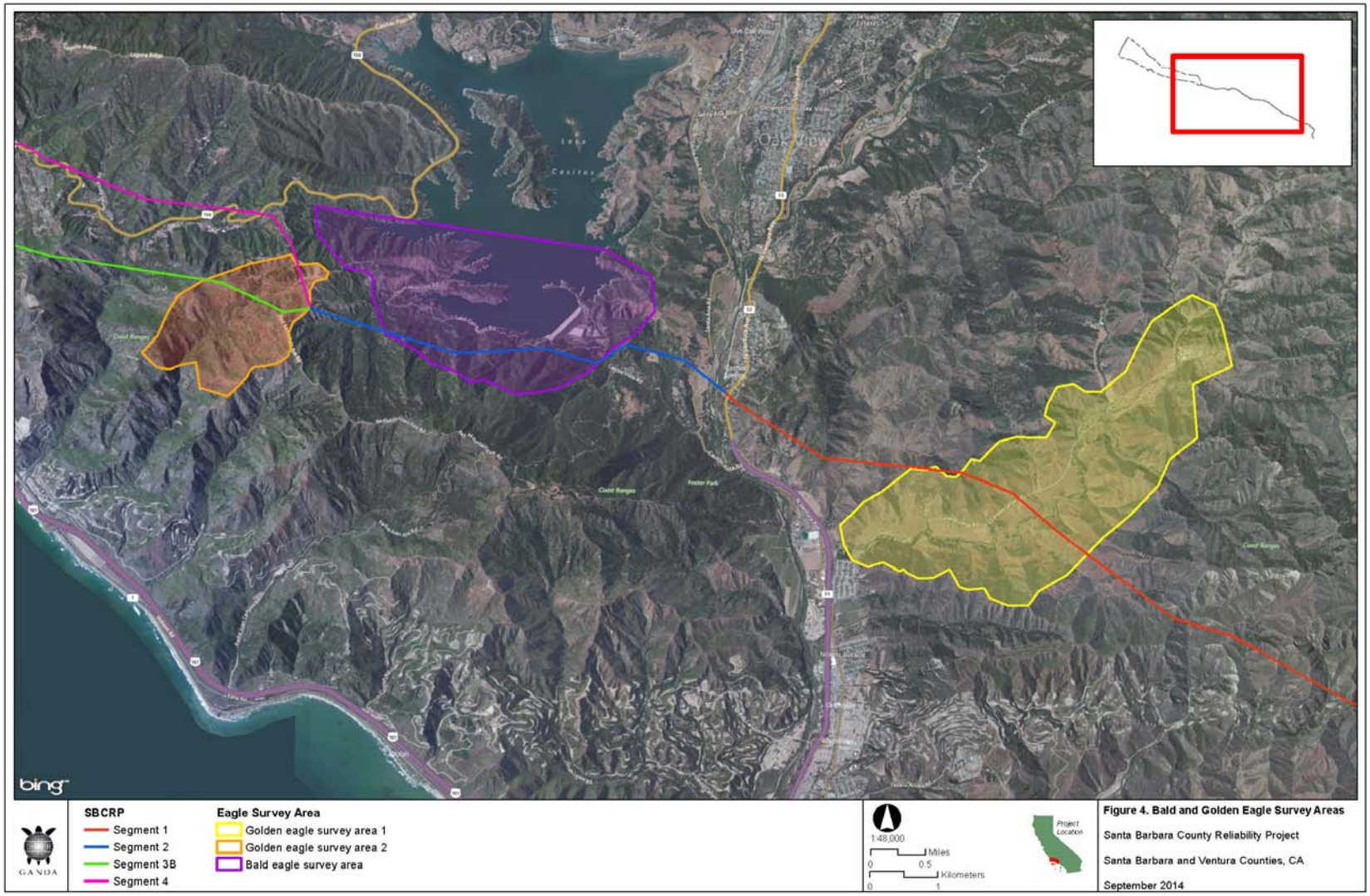
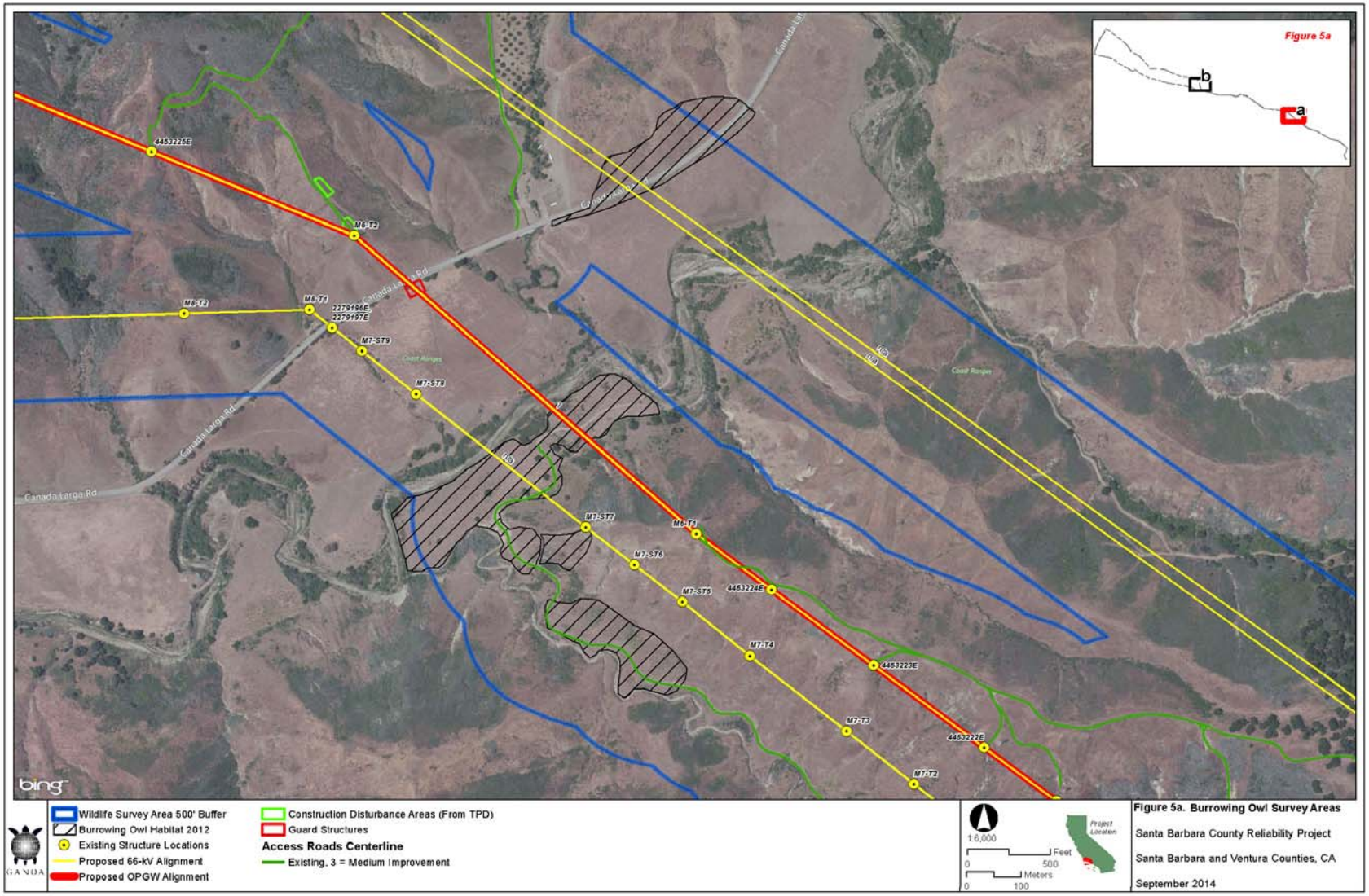


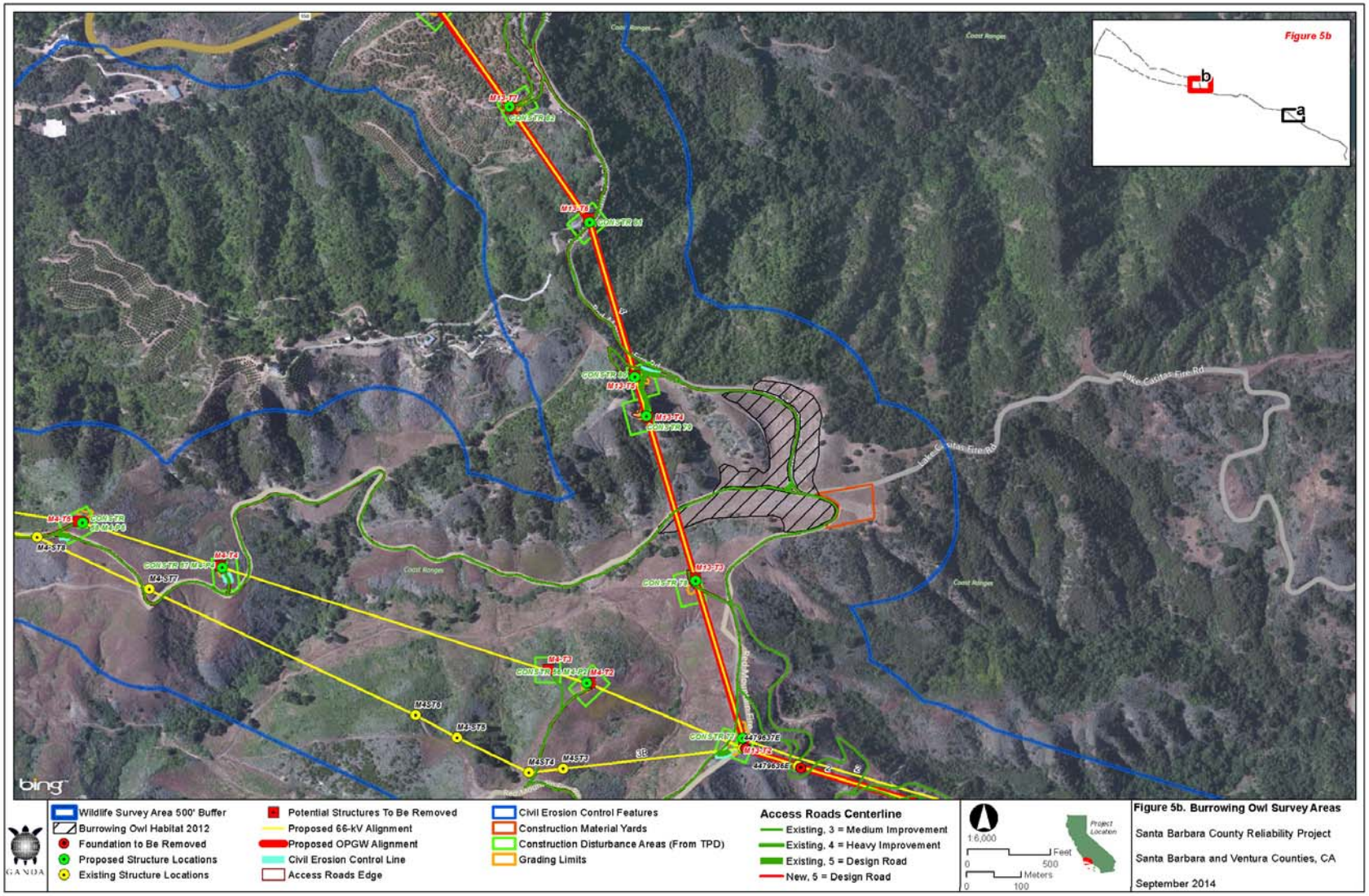
**Figure 4. Bald and Golden Eagle Survey Areas**



## Figure 5a. Burrowing Owl Survey Areas



## Figure 5b. Burrowing Owl Survey Areas



# 4. SUMMARY AND CONCLUSIONS

The SCE SBCRP was evaluated in 2014 to determine where breeding raptors occur along the Project Area and its vicinity. Those raptor species that could potentially breed within the vicinity of the Project were evaluated through various types of survey efforts. Six raptor species were observed within the Project Area during the surveys, including Cooper's hawk, red-tailed hawk, golden eagle, bald eagle, American kestrel and red-shouldered hawk. Eight species with special protection designations are documented to occur on or near the Project footprint (CDFW 2014).

BRC's 2013 survey (BRC 2013) reported an active bald eagle nest on the north side of Lake Casitas, just over 3.5 miles from the Segment 3B/4 Y and the Getty Tap area, but no other special-status species nests were confirmed during any of the survey periods.

Red-tailed hawks were the most common raptor species observed throughout the Project Area. No active red-tailed hawk nests were found in 2014; however, four juvenile red-tailed hawks were observed during the survey. Twenty of the 28 nests observed in 2014 were likely red-tailed hawk nests. All were inactive at the time of the survey. Seven active red-tailed hawk nests were documented in 2013 (BRC 2013), including three that were also active in 2012 (BRC 2012).

One likely great horned owl nest observed during previous surveys (BRC 2012, 2013) was inaccessible in 2014. One other likely great horned owl nest was examined closely in 2014. Both nests were in cavities in cliff walls, including one along Cañada Larga Creek in Segment 1 and one along Casitas Pass Road in Segment 4. These nests were last reported active in 2013 and 2011, respectively.

The lower number of active raptor nests in 2014 (one active nest during the survey) than during 2012 (two active nests) and 2013 (eight active nests) surveys could have been influenced by a third year of below-average precipitation. Nesting may have occurred earlier, or reduced survival during the multi-year drought could have reduced the number of nesting attempts and/or number of successful nests.

A known active bald eagle nest has been previously documented on the north bank of Lake Casitas, 3.5 miles from the Project Area (BRC, 2013). During the 2014 survey, the nest was found to be inactive. Bald eagles are known to occupy the same nest structure in more than one year if the surrounding areas remain viable as nesting habitat (i.e., silviculture, prey base, disturbance levels that remain at acceptable levels) (Jackman and Jenkins 2004). Hence, bald eagles are likely to nest at this location in future years if general habitat requirements are met. BRC (2013) observed that this nest was active with nestlings in 2013.

The fifth-year bald eagle that was observed near Lake Casitas dam during the 2014 survey was likely an intruder that was being chased out of the area by a mature bald eagle. This bald eagle may be in a period of exploration, as juvenile bald eagles have little apparent fidelity for any one area; movements are largely opportunistic and are related to heritable tendencies (i.e., a tendency to migrate), local food availability, and weather. These patterns can be repeated year after year, such that the same immature bald eagles may use the same areas in summer and winter, and as migratory stopover sites (Poole 2005). The presence of nesting bald eagles and juvenile bald

eagles at Lake Casitas indicates that the lake's prey base will likely continue to attract bald eagles.

An incidental sighting of a golden eagle by a botanist occurred on May 22, 2014 while conducting plant surveys in the Sexton Canyon area of Segment 1, just south of the Project transmission lines. The eagle was perched on a wooden distribution line pole, and subsequently soared overhead. There have been other golden eagle sightings in previous years along the SBCRP alignment, particularly in the Cañada Larga area and near SR 33. The Cañada Larga area contains the presence of a prey base, the proper components for nesting sites, including south-facing cliffs with nesting substrates such as transmission towers, evergreen and deciduous trees, and sheltered areas (valleys with little disturbance) (Poole 2005); however, the potential for golden eagles to nest in the area is highly unlikely as the habitat is limited and of marginal quality. No observations of dependent young golden eagles have been recorded, no nests have been observed during surveys and historical records indicate that the nearest golden eagle nesting occurrence is 18 miles south of the SBCRP.

A habitat assessment for burrowing owls conducted in 2014 in Segments 1 (other than the Getty Tap area), 2, and 3A indicated no suitable nesting habitat in those areas. This assessment supplemented data collected during assessments and protocol surveys conducted in previous years by BRC (2014). As such, no breeding areas or breeding season observations have been documented for this species in the Project Area.

In the vicinity of the Project Area, burrowing owls are predominantly known to be rare transients and winter visitors most frequently found in agricultural and grassland areas near the coast. The occurrence of burrowing owl in the region has notably decreased, as have the number of actively used breeding sites. A search of the eBird website shows 16 records of burrowing owl in the Cañada Larga area near Segment 1 and the Getty Tap between 2006 and 2010, and during the winter of 2013-2014, all during the months of December to February (Cornell 2014). Burrowing owls recorded at the Cañada Larga area are believed to be winter visitors.

# 5. LITERATURE CITED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# APPENDIX A

# NEST PHOTOS

**Photo 1. Inactive stick nest (likely Cooper's hawk) in sycamore tree ~ 100' east of Sexton Canyon Road (2014).**

**Photo 2. Inactive nest (likely red-tailed hawk) on lattice tower M4-T3 (Santa Clara–Getty Line) (2014).**

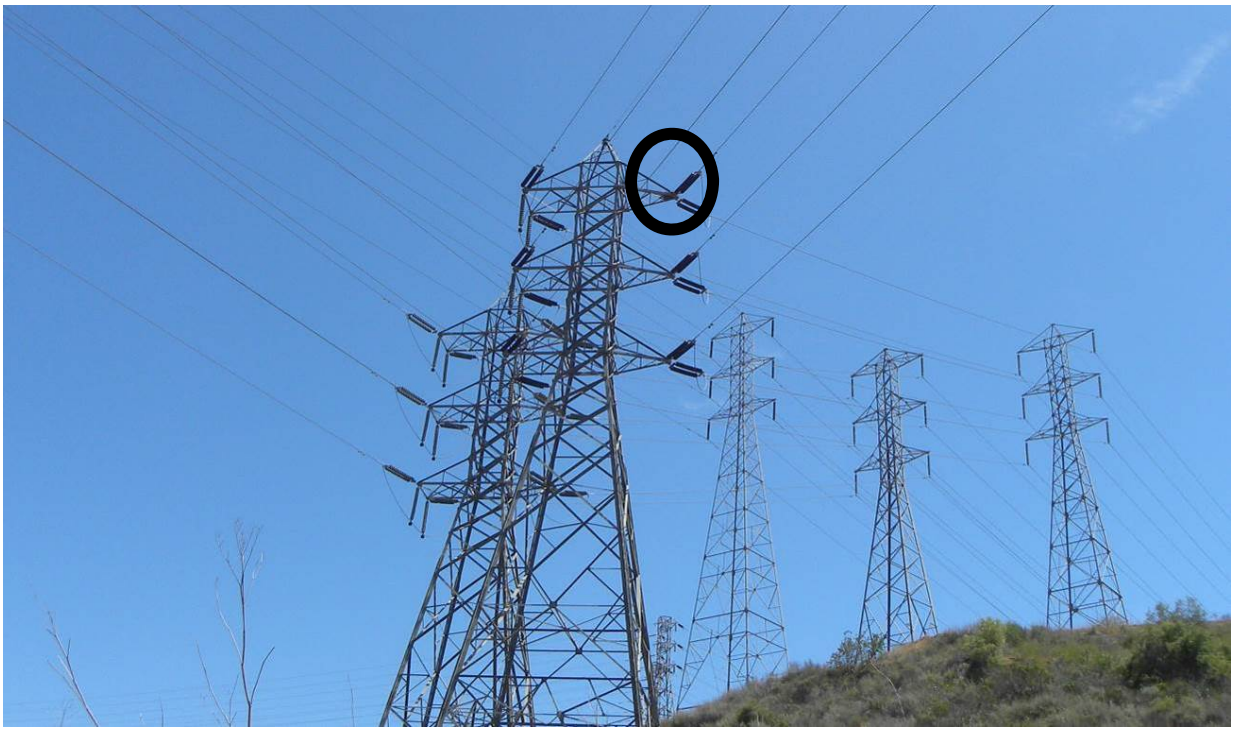

**Photo 3. Stick nest (likely red-tailed hawk) in lattice tower ~ 150' south of Long Canyon Road (2014).**

**Photo 4. American kestrel cavity nest in sycamore tree ~ 200' northwest of Manuel Canyon Road (2014).**

**Photo 5. Unmaintained stick nest (likely red-tailed hawk) in oak ~ 75' south of access road (2014).**

**Photo 6. Stick nest (likely red-tailed hawk) in lattice tower ~ 100' northeast of Construct 147 (2014).**

**Photo 7. Stick nest (likely red-tailed hawk) in oak tree between Cañada de Alisos and Santa Clara–Ojai–Santa Barbara lines (2014).**

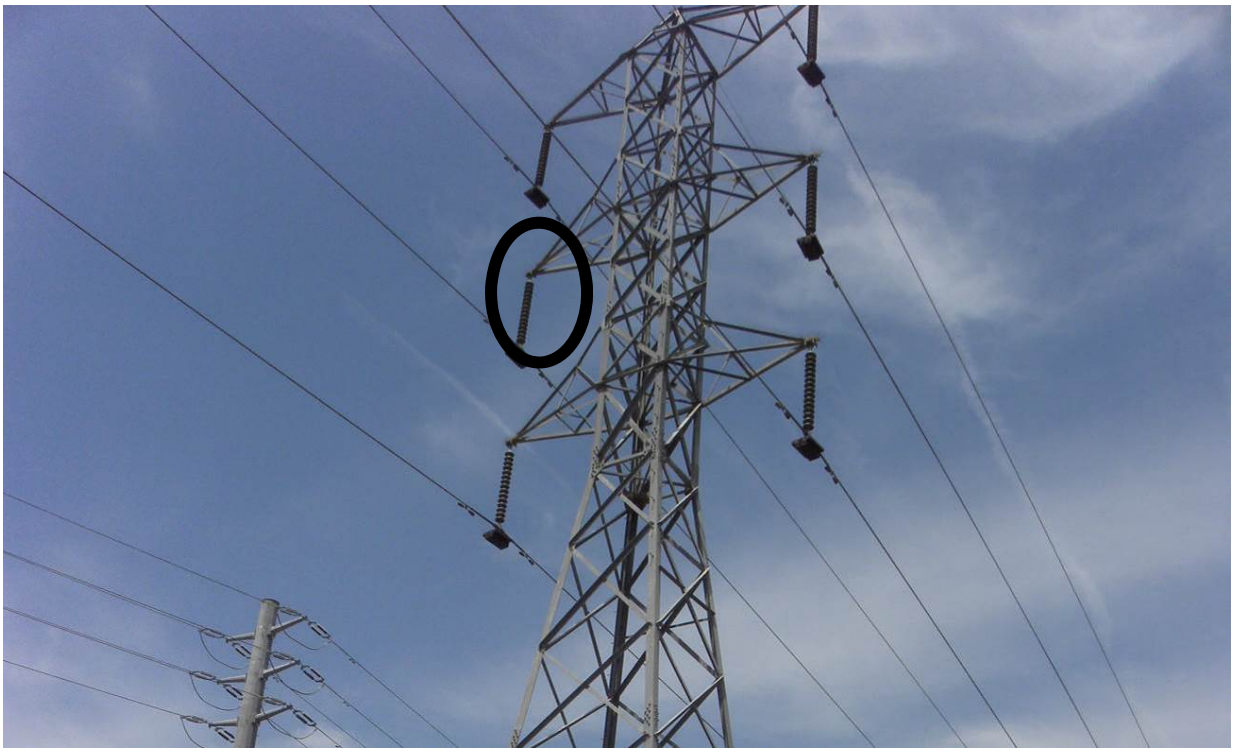

**Photo 8. Stick nest (likely red-tailed hawk) in lattice tower on the Goleta–Santa Clara # 1 line (2014).**

**Photo 9. Inactive (likely red-tailed hawk) nest in lattice tower on the Santa Clara–San Marcos Line, ~ 450' southwest from access road.**

**Photo 10. Inactive (likely red-tailed hawk) nest in lattice tower (**Tower M8-T5) **~ 665' north of Cañada Larga Road (2014).**

**Photo 11. Likely great horned owl nest in cavity of cliff wall along Cañada Larga Creek (photo from 2013 BRC raptor report; nest not accessible in 2014).**

**Photo 12. Stick nest (likely Cooper's hawk) in cottonwood tree ~ 60' from Edison Road (2014).**

**Photo 13. Unmaintained stick nest in oak tree on margin of Casitas Vista Road (2014).**

**Photo 14. Inactive (likely red-tailed hawk) nest in prominent eucalyptus tree near SR-150 (2014).**

**Photo 15. Inactive stick nest (likely red-shouldered hawk) in sycamore tree ~ 190' west of Lillingston Canyon Road (2014).**

**Photo 16. Inactive (likely red-tailed hawk) nest on the south shoulder of Casitas Pass Road (2014).**

**Photo 17. Inactive nest (likely red-tailed hawk) in sycamore tree on SR 150 ~ 230' southwest of Gobernader Canyon Road (2014).**

**Photo 18. Inactive (likely red-tailed hawk) nest in eucalyptus tree ~ 300' north of SR 192 (2014).**

**Photo 19. Inactive stick nest (likely red-tailed hawk) in Lattice Tower M5-T4 (2014).**

**Photo 20. Inactive (likely red-tailed hawk) nest in narrow eucalyptus tree approximately 50 feet southeast of the access road from the Y to Anderson Canyon (2014).**

**Photo 21. Inactive (likely red-tailed hawk) nest in Lattice Tower M5-T3 (2014).**

**Photo 22. Inactive likely great horned owl nest in cliff cavity ~ 300' south of Construct 95 (2014).**

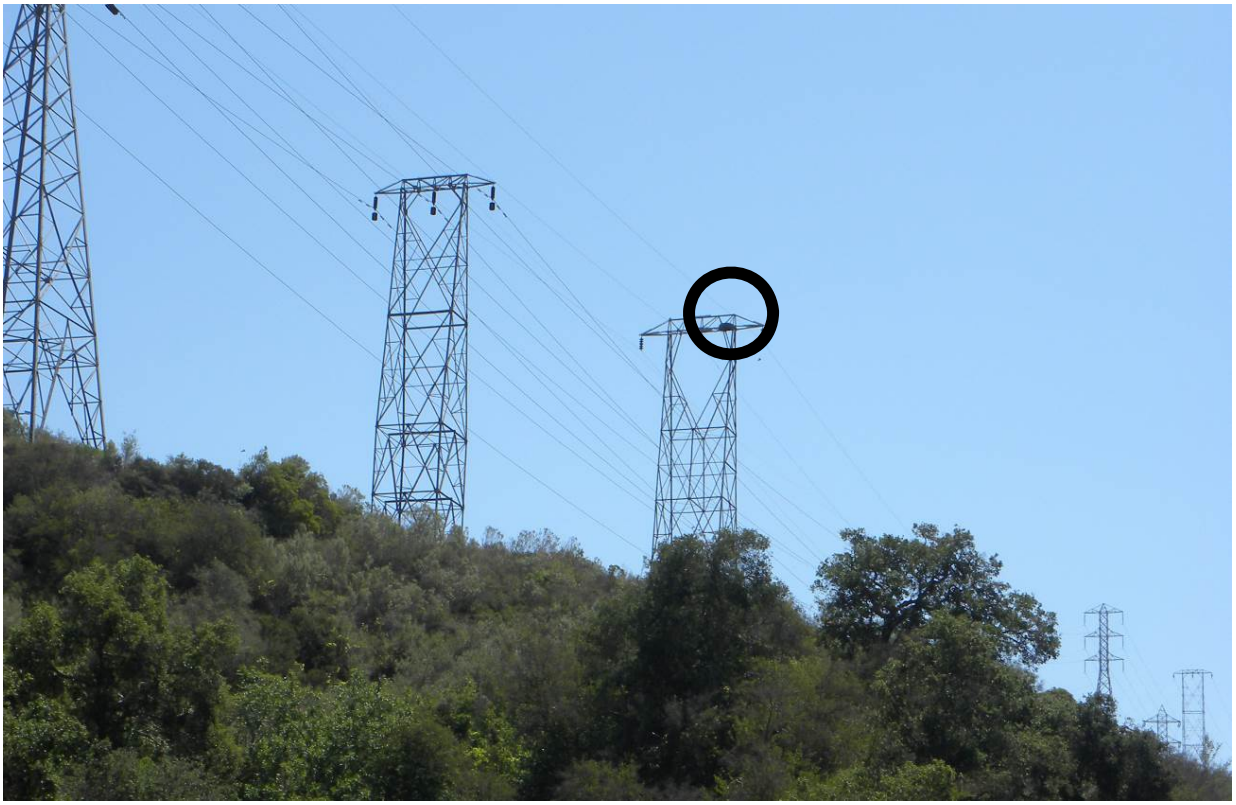

**Photo 23. Inactive stick nest (likely red-tailed hawk) in Lattice Tower M15-T3 (2014).**

**Photo 24. Inactive stick nest (likely red-tailed hawk) in sycamore tree ~ 90' north of SR 190 (2014).**

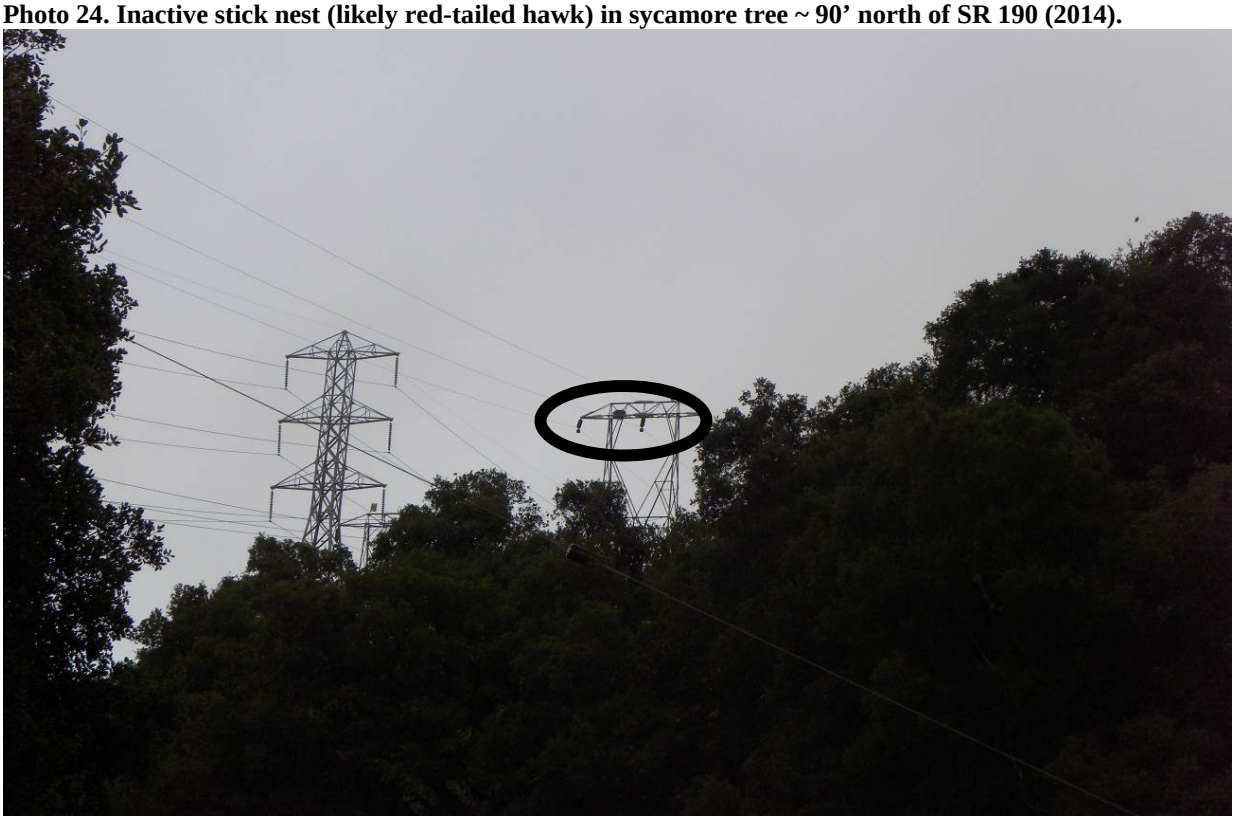

**Photo 25. Stick nest (likely red-tailed hawk) in Lattice Tower M4-T5 (2014).**

**Photo 26. Inactive stick nest (likely red-tailed hawk) in eucalyptus tree ~ 250' east of the Pinkham-Vedder property boundary (2014).**

# APPENDIX B

# 2012-2014 Burrowing Owl Surveys (BRC 2014)

# FEBRUARY 2012 - JANUARY 2014 BURROWING OWL SURVEYS

# SANTA BARBARA COUNTY RELIABILITY PROJECT VENTURA AND SANTA BARBARA COUNTIES, CALIFORNIA

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# 1.0 INTRODUCTION

This report presents the results of the 2012 and 2013 breeding seasons and the 2012-2013 and 2013-2014 non-breeding season surveys for burrowing owl (*Athene cunicularia*) within suitable habitat in Segments 3B and 4, and the Getty Tap portion of Segment 1 of the Santa Barbara County Reliability Project, and identifies potential impacts to burrowing owl that may result from implementation and construction of the Project.

## 1.1 Project Description

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

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

The Project includes the following physical elements:

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

and at Carpinteria Substation, Casitas Substation, Santa Clara Substation, and Ventura Substation[1].

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

## 1.2 Environmental Setting

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

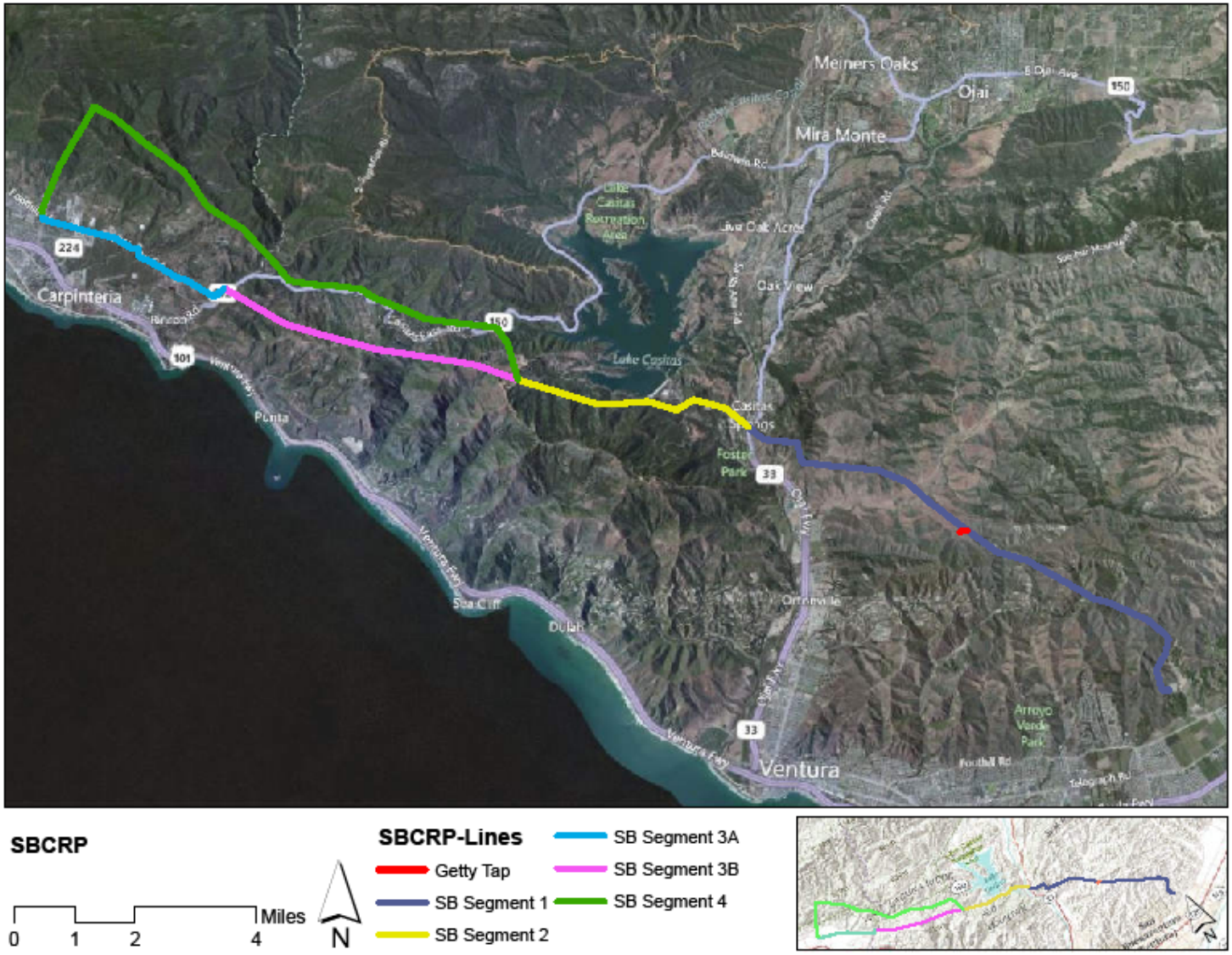
The Project crosses the headwaters of multiple small streams and creeks that flow through agricultural and urban areas before reaching the ocean, and is located in lower gradient reaches of the Santa Clara River and Ventura River watersheds, including Cañada Larga, which is tributary to the Ventura River.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

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

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

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

**Figure 1. Santa Barbara County Reliability Project Location**



### 1.3 Regulatory Setting

Burrowing owls are protected under various federal and state laws and regulations protecting raptors that include: the Migratory Bird Treaty Act of 1918 (MBTA), and California Fish and Game Code (CFGC). Take of individual burrowing owls and their nests is defined by the MBTA 16 U.S.C. § 703 as, "pursue, hunt, take, capture or kill; attempt to take, capture or kill", and by CFGC section 86 as, "hunt, pursue, catch, capture or kill, or attempt to hunt, pursue, catch, capture or kill." U.S.C. § 704 of the MBTA and sections 3503, 3503.5 and 3513 of the CFGC further detail prohibited acts and protections of migratory birds.

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

## 2.0 NATURAL HISTORY OF BURROWING OWL

The burrowing owl is a small, long-legged, ground-dwelling bird species, well-adapted to open, relatively flat expanses. In California, preferred habitat is generally typified by short, sparse vegetation with few shrubs, level to gentle topography and well-drained soils (Haug et al. 1993). Grassland, shrub steppe, and desert are naturally occurring habitat types used by the species. In addition, burrowing owls may occur in some agricultural areas, ruderal grassy fields, vacant lots and pastures if the vegetation structure is suitable and there are useable burrows and foraging habitat in proximity.

Burrowing owls nest in small mammal burrows, most frequently in the burrows of California ground squirrels (*Spermophilus beecheyi*). Although primarily crepuscular in their foraging habits, burrowing owls will hunt for insects and small vertabrates during both day and night. Their breeding season begins in March and extends through August. The peak of the breeding season occurs between 15 April and 15 July and is the period when most burrowing owls have active nests (eggs or young). Average clutch size is five or six eggs and they rarely produce a second brood. Where site conditions are optimal, burrowing owls sometimes form loose colonies which is unusual for avian predators (Haug et al. 1993).

Burrowing owls are summer residents in the western half of the United States and year-round residents in the southwestern portion of the U.S. and northern and central Mexico. In California, they inhabit the lowlands of the Central Valley and the desert environments of the southeastern

part of the state. Although burrowing owls still exist in most portions of their historic range, their population densities have declined due to habitat loss, degradation, and fragmentation.

# 3.0 METHODOLOGY

## 3.1 Literature and Database Review

To assess the known occurrence and distribution of burrowing owl in the vicinity of the Project area, standard database searches were conducted and previous surveys in the area were reviewed. Information about documented burrowing owl locations in the region was obtained from the California Natural Diversity Database (CNDDB; CDFG 2003), and the eBird database run by the Cornell Lab of Ornithology and National Audubon Society (eBird 2012).

The CNDDB was queried for historical records of burrowing owl occurences within 10 miles of the Project alignment and the search included the following U.S. Geological Survey (USGS) 7.5-minute quadrangles: Carpinteria, Matilija, Pitas Point, Saticoy, Ventura, and White Ledge Peak as well as the eleven surrounding quadrangles: Camarillo, Hildreth Peak, Lion Canyon, Little Pine Mountain, Ojai, Old Man Mountain, Oxnard, Santa Paula, Santa Paula Peak, Santa Barbara, and Wheeler Springs. The eBird website was also queried for recent records of burrowing owl occurences within 10 miles of the Project alignment in the past 10 years.

There are no CNDDB or eBird records of burrowing owl nesting within 10 miles of the project alignment (Figure 2). All eBird and CNDDB occurrences of burrowing owl within this area are for winter sightings.

Thirty-five individual occurrences are recorded for 16 different point locations by eBird between January 2004 and January 2014, including 13 individual winter occurrences listed for the eBird point along Cañada Larga Road west of the Getty Tap portion of Segment 1 (eBird 2012). Four occurrence polygons were recorded by CNDDB during this same 10-year period. These include Occurrence #443 near McGrath Lake, and Occurences 1273, 1274, and 1275 near Camarillo Airport (CDFG 2003).

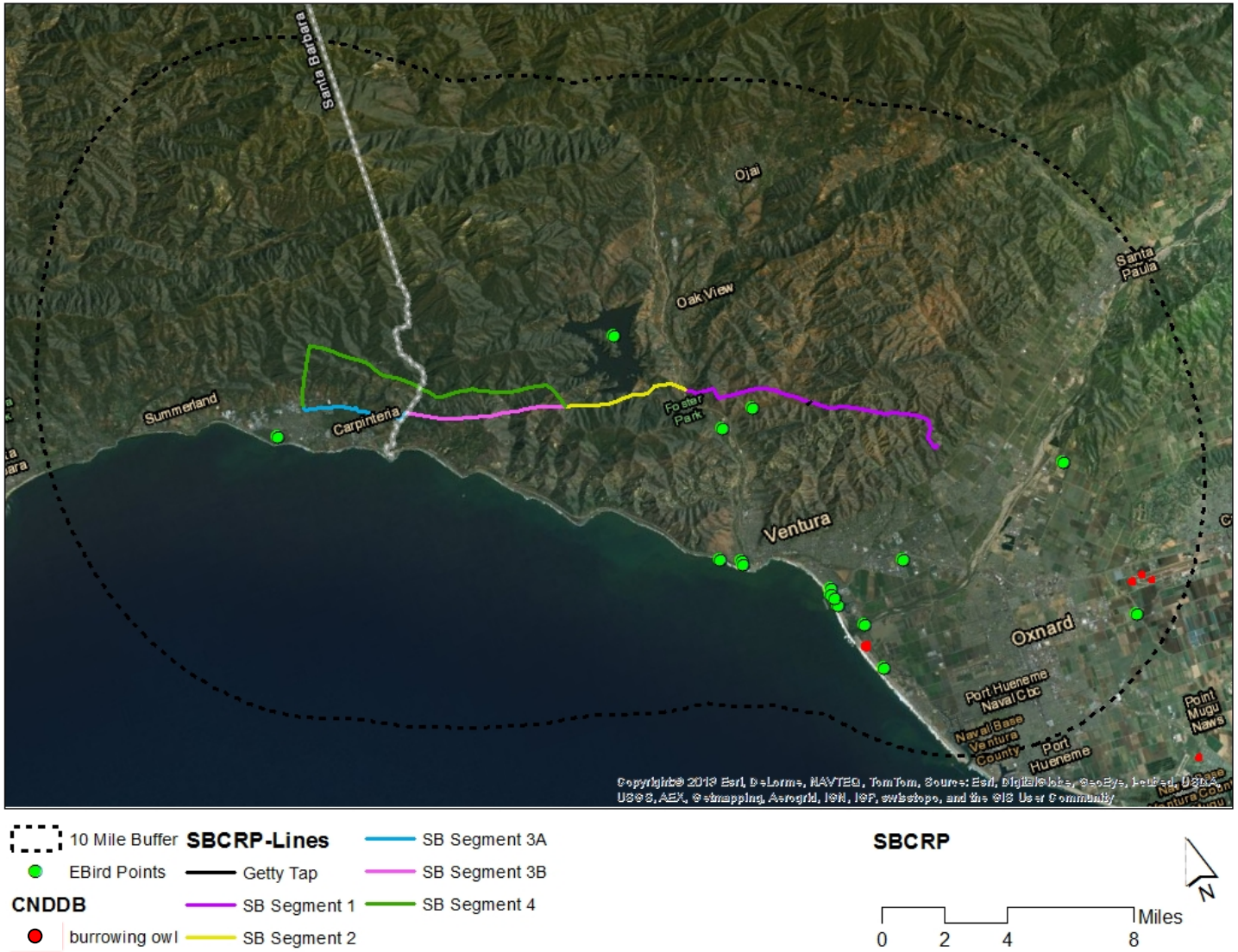
Additional literature and databases referenced include: *The Sibley Field Guide to Birds of Western North America* (Sibley 2003); and *California Wildlife Habitat Relationships* software (CDFG 2005).

## 3.2 Survey Protocol and Methods

Habitat assessments and surveys for the burrowing owl within the Project area adhered to the protocol outlined in the *California Department of Fish and Game Staff Report on Burrowing Owl Mitigation* (2012b).

A habitat assessment for burrowing owl was conducted during the biological reconnaissance survey for segments 3B, 4, and the Getty Tap portion of segment 1 in February and March 2012. The habitat assessment was conducted by walking the Project area and an approximate 500-foot buffer, to visually inspect the area and assess its potential for burrowing owls. These surveys included searching for and identifying habitat features that may attract and/or support burrowing owls.

**Figure 2. Documented Occurrence of Burrowing Owl Within 10 Miles of the Project Vicinity 2004-2014. All occurences are documented during the Non-Breeding Season.**



Suitable habitat for burrowing owl was identified in two areas within the Project: Location 1 - Cañada Larga area near the Getty Tap portion of Segment 1; and Location 2 - near the Segment 3B/4 split. A follow-up habitat assessment for burrowing owl was conducted within the Project area and an approximate 500-foot buffer on April 24 and 25, 2012 to determine the suitability of the area for burrowing owl, and the extent of suitable habitat in Locations 1 and 2 respectively.

Because suitable habitat for burrowing owl was determined to be present at Locations 1 and 2, focused breeding season (March 1 - August 31) surveys were conducted in the spring/summer of 2012 and 2013, and focused non-breeding season (September 1 – January 31) surveys were conducted in the fall/winter of 2012-2013 and 2013-2014. During each survey season, four survey visits occurred to look for burrowing owls or their sign (tracks, molted feathers, cast pellets, prey remains, egg shell fragments, owl white wash, nest burrow decoration materials). During each visit, line transects were walked in all areas with suitable habitat and an approximate 500-foot buffer. Transects were spaced less than 20 meters apart, and the area was scanned regularly with binoculars, at least every 100 meters. Surveys were conducted in the morning hours between civil twilight and 10:00 AM, or within 2 hours of sunset, and did not occur during periods of high wind (>20 km/hr), precipitation, or dense fog.

# 4.0 RESULTS

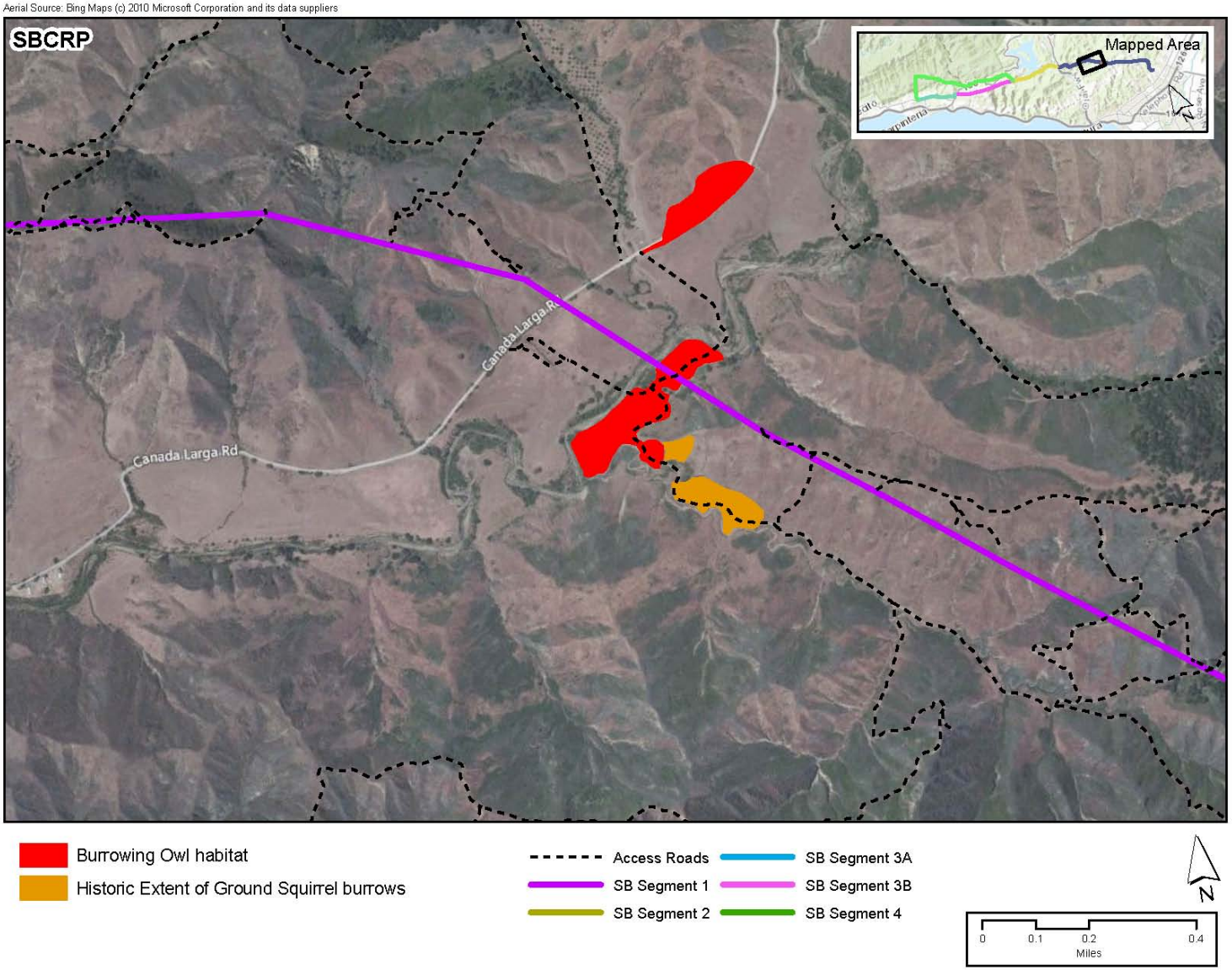
## 4.1 Location 1 - Getty Tap area of Segment 1

### *Habitat*

Potential burrowing owl habitat in the Getty Tap area of Segment 1 consists of approximately 17 acres within two disjunct areas that provide requisite burrows created by California ground squirrel (Figure 3). The first area is a thin band (~15 feet wide) of burrows that is located along the south side of Cañada Larga Road and on the slopes just north of Cañada Larga Road. The second area is a larger polygon within the floodplain on the south side of Cañada Larga Creek near the Seca Canyon Road, beneath and west of the Project alignment, and northwest of the Getty Tap (Appendix A, Photos 1, 2 and 3). The southern-most portion of this area extends into a smaller valley. This area may have a steeper slope than areas more commonly used by burrowing owl, but the remaining constituents of habitat (ground-squirrel burrows, short grasses, etc.) are present (Photos 4 and 5). Farther up the canyon there is evidence of historic ground-squirrel activity (roughly 9 acres), however, without active construction and maintenance by the squirrels, burrows in this area have collapsed due to cattle trampling and or weathering of the softer soils (Figure 3).

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

**Figure 3. Suitable Burrowing Owl Habitat in Location 1 (the Getty Tap Area of Segment 1).**



Beginning in the winter of 2012-2013, shipments of rotting fruits and vegetables, including red pepper, tomato, cilantro, parsley, and mangos, were periodically brought in and scattered in the field, presumably for cattle fodder (Photos 6 and 7).

***Survey Results***

**2012 Breeding Season Survey (15 February to 15 July)**

Due to limitations in gaining property owner permission to access the area, and the abatement schedule dictating when SCE would prepare and submit its application and Proponents Environmental Assessment (PEA) to the California Public Utilities Commission (CPUC), methods detailed in the *California Department of Fish and Game Staff Report on Burrowing Owl Mitigation* were adhered to as practicable, but the recommended date of the first survey (between February 15 and April 15), and recommended spacing between survey visits (at least three weeks apart) were not fully met. Four transect survey visits occurred on April 24, May 15 and 29, and June 15, 2012 in suitable burrowing owl habitat near the access to the Getty Tap area of Segment 1 (Table 1). No owls or their sign were detected during any of the site visits.

**Table 1: 2012 Breeding Season Survey Timing, Weather Conditions, and Observations at Location 1.**

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

Wildlife observed during the surveys includes: California ground squirrel, wild boar (*Sus scrofa*), western scrub-jay (*Aphelocoma californica*), red-tailed hawk (*Buteo jamaicensis*), California quail (*Callipepla californica*), lesser goldfinch (*Carduelis psaltria*), house finch (*Carpodacus mexicanus*), turkey vulture (*Cathartes aura*), killdeer (*Charadrius vociferus*), northern flicker (*Colaptes aura*), Brewer's blackbird (*Euphagus cyanocephalus*), American kestrel (*Falco sparverius*), greater roadrunner (*Geococcyx californianus*), acorn woodpecker (*Melanerpes formicivorus*), song sparrow (*Melospiza melodia*), California towhee (*Melozone crissalis*), northern mockingbird (*Mimus polyglottos*), ash-throated flycatcher (*Myiarchus cinerascens*), band-tailed pigeon (*Patagionas fasciata*), phainopepla (*Phainopepla nitens*), bank swallow (*Riparia riparia*), western meadowlark (*Sturnella neglecta*), European starling (*Sturnus vulgaris*), violet-green swallow (*Tachycineta thalassina*), western kingbird (*Tyrannus verticalis*), and mourning dove (*Zenaida macroura*).

## 2012-2013 Non-Breeding Season Survey (1 September to 31 January)

Four transect survey visits occurred on October 31, November 15, and December 20, 2012, and January 21, 2013 in suitable burrowing owl habitat near the access to the Getty Tap area of Segment 1 (Table 2). Surveys were conducted in accordance with the 2012 CDFG Staff Report. No owls or sign were detected during any of the site visits.

**Table 2. 2012-2013 Non-Breeding Season Survey Timing, Weather Conditions, and Observations at Location 1.**

| Survey Date/Time | Weather | Surveyor(s) | Results |
|---|---|---|---|
| 10/31/2012<br>0630-0745 | Sunny, clear, calm, 50-54° | C. Schade | No owls or owl sign observed |
| 11/15/2012<br>0927-1032 | Overcast, calm, 55-60° | C. Schade<br>L. Gonzales | No owls or owl sign observed |
| 12/20/2012<br>1504-1553 | Sunny, clear, light wind, 57° | C. Schade | No owls or owl sign observed |
| 1/21/2013<br>0805-0927 | Sunny, clear, calm, 57-62° | C. Schade<br>J. Fields | No owls or owl sign observed |

Wildlife observed during the surveys includes: California ground squirrel, desert cottontail (*Sylvilagus audubonii*), wild boar, black phoebe (*Sayornis nigricans*), western bluebird (*Sialia mexicana*), northern shrike (*Lanius excubitor*), common raven (*Corvus corax*), great horned owl (*Bubo virginianus*), western scrub-jay, red-tailed hawk, California quail, lesser goldfinch, house finch, turkey vulture, killdeer, American kestrel, greater roadrunner, acorn woodpecker, song sparrow, California towhee, northern mockingbird, western meadowlark, European starling, violet-green swallow, western kingbird, and mourning dove. At the entrances of several ground squirrel burrows, scratch marks consistant with American badger (*Taxidea taxus*) were found (Photo 8).

## 2013 Breeding Season Survey (15 February to 15 July)

Four transect survey visits occurred on March 19, April 24, May 31, and June 25, 2013 in suitable burrowing owl habitat near the access to the Getty Tap area of Segment 1 (Table 3). Surveys were conducted in accordance with the 2012 CDFG Staff Report. No owls or sign were detected during any of the site visits.

Wildlife observed during the surveys includes: California ground squirrel, desert cottontail, wild boar, Cooper's hawk (*Accipiter cooperii*), black phoebe, western bluebird, northern shrike, common raven, mourning dove, great-horned owl, western scrub-jay, red-tailed hawk, California quail, lesser goldfinch, house finch, turkey vulture, killdeer, American kestrel, greater roadrunner, acorn woodpecker, song sparrow, ash-throated flycatcher, band-tailed pigeon, phainopepla, California towhee, northern mockingbird, western meadowlark, European starling, violet-green swallow, western kingbird, and mourning dove.

**Table 3. 2013 Breeding Season Survey Timing, Weather Conditions, and Observations at Location 1.**

| Survey Date/Time | Weather | Surveyor(s) | Results |
|---|---|---|---|
| 3/19/2013 0735-0913 | Clear, calm, 49-51° | C. Schade | No owls or owl sign observed |
| 4/24/2013 1000-1100 | Overcast, light drizzle/mist, calm, 59-60° | C. Schade | No owls or owl sign observed |
| 5/31/2013 0815-0945 | Partly cloudy, calm, 63-65° | C. Schade, A. Gregory, A. Bruno, J. Turner | No owls or owl sign observed |
| 6/25/2013 0630-0845 | Clear, calm, 64-67° | C. Schade | No owls or owl sign observed |

**2013-2014 Non-Breeding Season Survey (1 September to 31 January)**

Four transect survey visits occurred on September 5, October 17, and December 11, 2013, and January 22 and 23, 2014 in suitable burrowing owl habitat near the access to the Getty Tap area of Segment 1 (Table 4). Surveys were conducted in accordance with the 2012 CDFG Staff Report. No owls or sign were detected during any of the site visits.

**Table 4. 2013-2014 Non-Breeding Season Survey Timing, Weather Conditions, and Observations at Location 1.**

| Survey Date/Time | Weather | Surveyor(s) | Results |
|---|---|---|---|
| 9/5/2013 0700-0815 | Sunny, clear, calm, 67-71° | C. Schade | No owls or owl sign observed |
| 10/17/2013 0747-939 | Sunny, clear, calm, 65-68° | C. Schade | No owls or owl sign observed |
| 12/11/2013 0736-0915 | Sunny, clear, calm, 32-38° | C. Schade | No owls or owl sign observed |
| 1/22/2014 0611-0728<br>1/23/2014 0713-0906 | Portion along Cañada Larga Road Sunny, clear, calm, 38-46°<br>Portion south of Cañada Larga Creek Sunny, clear, calm, 41-52° | C. Schade | No owls or owl sign observed |

Wildlife observed during the surveys includes: California ground squirrel, desert cottontail, wild boar, coyote (*Canis latrans*), black phoebe, western bluebird, common raven, American robin (*Turdus migratorius*), western scrub-jay, red-tailed hawk, California quail, lesser goldfinch, house finch, turkey vulture, killdeer, American kestrel, greater roadrunner, acorn woodpecker,

song sparrow, California towhee, northern mockingbird, European starling, western kingbird, and mourning dove.

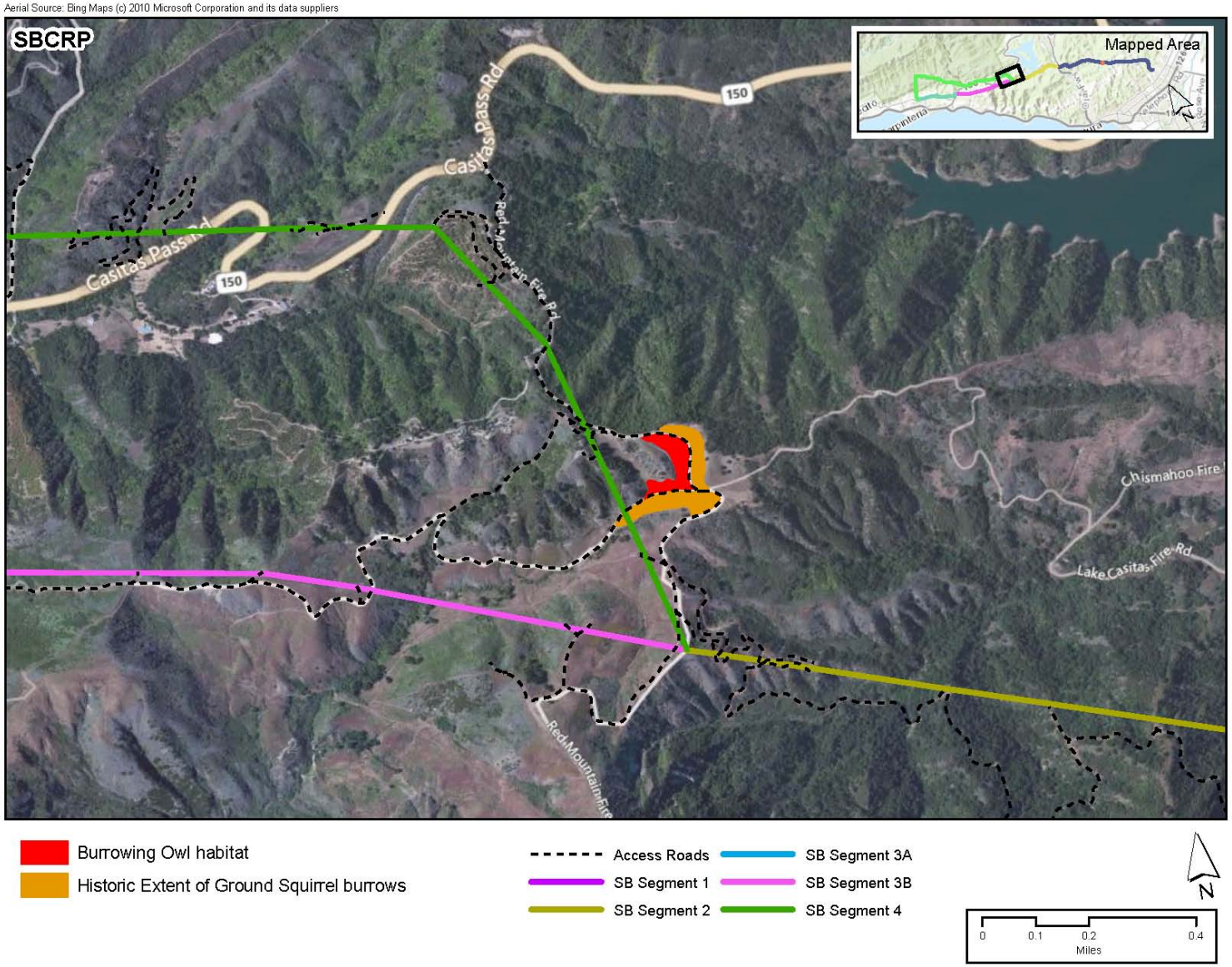
## 4.2 Location 2 - Segment 3B/4 Split

### *Habitat*

Potential burrowing owl habitat in the area of the Segment 3B/4 split consists of a contiguous 3-acre area along the Project access road that provides requisite burrows created by California ground squirrel (Figure 4). An adjacent 5-acre area extending to the east and south shows evidence of historic ground-squirrel activity, however, without active construction and maintenance by the squirrels, burrows in this area have collapsed due to cattle trampling and/or weathering of the softer soils, and from the use of ground disturbing equipment by the landowner.

This burrow habitat is located within a rural area characterized by gentle topography and well-drained soils (Photos 9 to 12). Vegetation in the area is a California Annual Grassland community dominated by a mix of native and non-native annual grasses and herbs, with non-native species such as black mustard, tocalote, and thistle. Vegetation throughout the area is kept short by cattle grazing and ground squirrel activity, and areas adjacent to the burrow complexes would provide suitable foraging habitat for burrowing owl. A cattle tank provides water year-round in the immediate area. Fence-posts and other substrate provide perching opportunities throughout the area. The area was mechanically raked or mowed in the fall of 2012, removing all vegetative cover but not collapsing or filling in ground squirrel burrows (Photo 13). Vegetation grew back by December 2012 following several rain events.

**Figure 4. Suitable Burrowing Owl Habitat in Location 2 (Segment 3B/4 Split).**



***Survey Results***

**2012 Breeding Season Survey (15 February to 15 July)**

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

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

**Table 5: 2012 Breeding Season Survey Timing, Weather Conditions, and Observations at Location 2.**

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

**2012-2013 Non-Breeding Season Survey (1 September to 31 January)**

Four transect survey visits occurred on October 30 and December 12, 2012, and January 8 and 31, 2013 in suitable burrowing owl habitat in the area of the Segment 3B/4 split (Table 6). Surveys were conducted in accordance with the 2012 CDFG Staff Report. No owls or sign were detected during any of the site visits.

Wildlife observed during the surveys includes: coyote, red-tailed hawk, black phoebe, song sparrow, western kingbird, California quail, turkey vulture, killdeer, California towhee, western bluebird, greater roadrunner, western meadowlark, northern mockingbird, and mourning dove.

**Table 6: 2012-2013 Non-breeding Season Survey Timing, Weather Conditions, and Observations at Location 2.**

| Survey Date/Time | Weather | Surveyor(s) | Results |
|---|---|---|---|
| 10/30/2012 0817-0912 | Sunny, clear, calm, 57-59° | C. Schade | No owls or owl sign observed |
| 12/12/2012 0800-0915 | Overcast, calm, 50-55° | C. Schade | No owls or owl sign observed |
| 1/8/2013 0912-1033 | Sunny, clear, calm, 47-52° | C. Schade | No owls or owl sign observed |
| 1/31/2013 1627-1717 | Sunny, clear, calm, 57-62° | C. Schade | No owls or owl sign observed |

**2013 Breeding Season Survey (15 February to 15 July)**

Four transect survey visits occurred on March 7, April 16, May 31, and June 27, 2013 in suitable burrowing owl habitat in the area of the Segment 3B/4 split (Table 7). Surveys were conducted in accordance with the 2012 CDFG Staff Report. No owls or sign were detected during any of the site visits.

**Table 7. 2013 Breeding Season Survey Timing, Weather Conditions, and Observations at Location 2.**

| Survey Date/Time | Weather | Surveyor(s) | Results |
|---|---|---|---|
| 3/7/2013 0753-0912 | Overcast, calm, 51-54° | C. Schade | No owls or owl sign observed |
| 4/16/2013 1023-1105 | Clear, Wind 5-7 mph, 59-61° | C. Schade | No owls or owl sign observed |
| 5/31/2013 0627-0711 | Mostly cloudy, calm, 57-59° | C. Schade | No owls or owl sign observed |
| 6/27/2013 0710-0845 | Clear, calm, 72-76° | C. Schade | No owls or owl sign observed |

Wildlife observed during the surveys includes: coyote, mule deer (*Odocoileus hemiones*),oak titmouse (*Baeolophus inornatus*), yellow-rumped warbler (*Dendroica coronata*), dark-eyed junco (*Junco hyemalis*), American kestrel, acorn woodpecker, red-tailed hawk, black phoebe, song sparrow, western kingbird, California quail, turkey vulture, killdeer, California towhee, western bluebird, greater roadrunner, western meadowlark, northern mockingbird, and mourning dove.

**2013-2014 Non-Breeding Season Survey (1 September to 31 January)**

Four transect survey visits occurred on September 4, October 16, November 13 and December 12, 2013 in suitable burrowing owl habitat in the area of the Segment 3B/4 split (Table 8). Surveys were conducted in accordance with the 2012 CDFG Staff Report. No owls or sign were detected during any of the site visits.

Wildlife observed during the surveys includes: coyote, brush rabbit, red-tailed hawk, red-shouldered hawk (*Buteo lineatus*), barn owl (*Tyto alba*), black phoebe, song sparrow, western kingbird, California quail, turkey vulture, killdeer, yellow-rumped warbler, common raven, California towhee, western bluebird, greater roadrunner, western meadowlark, northern mockingbird, and mourning dove.

**Table 8: 2013-2014 Non-Breeding Season Survey Timing, Weather Conditions, and Observations at Location 2.**

| Survey Date/Time | Weather | Surveyor(s) | Results |
|---|---|---|---|
| 9/4/2013 0747-0933 | Sunny, clear, calm, 77-82° | C. Schade | No owls or owl sign observed |
| 10/16/2013 0727-852 | Sunny, clear, calm, 66-69° | C. Schade | No owls or owl sign observed |
| 11/13/2013 1632-1726 | Sunny, clear, wind 3-5 mph with heavier gusts, 87-85° | C. Schade | No owls or owl sign observed |
| 12/11/2013 1533-1647 | Sunny, clear, calm, 67-59° | C. Schade | No owls or owl sign observed |

## 5.0 DISCUSSION

Burrowing owl is a yearlong resident of open, dry grassland and desert habitats, and in grass, forb, and open shrub stages of pinyon-juniper and ponderosa pine forests as high as 5,300 feet ASL. In the vicinity of the Project area, burrowing owls are predominantly known to be rare transients and winter visitors most frequently found in agricultural and grassland areas. The occurrence of burrowing owl in the region has notably decreased, as have the number of actively used breeding sites (Ventura Audubon Society 2011). A search of the eBird website shows 13 records of burrowing owl in the Cañada Larga area near Segment 1 and the Getty Tap between January 2004 and January 2014, all during the winter months of December to March (eBird 2012). Three of these records occurred during the 2012-2013 non-breeding season survey period, on January 15 and 17, and February 24, 2013, and one record during the 2013-2014 non-breeding season survey period, on January 4, 2014. No specific location was provided for these records to determine how far the occurences were from the Project area. Burrowing owls recorded at Cañada Larga are believed to be just winter visitors (Ventura Audubon Society 2011). No breeding areas or breeding season observations are documented for this species in the Project area. It is believed that burrowing owls have largely been, if not completely, eliminated as a breeding species from Ventura and Santa Barbara counties (Dave Pereksta, Avian Biologist,

Bureau of Ocean Energy Management, personal communication May 30, 2012; Center for Biological Diversity 2010; USFWS 2003).

### 5.1 Recommendations

Although no burrowing owl have been recorded in the area during the breeding season, or found during the 2012 and 2013 breeding seasons and the 2012-2013 and 2013-2014 non-breeding season surveys, suitable habitat with suitable burrows exists within the Project area at the two locations described above. No physical ground disturbance is expected to occur within 500 feet of any potential burrow site, however, vehicle and equipment travel will occur along roadways adjacent to suitable habitat at both locations. Activities such as grading, vegetation trimming or removal, and general project noise or vibration could result in construction-related impacts to nesting burrowing owl, should the area become occupied during a future breeding season, including potential disruption of nesting activity, or destruction of active burrows. Pre-construction surveys for the burrowing owl within areas with suitable habitat, and construction monitoring if owls are detected, would help ensure detection of burrowing owl breeding activity and/or occupancy and that no owls or their potential habitat are disturbed by Project activities.

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# APPENDIX A

# SITE PHOTOS

**Photo 1. Location 1 -** Looking southwest across ground squirrel complex/burrowing owl habitat of the main polygon, Spring 2012. The existing access road to the Getty Tap is on the left.

**Photo 2. Location 1 -** Looking southwest across ground squirrel complex/ burrowing owl habitat of the main polygon, Fall 2012.

**Photo 3. Location 1 -** Looking southwest across ground squirrel complex/ burrowing owl habitat of the main polygon, January 2014.

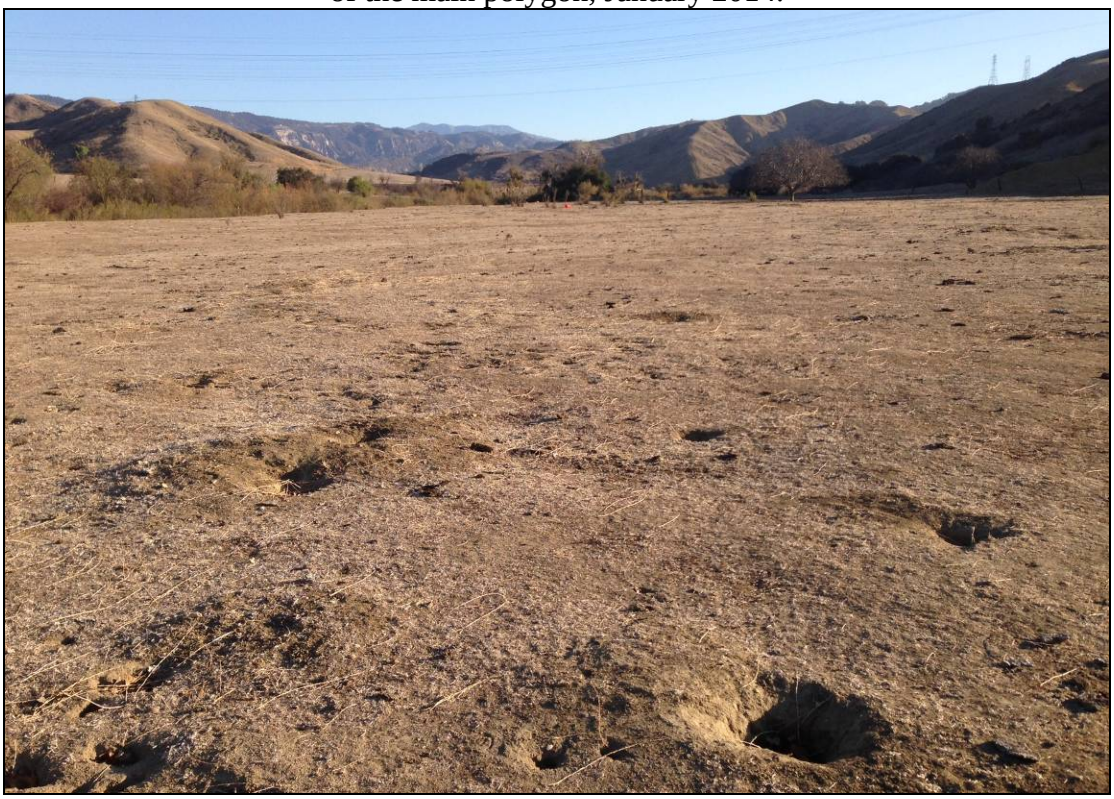

**Photo 4. Location 1 -** Active ground squirrel burrow in the Project area.

**Photo 5. Location 1 -** Burrowing owl habitat in the southern-most portion of the main polygon. Slope may be greater than commonly used by burrowing owl, but remaining habitat constituents are present.

**Photo 6. Location 1 -** Mango pits surrounding ground squirrel burrow.

**Photo 7. Location 1 -** White twist ties from various herbs and vegetables litter portions of the burrow field.

**Photo 8. Location 1 -** Potential evidence of American badger digging at ground squirrel holes.

**Photo 9. Location 2 -** Looking north at ground squirrel complex/burrowing owl habitat near Segment 3B/4 split, Spring 2012. Roadways in the upper right and middle of the photo will both be used by the Project.

**Photo 10. Location 2 -** Looking south across ground squirrel complex/burrowing owl habitat near Segment 3B/4 split, Spring 2012.

**Photo 11. Location 2 -** Ground had been mowed or raked and is devoid of vegetation October 2012. Grasses grew back by December 2012 survey.

**Photo 12. Location 2 -** Looking north at ground squirrel complex/burrowing owl habitat near Segment 3B/4 split, Winter 2013.

**Photo 13. Location 2 -** Active ground squirrel burrows in the survey area.

# SPECIAL-STATUS BOTANICAL RESOURCES SURVEY REPORT

## SOUTHERN CALIFORNIA EDISON

## SANTA BARBARA COUNTY RELIABILITY PROJECT

## SANTA BARBARA AND VENTURA COUNTIES, CALIFORNIA

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**October 2014**

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# 1. EXECUTIVE SUMMARY

Special-status botanical resources surveys were conducted by Garcia and Associates (GANDA) in the spring and summer of 2014 for Southern California Edison's (SCE) Santa Barbara County Reliability Project (SBCRP; Project) in Santa Barbara and Ventura counties, California.

This study presents the results of the floristically based special-status plant surveys and mapping conducted in May and July 2014 for the Project, including Segments 1, 2, 3A, 3B, 4, the Getty Tap, existing access and spur roads, proposed new spur roads, yards, and other facilities. Special-status plant species targeted during the 2014 surveys are those that are federally or state-listed and plants with a California Rare Plant Rank (CRPR), as designated by the California Native Plant Society (CNPS). In addition, plant species designated by the Los Padres National Forest (LPNF) as a sensitive species were surveyed for on land owned by the United States Forest Service (USFS).

Prior to conducting field surveys, a literature review was conducted and a special-status species list was developed to identify special-status plant species that have the potential to occur within the Project Area. Forty-five (45) special-status plant species were identified as having the potential to occur within the habitat types present in the Project Area. Of those 45 species the following eight were observed and mapped within the Project Area during the 2014 botanical surveys:

- Plummer's baccharis (*Baccharis plummerae* ssp. *plummerae*),
- Catalina mariposa lily (*Calochortus catalinae*),
- Southern California black walnut (*Juglans californica*),
- Ocellated Humboldt lily (*Lilium humboldtii* ssp. *ocellatum*),
- Santa Barbara honeysuckle (*Lonicera subspicata* var. *subspicata*),
- Fish's milkwort (*Polygala cornuta* var. *fishae*),
- Nuttall's scrub oak (Q*uercus dumosa*),and
- Hoffman's sanicle (*Sanicula hoffmannii*).

Approximately 4.29 acres of Santa Barbara honeysuckle (CRPR 1B.2) and 7.49 acres of Nuttall's scrub oak (CRPR 1B.1) were observed within the Project Area during the survey. All other special-status species observed are ranked as CRPR 4.2 or lower. The approximate acreage of the other six special-status plant populations in the Project Area is 155 acres (Plummer's baccharis [11.43 acres], Catalina mariposa lily [2.55 acres], Southern California black walnut [85.86 acres], ocellated Humboldt lily [0.1-acre], Fish's milkwort [54.58 acres], and Hoffman's sanicle [0.96-acre]), the majority of which are located along Project roads. Acreage is calculated based on polygon data only; points collected within the Project Area represent nominal area. No FSS species were observed on Forest Service Land.

## 2. INTRODUCTION

This report documents the results of the special-status botanical resources surveys performed in the spring and summer of 2014 by Garcia and Associates (GANDA) for the SCE Santa Barbara County Reliability Project (SBCRP; Project), located in southeastern Santa Barbara County and northwestern Ventura County, California (Appendix A: Figure 1 - Project Vicinity Map). Special-status botanical resources surveys for the Project were conducted to establish the presence/absence of sensitive botanical resources within the Project area.

## 3. PROJECT DESCRIPTION

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

The Project has been divided into six geographically-defined Segments (Segments 1, 2, 3A, 3B, 4, and the "Getty Tap") and includes three substations (Carpinteria Substation, Casitas Substation, and Santa Clara Substation) (Project Area; Appendix A: Figure 2 - Project Location Map). Segment 1 begins at the Santa Clara Substation off Foothill Road in unincorporated Ventura County. From that origin, it heads north along western Long Canyon, turns northwest at Harmon Canyon in the Ventura Hills, traverses Lake, Sexton, and Hall canyons, then runs west along northern Cañada Seca and crosses Cañada Larga to the Casitas Substation, which lies between State Route 33 (SR-33) and the Ventura River. The Getty Tap is located approximately in the middle of Segment 1. Segment 2 extends west from the Casitas Substation along the south side of Lake Casitas, to the Y near East Casitas Pass. Segment 3B heads west from the Y through Casitas Valley along the south side of State Route 150 (SR-150), crossing over Madranio Canyon, along Rincon Mountain, and through Rincon Valley. At the Santa Barbara–Ventura County line near the intersection of SR-150 and State Route 192 (SR-192), Segment 3B becomes Segment 3A and continues to the west into the Shepard Mesa and Gobernador rural residential areas, then west along SR-192 to the Carpinteria Substation. Segment 4 heads west from the Y along the north side of SR-150, runs northwest along the ridgetop of Sutton Canyon, and then turns south to the Carpinteria Substation.

The Project includes the following physical elements:

- Reconstruction of the existing 66-kV subtransmission facilities primarily within existing utility rights-of-way (ROW) between the existing Santa Clara Substation in Ventura County and the existing Carpinteria Substation in Santa Barbara County.
- Installation of marker balls on overhead wire where determined to be necessary.

- Modification of subtransmission and substation equipment within the existing Carpinteria Substation, Casitas Substation, and Santa Clara Substation.
- Replacement of line protection relays within existing substation equipment rooms or cabinets at the Getty Substation, Goleta Substation, Ortega Substation, and Santa Barbara Substation.
- Installation of telecommunications facilities to connect the Project to SCE's existing telecommunications system for the protection, monitoring and control of subtransmission and substation equipment. Installation of new telecommunications facilities along Segments 1, 2, and 4 and at the Carpinteria Substation, Casitas Substation, Santa Clara Substation, and Ventura Substation[1].
- Transfer of distribution lines (and third-party infrastructure as necessary) to subtransmission structures along Segment 3A.
- Removal of subtransmission infrastructure in Segments 1 and 2.

# 4. ENVIRONMENTAL SETTING

The Project is located in southeastern Santa Barbara County and northwestern Ventura County, between 1 and 6 miles inland of the coastline. The majority of the Project Area is located on private lands, with the exception of several tower sites and associated access and spurs roads located within the Santa Barbara Front, a geographical unit of land under the jurisdiction of the Los Padres National Forest (LPNF), owned by the U.S. Forest Service (USFS).

Elevations within the Project Area range from approximately 30 feet above sea level (ASL) near the Carpinteria Substation to approximately 1,800 feet ASL along portions of Segment 3B, near Rincon Peak. Temperatures in the area average 50 to 71° F, with an average annual temperature of 60° F. Average rainfall ranges from 15.4 to 17.7 inches (BioResource Consultants 2012). The east-west orientation of the mountains, combined with the distinct Mediterranean/marine climate, results in a unique botanic zone and mix of species. Predominately north- or south-facing slopes are dominated by alternating bands of sedimentary rock formations, with chaparral habitats at higher elevations and coastal scrub habitat and oak woodlands at lower elevations. Noxious weed infestations, ruderal species, and escaped cultivars occur throughout the vicinity of the Project, especially in grazed or disturbed areas and along road corridors.

The Project crosses the headwaters of multiple small streams and creeks that flow through agricultural and urban areas before reaching the Pacific Ocean, and is located in lower gradient reaches of the Santa Clara River and Ventura River watersheds, including Cañada Larga, which

[1] The Project also includes additional minor substation and telecommunications work at the Getty Substation, Goleta Substation, Ortega Substation, Santa Barbara Substation, and Ventura Substation; this work would be conducted exclusively on substation property, and thus would have no impact to biological resources. Therefore, this work is not addressed further in this report.

is a tributary to the Ventura River. While groundwater and surface water sources have been extensively developed for domestic and agricultural uses throughout the area, these riparian corridors contrast sharply with an otherwise dry landscape. Landslides are prone to occur in areas of steep, unstable terrain, and the area has a history of large and sometimes devastating wildland fire events. Land uses in the immediate vicinity of the Project Area are dominated by agriculture (cattle grazing and orchards) and open-space areas covered by natural vegetation communities, with low-density residential development and commercial areas (nurseries and row crops) scattered through Segments 3A, 3B, and 4 (BioResource Consultants 2012).

### 4.1 Vegetation Types and Plant Communities

The characterization of upland and riparian vegetation types and habitat mapping identified in this report (below) are taken from the 2012 Biological Technical Report prepared by BioResource Consultants (BRC) for the Project. The Project Area consists of several vegetation types including chaparral, coastal sage scrub, woodland, grassland, and non-native habitats. Within these vegetation types, 19 plant communities were observed and characterized (BRC 2012). Table 1 summarizes the vegetation types and plant communities mapped within the Project Area during the 2012 surveys.

## Table 1. Plant Communities Mapped within the Project Area.

| Plant Community Name | Class Code | Segment (s) of Occurrence* | Acreage within Survey Area** |
|---|---|---|---|
| **Chaparral Types** | **C** | | **1305** |
| Greenbark Ceanothus Chaparral | CGC | 3B, 4 | 50 |
| Toyon Chaparral | CT | 1, 2, 3B, 4 | 123 |
| Lemonade Berry Chaparral | CL | 1, 2, 3B, 4 | 236 |
| Mixed Ceanothus Chaparral | CMC | 3B, 4 | 896 |
| **Coastal Sage Scrub Types** | **S** | | **2790** |
| California Sagebrush Scrub | SCS | 1 | 221 |
| Chaparral Mallow Scrub | SCM | 1, 4 | 110 |
| Coyote Brush Scrub | SCB | 1, 2, 3B | 97 |
| Purple Sage Scrub | SPS | 1, 2, 3B, 4 | 2284 |
| Mulefat Scrub | SMF | 1 | 78 |
| **Woodland Types** | **W** | | **849** |
| Coast Live Oak Woodland | WLO | 1, 2, 3B, 4 | 808 |
| Arroyo Willow Woodland | WAW | 1, 3B, 4 | 27 |
| Southern California Black Walnut Woodland | WCBW | 3B, 4 | 5 |
| Scrub Oak Woodland | WSO | 4 | 9 |
| **Grassland Types** | **G** | | **1235** |
| California Annual Grassland | GCA | 1, 2, 3B | 1229 |
| Ruderal Grassland | GR | All | 6 |
| **Non-Native Types** | **N** | | **2450** |
| Agriculture | NAG | 3A, 3B, 4 | 2211 |
| Ruderal/Disturbed | NRD | All | 103 |
| Cape Ivy Infestation | NCI | 2, 3A, 3B, 4 | 40 |
| Developed | ND | 3A, 4 | 96 |

*Segments of occurrence are based on the existing habitat maps (BRC 2012) and observations made during the 2014 invasive plant and noxious weed surveys.

**Acreage within the survey area is based on the 2012 biological reconnaissance surveys and habitat maps (BRC 2012).

The following vegetation descriptions were developed in part by using existing information from the 2012 and 2013 botanical studies of the Project Area (BRC 2012; 2013), as well as observations made in the field during the 2014 botanical surveys. Plant communities were described in terms of dominant tree, shrub, and herbaceous vegetation composition and cross-referenced to natural communities described in *A Manual of California Vegetation* (Sawyer and Keeler-Wolf 1995) and *A Manual of California Vegetation, Second Edition* (Sawyer et al. 2009) where applicable.

### 4.1.1 Chaparral Types

Chaparral vegetation types typically occur on moderate to steep south-facing slopes with dry, rocky, shallow soils. Chaparral habitats are more abundant at higher elevations where temperatures are lower and moisture supplies are more ample, and often intergrade with coastal scrub vegetation types at lower elevations. Chaparral within the Project Area consists of four different plant communities: Greenbark Ceanothus Chaparral, Toyon Chaparral, Lemonade Berry Chaparral, and Mixed Ceanothus Chaparral.

***Greenbark Ceanothus Chaparral***

Greenbark Ceanothus Chaparral (CGC) stands are prominent on concave, north-facing slopes, though they may also occur on ocean-facing slopes, at elevations ranging from 1,000 to 3,300 feet ASL. Greenbark ceanothus (*Ceanothus spinosus*) occurs in the coastal mountains of California from San Luis Obispo County south to Baja California, including the Santa Ana, Sierra Nevada, and Santa Monica mountains. Within the Project Area, small areas of this plant community were mapped between Segments 3B and 4, near the Y (BRC 2012). The dominant or co-dominant species in the shrub canopy within this plant community are greenbark ceanothus, bigpod ceanothus (*C. megacarpus* var. *megacarpus*), toyon (*Heteromeles arbutifolia*), and sugar bush (*Rhus ovata*).

***Toyon Chaparral***

Toyon is one of the most widely distributed shrubs in foothills and low mountains in cismontane California. Toyon Chaparral (CT) stands occur on gradual slopes, to steep, rocky canyons, and steep, north-facing slopes, at elevations ranging from 165 to 3,165 feet ASL. Within the Project Area, this plant community is present in scattered locations along Segments 2, 3B, and 4, with one small area occurring on the east end of Segment 1 (BRC 2012). Dominant or co-dominant species in the shrub canopy include toyon, hoary-leaved ceanothus (*Ceanothus crassifolius*), greenbark ceanothus, and birch-leaf mountain mahogany (*Cercocarpus betuloides*), with scattered occurrences of Southern California black walnut (*Juglans californica*) and coast live oak (*Quercus agrifolia*) trees.

***Lemonade Berry Chaparral***

Lemonade Berry Chaparral (CL) communities occur on steep upland slopes with shallow coarse soils, at elevations from near sea level to 1,300 feet ASL. This plant community occurs primarily on the east end of Segment 2 and the west end of Segment 1, as well as in small, scattered locations along Segments 3B and 4 (BRC 2012). Dominant shrub species include lemonade berry (*Rhus integrifolia*), coyote brush (*Baccharis pilularis*), bigpod ceanothus, giant wild-rye (*Elymus condensatus*), chaparral mallow (*Malacothamnus fasciculatus* var. *fasciculatus*), laurel sumac (*Malosoma laurina*), and blue elderberry (*Sambucus nigra* ssp. *caerulea*). This plant community often intergrades with the Purple Sage Scrub plant community described below.

***Mixed Ceanothus Chaparral***

Mixed Ceanothus Chaparral (CMC) is the most frequent chaparral type within the Project Area. This community is present along almost the entire length of Segment 4, as well as in scattered locations along Segment 3B (BRC 2012). CMC forms a variable canopy dominated by two or three species of *Ceanothus*, including bigpod ceanothus, hoary-leaved ceanothus, and greenbark ceanothus. Associated species in the shrub canopy include toyon, scrub oak (*Quercus berberidifolia*), Nuttall's scrub oak (*Q. dumosa*), lemonade berry, and purple sage (*Salvia leucophylla*), with coast paintbrush (*Castilleja affinis* ssp. *affinis*) and San Diego bedstraw (*Galium nuttallii* ssp. *nuttallii*) growing in the ground layer.

### 4.1.2 Coastal Sage Scrub Types

Coastal sage scrub vegetation, common in California, is generally found along the coastward slopes of the Transverse, Central Coast, and Peninsular ranges, and is adapted to the Mediterranean climate. Coastal Sage Scrub forms a continuous to open canopy; it occupies dry, gentle to steep, more or less rocky slopes with shallow or heavy soils and generally occurs at lower elevations. Within the Project Area, the Coastal Sage Scrub vegetation type consists of five different plant communities: California Sagebrush Scrub, Chaparral Mallow Scrub, Coyote Brush Scrub, Purple Sage Scrub, and Mulefat Scrub.

***California Sagebrush Scrub***

California Sagebrush Scrub (SCS) typically occurs on steep, south-facing slopes of xeric foothills, especially near the coast, at elevations below 2,625 feet ASL. SCS is dominated by California sagebrush (*Artemisia californica*) and forms a continuous to intermittent canopy, with associated shrub species including coyote brush, purple sage, lemonade berry, and deerweed (*Acmispon glaber*). Associated shrub species also include California bush sunflower (*Encelia californica*), chaparral mallow, black sage (*Salvia mellifera*), and poison oak (*Toxicodendron diversilobum*). Within the Project Area, occurrences of SCS are found along the western and middle portions of Segment 1 (BRC 2012).

### *Chaparral Mallow Scrub*

Chaparral Mallow Scrub (SCM) occurs primarily along road edges, existing pole pads, and other previously disturbed areas, at elevations below 1,975 feet ASL. SCM is dominated by chaparral mallow and forms an intermittent to closed canopy with associated species including California sagebrush, coyote brush, purple sage, California bush sunflower, and giant wild rye. This plant community also frequently contains occurrences of lemonade berry and blue elderberry. Within the Project Area, SCM occurs in scattered locations along Segment 4 and on the eastern end of Segment 1 (BRC 2012).

### *Coyote Brush Scrub*

Coyote Brush Scrub (SCB) occurs on stabilized dunes of coastal bars, river mouths, coastline spits, coastal bluffs, open slopes, and ecotonal areas with grasslands from sea level to 3,300 feet ASL. Within the Project Area, SCB forms a continuous or intermittent canopy of coyote brush (less than 2 meters tall) growing over a variable ground layer, with co-dominant species in the shrub canopy including purple sage, California sagebrush, lemonade berry, and blue elderberry. This plant community is present on the west end of Segment 2, near the Y, and along portions of Segments 3B and 1 (BRC 2012).

### *Purple Sage Scrub*

Purple Sage Scrub (SPS) is typically found on steep north-facing slopes in colluvial-derived, rocky soils. Purple sage is often found in association with California sagebrush, and is a typical shrub of Coastal Sage Scrub and chaparral types of xeric foothills, especially near the coast, at elevations from 165 to 3,000 feet ASL. Within the Project Area, this plant community ranges from being solely dominated by purple sage to being co-dominant with coyote brush and California sagebrush. Several other canopy contributors are present within the SPS community, including: California bush sunflower, saw-toothed goldenbush (*Hazardia squarrosa*), birch-leaf mountain mahogany, giant wild rye, toyon, lemonade berry, and blue elderberry. SPS is the dominant plant community in the Project Area, occurring on the eastern end of Segment 4, along Segments 3B and 2, and along the majority of Segment 1 (BRC 2012).

### *Mulefat Scrub*

Mulefat (*Baccharis salicifolia*) is generally found along wetlands or stream banks between sea level and 1,500 feet ASL. Within the Project Area, Mulefat Scrub (SMF) occurs intermittently in flooded habitats within canyon bottoms and ephemeral and intermittent streams. The SMF community is dominated by mulefat, with occurrences of arroyo willow (*Salix lasiolepis*), coyote brush, tree tobacco (*Nicotiana glauca*), blue elderberry, and poison oak. This plant community is present in the canyons along Segment 1 (BRC 2012).

### 4.1.3 Woodland Types

Woodlands are vegetation types dominated by woody trees and tall tree-like shrubs, forming an open to closed canopy growing over a scattered variety of low-growing shrubs and a grassy ground layer. Woodlands within the Project Area consist of four different plant communities: Coast Live Oak Woodland, Scrub Oak Woodland, Arroyo Willow Woodland, and California Black Walnut Woodland.

***Coast Live Oak Woodland***

Coast live oak is the most widely distributed of the evergreen oaks, occurring in valleys, on edges of riparian woodlands, scattered in grassland or coastal sage scrub communities, as an element of mixed evergreen forest, or associated with other oak species. Coast Live Oak Woodland (WLO) predominantly occurs on steep slopes and on raised stream banks or terraces at elevations below 4,000 feet ASL, where it forms a continuous to open canopy, less than 100 feet tall, with an understory of occasional or common shrubs and an absent or herbaceous ground layer. This woodland community is dominated by coast live oak with frequent occurrences of Southern California black walnut in the tree canopy. Common understory shrubs include coyote brush, deerweed, bigpod ceanothus, redberry (*Rhamnus crocea*), sticky monkeyflower (*Mimulus aurantiacus* var. *aurantiacus*), toyon, laurel sumac, and poison oak. Other associated ground cover species include canyon sunflower (*Venegasia carpesioides*), California wild rose (*Rosa californica*), California blackberry (*Rubus ursinus*), bracken fern (*Pteridium aquilinum*), heart-leaved bush penstemon (*Keckiella cordifolia*), and snowberry (*Symphoricarpos albus* var. *laevigatus, S. mollis*). WLO is present along the majority of Segment 2 and in scattered locations along Segments 1, 3B, and 4 (BRC 2012).

***Scrub Oak Woodland***

Scrub Oak Woodland (WSO) is dominated by scrub oak and coast live oak and occurs from sea level to 5,000 feet ASL, generally along the coast. Associated shrub species include toyon, redberry, buckbrush (*Ceanothus cuneatus* var. *cuneatus*), deerweed, and chamise (*Adenostma fasciculatum*). This plant community is present on the far west end of the Project Area, along Segment 4 (BRC 2012). Nuttall's scrub oak (CRPR 1B.1) is also documented in the WSO in the Project Area; however, these occurrences are above the known elevation range for Nuttall's scrub oak and are likely scrub oak hybrids (*Q. berberidifolia* x *Q. dumosa*).

***Arroyo Willow Woodland***

Arroyo willow grows in seasonally or intermittently flooded sites, at elevations from sea level to 7,100 feet ASL. Habitat includes stream banks and benches, slope seeps, and along drainages. The Arroyo Willow Woodland (WAW) community is composed of arroyo willows forming an open to continuous canopy less than 30 feet tall, with a variable herbaceous layer. Co-dominant species in the shrub or tree canopy layer include coyote brush, mulefat, California sycamore (*Platanus racemosa*), black cottonwood (*Populus trichocarpa*), and Fremont cottonwood

(*Populus fremontii*). Within the Project Area, WAW is present in drainages in canyons on Segments 1, 3B, and 4 (BRC 2012).

***Southern California Black Walnut Woodland***

Southern California black walnut trees are typically found along riparian corridors and hill slopes, at elevations from 500 to 3,000 feet ASL. Within the Project Area, the Southern California Black Walnut Woodland (WCBW) community forms an open to continuous canopy less than 50 feet tall, with a sparse to intermittent or grassy herbaceous layer. Although Southern California black walnut trees are frequent throughout several plant communities in the Project Area, WCBW occurs in isolated areas along Segments 3B and 4 and is typically co-dominated by coast live oak (BRC 2012).

### 4.1.4 Grassland Types

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

***California Annual Grassland***

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

Most of the non-native grasses found in the Project Area are Mediterranean in origin, germinate in the fall or early winter with the first rains, and are protected from unseasonal germination by a preference for cool temperatures. Although the introduced annual grass species have irreversibly invaded the once native perennial grass stands, they are often referred to as “naturalized,” and are often considered important GCA contributors (BRC 2103). Within the Project Area, common dominant plants in these in these communities include slender wild oat (*Avena barbata*), wild oat (*Avena fatua*), ripgut grass (*Bromus diandrus*), black mustard (*Brassica*

*nigra*), summer mustard (*Hirschfeldia incana*), as well as emergent California sagebrush, saw-toothed goldenbush, and laurel sumac shrubs. Other characteristic non-native grass species and naturalized annual forbs typical of GCA communities include soft chess (*B. hordeaceus*), foxtail chess (*B. madritensis* ssp. *madritensis*), red brome (*B. madritensis* ssp. *rubens*), summer barley (*Hordeum murinum* ssp. *glaucum*), rye grass (*Festuca perennis*), slender fescue (*Festuca bromoides*), red-stem filaree (*Erodium cicutarium*), tocalote (*Centaurea melitensis*), milk thistle (*Silybum marianum*), and cheeseweed (*Malva parviflora*). Associated native herb and bulb species in ground layer include blue dicks (*Dichelostemma capitatum*), clustered tarplant (*Deinandra fasciculata*), narrow-leaf milkweed (*Asclepias fascicularis*), blue-eyed grass (*Sisyrinchium bellum*), and western verbena (*Verbena lasiostachys*). GCA communities are present in Segments 1, 2, and 3B (BRC 2012).

***Ruderal Grassland***

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

Ruderal grassland associations of the Project Area include non-native grass species characteristic of the California Annual Grassland community described above, as well as emergent native shrubs and plants including California sagebrush, coyote brush, tenuated cliff-aster (*Malacothrix saxatilis* var. *tenuifolia*), and purple sage. These native species compete with common ruderal/invasive forbs, including black mustard, poison hemlock (*Conium maculatum*), summer mustard, white horehound (*Marrubium vulgare*), tocalote, wild radish (*Raphanus sativus*), fennel (*Foeniculum vulgare*), milk thistle, Russian thistle (*Salsola tragus*), and Italian thistle (*Carduus pycnocephalus* ssp. *pycnocephalus*). Ruderal grasslands are scattered throughout the Project Area and are present on all segments (BRC 2012).

### 4.1.5 Non-Native Types

Non-native type assemblages are areas that have been planted with orchards or crops, landscaped, or are heavily disturbed by human activities, and are dominated by non-native or ruderal species. These areas are often monocultures, or assemblages dominated with escaped cultivars and ruderal non-native species.

### *Agricultural*

Agricultural (NAG) lands are areas that have been planted with orchards, crops, or are extensively grazed by cattle. Orchard and crop areas are often monocultures with a sparse understory, generally with ruderal forbs and/or non-native grassland species such as Bermuda grass (*Cynodon dactylon*), scarlet pimpernel (*Anagallis arvensis*), knotweed (*Polygonum aviculare* ssp. *depressum*), spotted spurge (*Chamaesyce maculata*), and bindweed (*Convolvulus arvensis*). Crops grown in the Project Area include avocado (*Persea americana*), orange (*Citrus* x *sinensis*), lemon (*Citrus* x *limon*), walnut (*Juglans* sp.), cherimoya (*Annona cherimola*), guava (*Psidium* sp.), passion fruit (*Passiflora* sp.), and dragonfruit (*Hylocereus* sp.). Agricultural lands are scattered throughout the Project Area and are present on all Segments (BRC 2012). Agricultural lands comprise the majority of Segment 3A and large portions of Segments 3B and 4.

### *Ruderal/Disturbed*

Ruderal/Disturbed (NRD) communities are present in all segments of the Project Area and include areas dominated by non-native weedy and invasive species such as black mustard, summer mustard, red-stem filaree, tocalote, Russian thistle, fennel, cheeseweed, Italian thistle, wild oats, and brome grasses (*Bromus* spp.). Ruderal/disturbed communities are found primarily along road edges, around structures, edges of agriculture fields, and cleared areas including existing SCE pole or tower pads, and often intergrade with the Ruderal Grassland community described above.

### *Cape Ivy Infestation*

The Cape Ivy Infestation (NCI) communities in the Project Area consist of large patches of Cape ivy (*Delairea odorata*) that are blanketing areas of Coast Live Oak Woodland, Arroyo Willow Woodland, Coastal Sage Scrub, and Chaparral. In these areas, Cape ivy is forming a solid cover over native shrubs and trees. Vines block the light, smothering and killing the native vegetation beneath and prohibiting the regeneration of most native species, leaving a monoculture stand of ivy. Cape ivy infestations were documented and mapped in Segment 4 during 2012 vegetation mapping surveys; however, additional NCI areas were observed along Segments 2, 3A, and 3B during 2014 botanical surveys.

### *Developed*

Developed (ND) areas include residential and commercial buildings and lots, and cleared, paved, or graded surfaces, generally lacking native plant assemblages. Vegetation in ND areas is predominately landscaped with non-native, ornamental species. Developed areas are present along Segments 3A and 4.

# 5. REGULATORY FRAMEWORK

Native plant species, depending on their legal status, may be protected under various federal, state, and local laws and regulations. These laws, regulations, and codes are summarized below (BRC 2012).

## 5.1 Federal Regulations

***Endangered Species Act (16 U.S.C. § 1531 et seq.)***

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

When non-federal entities, such as states, counties, local governments, and private landowners, wish to conduct an otherwise lawful activity that might incidentally, but not intentionally, "take" a listed species, an incidental take permit must first be obtained via formal consultation with the USFWS using one of two methods. If a federal nexus is available, an incidental take permit must be obtained for the Project by the federal agency involved in the nexus via formal consultation with USFWS (ESA § 10(a)(1)(B)). If no federal nexus is available, then an incidental take permit must be obtained must first be obtained following formal consultation with the USFWS via Section 7 of the ESA (ESA § 7).

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

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

***U.S. Forest Service Manual***

The Forest Service Manual (FSM) contains legal authorities, objectives, policies, responsibilities, instructions, and guidance for the planning and execution of programs and activities within and

related to national forests. FSM Chapter 2670 directs the USFS to "develop/implement management practices to ensure that species do not become threatened or endangered because of Forest Service actions," and to "avoid or minimize impacts to species whose viability has been identified as a concern." If impacts cannot be avoided, the UFSF "can allow or disallow the impact, but the decision must not result in loss of species viability or create a significant trend towards federal listing." FSM Chapter 2672.4 specifies that a Biological Evaluation (BE) be prepared to determine if a project may affect any USFS or USFWS listed species. In addition to protections to federally listed species, FSM Chapter 2672.11 delegates to each Regional Forester the authority to designate "Sensitive" species, which are defined as:

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

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

The Land and Resource Management Plans (Plans) established by USFS for the southern California national forests describe the strategic direction at the broad program level for managing the land and its resources over the next 10 to 15 years. As stated in the LPNF Strategy, the objective of USFS threatened, endangered, proposed, candidate, and sensitive species management is to "manage habitat to move listed species toward recovery and de-listing" and to "prevent listing of proposed and sensitive species." For management of species of concern, the primary objective is to "maintain and improve habitat for fish, wildlife, and plants, including those with the following designations: game species, harvest species, management indicator species and watch list species."

## 5.2 State Regulations

***California Endangered Species Act (CFG Code § 2050, et seq.)***

The California Endangered Species Act (CESA) generally parallels the provisions of the federal ESA, and states that "all native species of fishes, amphibians, reptiles, birds, mammals, invertebrates, and plants, and their habitats, threatened with extinction and those experiencing a significant decline which, if not halted, would lead to a threatened or endangered designation, will be protected or preserved." The California Department of Fish and Wildlife (CDFW) administers the CESA, and has committed itself to work with all interested persons, agencies, and organizations to protect and preserve such sensitive resources and their habitats.

Under the CESA, "endangered" is defined as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range;" and "threatened" is defined as "a native species or

subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts." "Take" is defined as "to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill" an individual of a species, but the definition does not include "harm" or "harass," as the ESA does. As a result, the threshold for a take under the CESA is higher than that under the Federal ESA.

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

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

The Native Plant Protection Act (NPPA) identifies the types of plant species eligible for state listing. Eligible species include those identified on California Native Plant Society (CNPS) Rare Plant Ranks (CRPR) 1A, 1B, and 2 meet the definitions of Sections 1901, Chapter 10 (NPPA) or Sections 2062 and 2067 (CESA) of the California Fish and Game Code. CRPR 3 and 4 species, though not meeting the criteria for listing by CDFW, may be considered during project review by the agency. CRPR definitions are as follows:

> *CRPR 1A – Plants presumed extirpated in California and either rare or extinct elsewhere:* This rank includes that are presumed extinct in California as well as those plants that are presumed extirpated in California. A plant is presumed extinct if it no longer occurs in California, or elsewhere, and is presumed to be extirpated if it has not been seen or collected in the wild in California for many years, but may still occur elsewhere in its range. All of the plants constituting CRPR 1A meet the definitions of CESA Sections 2062 and 2067 of the California Fish and Game Code, and are eligible for state listing. Should these taxa be rediscovered, it is mandatory that they be fully considered during preparation of environmental documents relating to the California Environmental Quality Act (CEQA).
>
> *CRPR 1B – Plants that are rare, threatened, or endangered in California and elsewhere:* Plant species that have declined significantly over the last century and are considered rare throughout their range. The majority of the plants constituting CRPR 1B are endemic to California and all meet the definitions of CESA Sections 2062 and 2067 of the California Fish and Game Code, and are eligible for state listing. It is mandatory that CRPR 1B plants are fully considered during preparation of environmental documents relating to CEQA.

*CRPR 2A – Plants presumed extirpated in California, but are more common elsewhere:* This list includes only those plant taxa that are presumed extirpated in California, but are more common elsewhere in their range. CRPR 2A plants are presumed extirpated because they have not been observed or documented in California for many years. All of the plants constituting CRPR 2A meet the definitions of CESA Sections 2062 and 2067 of the California Fish and Game Code, and are eligible for state listing. It is mandatory that these plants are fully considered during preparation of environmental documents relating to CEQA.

*CRPR 2B – Plants that are rare, threatened, or endangered in California, but more common elsewhere*: These plant species are common beyond the boundaries of California, but have declined significantly over the last century and are considered rare throughout their range in California. All of the plants constituting CRPR 2B meet the definitions of CESA Sections 2062 and 2067 of the California Fish and Game Code, and are eligible for state listing. It is mandatory that these plants are fully considered during preparation of environmental documents relating to CEQA.

*CRPR 3 – Plants about which more information is needed:* A review list for plants for which there is inadequate information to assign them to one of the other lists or to reject them. Nearly all of the plants constituting CRPR 3 are taxonomically problematic. Some of the plants constituting CRPR 3 meet the definitions of CESA Sections 2062 and 2067 of the California Fish and Game Code, and are eligible for state listing. It is strongly recommended that these plants are fully considered during preparation of environmental documents relating to CEQA.

*CRPR 4 – Plants of limited distribution:* A watch list for plants that are of limited distribution or are uncommon throughout a broader area in California. Some of the plants constituting CRPR 4 meet the definitions of CESA Sections 2062 and 2067 of the California Fish and Game Code but few, if any, are eligible for state listing. It is strongly recommended that these plants are fully considered during preparation of environmental documents relating to CEQA.

## 5.3 Local Regulations

CPUC General Order No. 131-D, Section XIV. B. states: "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However in locating such projects, the public utilities shall consult with local agencies regarding land use matters."

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

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

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

# 6. METHODOLOGY

Floristically based special-status plant surveys and mapping were conducted on May 15 to May 30 and July 14 to July 24, 2014 for Segments 1, 2, 3A, 3B, 4, the Getty Tap, existing access and spur roads, and proposed new spur roads, as well as other facilities, such as staging yards. Special-status plant species targeted during the 2014 surveys were those that are federally or state-listed and plants with a CRPR, as designated by the CNPS. In addition, plant species designated by the LPNF as a sensitive species were targeted on land owned by the USFS.

## 6.1 Literature Review

### 6.1.1 Special-Status Botanical Resources

Prior to conducting field surveys, a literature review was conducted and a special-status species list was developed to include special-status taxa that have the potential to occur within the Project Area. This list was developed from documented rare plant occurrences from the CDFW's California Natural Diversity Database (CNDDB 2014) within a 5-mile radius of the Project Area (Appendix A: Figure 3 - CNDDB Plant Occurrences Map), as well as the 2014 Pacific Southwest Region Sensitive Plant Species List, which includes the most up-to-date Regional Forester's Sensitive Plant Species (FSS) list for the LPNF.

In addition, two reports from past botanical surveys were reviewed: and the results were incorporated into this report. A special status plant species survey was conducted within Segments 3B, 4, and the Getty Tap portion of Segment 1 from April 15 to April 24, 2013 and from May 7 to May 15, 2012. The 2013 special-status plant survey focused on known locations, suitable habitat, and locations where genera of special-status species not in bloom were located but not identified in 2012 (BRC 2013). A biological reconnaissance survey of the Project Area was conducted in February and March 2012 to characterize and map the vegetation present in the Project Area according to the vegetation's dominant species and to evaluate the potential of the habitats to support special-status plant and wildlife species (BRC 2012).

Since the 2012 and 2013 botanical surveys, one previously recognized taxon, Hoffman's bitter gooseberry, is no longer considered rare and has been removed from the list of special-status plant species found in the Project Area. The Hoffman's bitter gooseberry variety (*Ribes amarum* var. *hoffmannii*) is no longer considered to be distinct from the common species (*Ribes amarum*) and therefore, is no longer considered rare (Baldwin et al. 2012).

### 6.1.2 GIS and GPS Preparation

Handheld, sub-meter GPS units were used for navigation and to collect population information in the field. Mobile GIS field data collection forms were developed for the Project using a data dictionary within Terra Sync 4.51 Professional application software that includes fields for recording a variety of attribute information within each mapped point or polygon. Attribute information in the data dictionary included target species code, population size, cover class, phenology (i.e., percent vegetative, percent flowering, and percent fruiting), nearest construct, potential disturbance type or threat to population, surveyor initials, and date. Table 2 presents a complete list of all information fields collected for each population mapped. All data were collected as Universal Transverse Mercator (UTM) coordinates in the North American 1983 datum (NAD83), Zone 11 South, and subsequently converted to NAD83, State Plane 5. Digital copies of recently flown high-resolution geo-rectified aerial photographs (NAIP 2009) and topographic maps (ESRI 2010) were acquired for mapping efforts.

**Table 2. Special-status Species Database Fields**

| FIELD | ATTRIBUTE |
|---|---|
| **Species Code** | List of target species that have the potential to occur within the Project boundary. Surveyor was able to record additional plant species under "Other" if a special-status species not on the list was found. |
| **Population Size** | Surveyor recorded the number of individuals for each species found. |
| **Cover Class** | Cover of species found was classified by ocular estimates with the following cover classes:<br><1%<br>1%<br>2%<br>5%<br>10%<br>15%<br>25%<br>40%<br>50%<br>65%<br>75%<br>85%<br>95%<br>100% |
| **Phenology** | Life stages of each occurrence were visually assessed and the percentage of vegetative, flowering, and fruiting individuals was recorded for each population. |
| **Disturbance Type/Threats to Population** | Potential threats to populations and/or potential disturbance factors were determined for each occurrence and included the following:<br>• Access road<br>• Ground disturbance area<br>• Linear ROW<br>• Facility site<br>• Invasive weeds<br>• Agriculture<br>• Other |
| **Surveyor Initials and Date** | Initials of surveyors and date of survey was entered for each occurrence. |
| **Comments** | Surveyor recorded essential notes about occurrences. |

## 6.2 Field Survey Methods

### 6.2.1 Personnel and Timing

Spring and summer field surveys for special-status plant species were conducted on Segments 1, 2, 3A, 3B, 4 and the Getty Tap area by GANDA botany staff from May 15 to 30, 2014 and July 14 to 24, 2014. Surveys were spaced so that suitable habitat areas were visited at least twice during the appropriate bloom periods for the majority of the special-status plant taxa that have

the potential to occur in the Project Area (see Table 3). GANDA field personnel included Jessica Peak, Eliza Shepard, Mark Bibbo, Molly Graber, Keir Morse, and Stephanie Hines.

### 6.2.2 Reference Population Surveys

Reference sites of select special-status species in the vicinity of the Project Area were visited during Project surveys in order to determine if known populations of species were in bloom. References including *The Jepson Manual, Second Edition* (Baldwin et al. 2012) and online resources such as the *CNPS Inventory of Rare and Endangered Plants* (CNPS 2014), CalPhotos (2014), and Calflora (2014) were consulted for specific species information.

### 6.2.3 Special-status Species Surveys

Survey methods for special-status species were floristic in nature, took place at appropriate times to identify special-status species, and were consistent with the botanical survey guidelines of the California Department of Fish and Game (2009), the U.S. Fish and Wildlife Service (1996), and the California Native Plant Society (2001). The surveys involved systematically searching suitable habitat in the Project alignment, around all proposed disturbance areas, and along roads within the Project Area for special-status plants, and mapping occurrences using a point and polygon mapping system. All vascular plant species observed within the Project Area were recorded (Appendix B—Vascular Plant Inventory). Plant specimens that were not positively identified in the field were further examined using a dissecting/compound microscope and appropriate botanical keys, including *The Jepson Manual, Second Edition* (Baldwin et al. 2012) and *A Flora of the Santa Barbara Region, California, Second Edition* (Smith 1998). Efforts were made to locate all populations of special-status taxa documented during the 2013 and 2012 botanical surveys of the Project Area.

The survey included a buffer of 100 feet (a 200-foot-wide corridor) of the alignment, proposed disturbance areas, Project features (i.e., lay down yards, guard structures, etc.), and Project roads. Methods for evaluating the Project Area varied depending on the potential of a location to provide suitable habitat for special-status plant species. Surveys were typically conducted by walking linear transects within the alignment, project features, and along roads. Within areas with non-linear orientation (i.e., large lay down yards, landing zones, or disturbance areas), meandering transects were walked to ensure the greatest amount of visual coverage possible.

When located, special-status species populations were recorded using Trimble GeoXT or XH GPS units capable of sub-meter accuracy. Populations covering greater than 0.01 acre (approximately 20 x 20 feet or larger) were collected as polygon features; populations 0.01 acre or smaller were collected as point features. The GPS units used during field surveys contained electronic forms and a data dictionary with the attributes summarized above.

Each occurrence was assigned a two-part identification number in the geographic information system (GIS) data. The first part of this identification number consists of a four or five letter code derived from the first two letters of the genus and specific epithet for each species, and the first letter of the variety or subspecies as applicable (e.g., the code for *Polygala cornuta* var. *fishiae* is "POCOF"), and the second part is a three digit number that refers to a specific population (e.g., POCOF-001, POCOF-002, etc.).

### 6.3 Post-processing Data and Map Creation

GIS special-status species data were managed by a GIS specialist. Field data were exported to Pathfinder software and reviewed to ensure accuracy and optimize data consistency and searchability. Field personnel assisted with review. Maps were then created using ArcMap 9.3.1 software. The resulting maps are found in Appendix A (Figures 4 – 8).

## 7. RESULTS

### 7.1 Plant Species Observed

A total of 313 plant species were observed in the Project Area during 2014 botanical surveys. Of the species observed, 190 (61 percent) were native and 123 (39 percent) were non-native, naturalized, agricultural, or landscape species. A comprehensive list of vascular plant species observed in the Project Area is provided in Appendix B.

### 7.2 Special-Status Plant Species

A total of 45 special-status plant species are known to occur (are tracked by the CNDDB and/or were observed during botanical surveys) or were determined to have the potential to occur within the Project Area. This special-status species list (Table 3) includes all CNDDB plant occurrences within a 5-mile radius of the Project Area and LPNF-listed FSS species with a potential to occur. The list for potential special-status plant occurrences, including protected status, blooming period, elevation range, habitat requirements, and evaluation of habitat suitability within the Project Area, is presented below in Table 3.

Using information from the various listed sources and botanical surveys of the area, the potential for special-status species to occur within the Project Area was assessed as present, high, moderate, low, or not expected based on the following criteria:

- **Present:** The species was observed in the Project Area during field surveys, or documented from the site during previous surveys.
- **High:** CNDDB or other documented occurrences have been recorded within the Project Area and/or within a 1-mile radius of the Project and suitable habitat is present.

Individuals were not observed during field surveys; however, the species has the potential to be present.

- **Moderate:** CNDDB or other documented occurrences have been recorded within 5 miles of the Project Area and suitable or marginal habitat is present. Individuals were not observed during field surveys; however, the species the potential to be present.
- **Low:** Marginal habitat may occur in the Project Area but no CNDDB records of the species have been recorded within recent years, records of the species within 5 miles of the Project are suspected to be now extirpated or potentially misidentified with other species, or individuals were not observed during field surveys and are not anticipated to be present.
- **Not Expected:** A number of plant species identified in the literature review were determined to have no potential to occur within the Project Area because the Project Area does not contain suitable habitat, is located out of the species known geographic range, or is located out of the species known elevation range.

Based on an analysis of known geographic range and suitable habitat, 22 FSS plant species listed by the LPNF have the potential to occur or are known to occur in the Project Area. The potential for special-status species to occur within the Project Area was assessed in the same manner as outlined above for CNDDB tracked plant species (i.e., present, high, moderate, low, or not expected).

**Table 3. Special-status Plant Species Known to Occur or Having the Potential to Occur within the Project Area.**

| Common Name *Scientific Name* | Status* (Federal/State/ USFS/CRPR) | Blooming Period[a] | Elevation Range (feet)[a] | Suitable Habitat Type[a] | Likelihood to Occur within Project Area | Known or Potential Occurrence Determination |
|---|---|---|---|---|---|---|
| Hoover's bent grass *Agrostis hooveri* | - / - / FSS / 1B.2 | April - August | 20 - 2,000 | Dry, sandy soils within chaparral and cismontane woodland communities. | Moderate | No occurrences of this species have been documented in the vicinity of the Project Area, but the Project is within known species range. Potential suitable habitat for this FSS species is present in chaparral and woodlands of the Project Area. |
| Hickman's onion *Allium hickmanii* | - / - / FSS / 1B.2 | March - May | 15 - 650 | Closed cone coniferous forest, maritime chaparral, coastal prairie, coastal scrub, and valley and foothill grassland communities. | Low | No occurrences of this species have been documented in the vicinity of the Project Area, but the Project is within known species range. Possible suitable habitat for this FSS species is present in the scrub and grasslands of the Project Area. |
| Aphanisma *Aphanisma blitoides* | - / - / - / 1B.2 | June - September | 0 – 660 | Sandy soils within coastal bluff scrub, coastal dunes, coastal scrub. | Low | Possible suitable habitat in the in low elevation coastal scrub communities. Only known occurrence of this species within 5 miles of the Project Area is from 1963 in coastal bluff habitat along Highway 101, near the Ventura River. No records of this taxon have been recorded within the vicinity of the Project in recent years. |

| Common Name *Scientific Name* | Status* (Federal/State/ USFS/CRPR) | Blooming Period[a] | Elevation Range (feet)[a] | Suitable Habitat Type[a] | Likelihood to Occur within Project Area | Known or Potential Occurrence Determination |
|---|---|---|---|---|---|---|
| Arroyo de la Cruz manzanita *Arctostaphylos cruzensis* | - / - / FSS / 1B.2 | December - March | 200 - 1,000 | Sandy soils within upland forest, coastal bluff scrub, closed-cone coniferous forest, chaparral, coastal scrub, and valley and foothill grassland communities. | Low | No occurrences of this species have been documented in the vicinity of the Project Area, but the Project is within known species range. Potential suitable habitat for this FSS species exists in low elevation chaparral and scrub habitat. |
| Hoover's manzanita *Arctostaphylos hooveri* | - / - / FSS / 4.4 | February - June | 1,575 - 3,300 | Broadleaf upland forest, rocky chaparral, cismontane woodland, and lower montane coniferous forest communities. | Low | No occurrences of this species have been documented in the vicinity of the Project Area, but the Project is within known species range. Possible suitable habitat for this FSS species is present in the chaparral and woodlands of the Project Area. |
| Refugio manzanita *Arctostaphylos refugioensis* | - / - / FSS / 1B.2 | December - March | 900 - 2,700 | Sandstone chaparral communities. | Moderate | No occurrences of this species have been documented in the vicinity of the Project Area, but the Project is within known species range. Potential suitable habitat for this FSS species exists in sandstone chaparral on the west end of the Project Area. |

| Common Name *Scientific Name* | Status* (Federal/State/ USFS/CRPR) | Blooming Period[a] | Elevation Range (feet)[a] | Suitable Habitat Type[a] | Likelihood to Occur within Project Area | Known or Potential Occurrence Determination |
|---|---|---|---|---|---|---|
| Ventura Marsh milk-vetch *Astragalus pycnostachyus* var. *lanosissimus* | FE / CE / - / 1B.1 | | 0 - 350 | Sandy or gravelly soils in disturbed or open areas. | Not Expected | Disturbed open areas with sandy or gravelly soils are not present in low elevation areas of the Project. Documented occurrences of this taxon within 5 miles of the Project Area are believed to be extirpated and suitable habitat is no longer present at those locations. No records of this taxon have been recorded within the vicinity of the Project in recent years. |
| Coulter's saltbush *Atriplex coulteri* | - / - / - / 1B.2 | March - October | 0 - 1,500 | Alkaline or clay soils in coastal bluff scrub, coastal dune, coastal scrub, and valley and foothill grasslands. | Low | Potential suitable habitat is present in open grasslands and coastal scrub. Only known locations within 5 miles of the Project area are from 1927 and 1963 on coastal bluffs along Highway 101. No records of this taxon have been recorded within the vicinity of the Project in recent years. |
| South Coast saltscale *Atriplex pacifica* | - / - / - / 1B.2 | March - October | 0 - 660 | Coastal bluff scrub and dunes. | Not Expected | Suitable coastal bluff and dune habitat is not present in the Project Area. Known occurrences within 5 miles of the Project are from the mid-1960s. No records of this species have been recorded within the vicinity of the Project in recent years. |

| Common Name *Scientific Name* | Status* (Federal/State/ USFS/CRPR) | Blooming Period[a] | Elevation Range (feet)[a] | Suitable Habitat Type[a] | Likelihood to Occur within Project Area | Known or Potential Occurrence Determination |
|---|---|---|---|---|---|---|
| Davidson's saltscale *Atriplex serenana* var. *davidsonii* | - / - / - / 1B.2 | April - October | 20 - 820 | Alkaline soils in coastal bluff scrub, coastal scrub, and wetland and riparian communities. | Low | Alkaline soils infrequent in the Project Area. Potential suitable habitat is present in coastal scrub and riparian communities. |
| Plummer's baccharis *Baccharis plummerae* ssp. *Plummerae* | - / - / - / 4.3 | August - November | 0 - 6,000 | Rocky soils on sea bluffs, in brushy canyons, and in open shrub-grassland associations in coastal scrub or oak woodlands. | Present | Documented throughout Segments 1, 2, 3B, and 4 in coastal scrub and woodland habitats during 2014 botanical surveys. Also documented in Segments 3B and 4 during 2012 surveys. |
| Dwarf goldenstar *Bloomeria humilis* | - / CR / FSS / 1B.2 | June | 30 - 400 | Coastal bluff scrub, chaparral, valley and foothill grassland communities. | Low | No occurrences of this species have been documented in the vicinity of the Project Area, but the Project is within known species range. Possible suitable habitat for this FSS species is present in the chaparral, scrub, and grasslands of the Project Area. |
| Club-haired mariposa lily *Calochortus clavatus* var. *clavatus* | - / - / FSS / 4.3 | May - June | 250 - 4,250 | Usually on serpentine or rocky soils within chaparral, cismontane woodland, coastal scrub, and valley and foothill grasslands. | Low | No occurrences of this species have been documented in the vicinity of the Project Area, but the Project is within known species range. No suitable serpentine soils are present, but potential suitable habitat for this FSS species exists in chaparral, woodland, grassland, and coastal scrub communities. |

| Common Name *Scientific Name* | Status* (Federal/State/ USFS/CRPR) | Blooming Period[a] | Elevation Range (feet)[a] | Suitable Habitat Type[a] | Likelihood to Occur within Project Area | Known or Potential Occurrence Determination |
|---|---|---|---|---|---|---|
| Slender mariposa lily *Calochortus clavatus* var. *gracilis* | - / - / FSS / 1B.2 | May - June | 1,050 - 3,300 | Chaparral, costal scrub, valley and foothill grasslands. | Moderate | No occurrences of this species have been documented in the vicinity of the Project. Potential suitable chaparral, coastal scrub, and grassland, habitat for this FSS species is present in the Project Area. |
| Catalina mariposa lily *Calochortus catalinae* | - / - / - / 4.2 | March - May | 50 - 2,300 | Coastal sage scrub, chaparral, and valley and foothill grassland communities. | Present | Documented in Segments 1, 3B, and 4 in grasslands and along the edges of coastal scrub habitats during 2014 botanical surveys. Also documented in Segments 3B and 4 during 2012 and 2013 surveys. |
| Late-flowered mariposa lily *Calochortus fimbriatus* | - / - / FSS / 1B.2 | July - August | 0 - 3,000 | Dry, open coastal woodlands, and chaparral; often on serpentine soils. | High | Historic documentation within the Project Area near Segment 4, exact location unknown. Suitable habitat is present in edges of woodlands and open chaparral communities. |
| Palmer's mariposa lily *Calochortus palmeri* var. *palmeri* | - / - / - / 1B.2 | May - July | 3,900 – 7,260 | Mesic sites in chaparral and lower montane coniferous forests, and meadows and seeps. | Not Expected | Suitable mesic chaparral and meadows and seeps are not present in the Project Area. Known elevation range for this species is approximately 2,000 to 5,400 feet higher than that of the Project Area. |

| Common Name *Scientific Name* | Status* (Federal/State/ USFS/CRPR) | Blooming Period[a] | Elevation Range (feet)[a] | Suitable Habitat Type[a] | Likelihood to Occur within Project Area | Known or Potential Occurrence Determination |
|---|---|---|---|---|---|---|
| La Panza mariposa lily *Calochortus simulans* | - / - / FSS / 1B.3 | April - June | 1,300 - 3,600 | Sandy, often granitic, sometimes serpentine soils within chaparral, cismontane woodland, lower montane coniferous forest, and valley and foothill grasslands. | Low | No occurrences of this species have been documented in the vicinity of the Project Area, but the Project is within known species range. Possible suitable habitat for this FSS species exists in the chaparral, woodland, and grasslands of the Project Area. |
| Dwarf calycadenia *Calycadenia villosa* | - / - / FSS / 1B.1 | May - October | 780 - 4,500 | Fine soils within chaparral, cismontane woodland, meadows and seeps, rocky valley and foothill grasslands | Low | No occurrences of this species have been documented in the vicinity of the Project Area, but the Project is within known species range. Potential suitable for this FSS species is present in chaparral, woodland, and grassland communities of the Project Area. |
| Lemmon's jewelflower *Caulanthus lemmonii* | - / - / FSS / 1B.2 | May - September | 825 – 2,800 | Dry, rocky hills, ridges, grassland, openings in foothill woodland. | Low | No occurrences of this species have been documented in the vicinity of the Project Area, but the Project is within known species range. Potential suitable habitat for this FSS species exists in woodland and grassland communities of the Project Area. |
| Southern tarplant *Centromadia parryi* ssp. *australis* | - / - / - / 1B.1 | June - October | 0 - 660 | Disturbed sites near the coast at marsh edges, or in areas with alkaline soils within valley and foothill grassland. | Low | No occurrences of this species have been documented in the vicinity of the Project Area. Known occurrence within 5 miles of the Project Area is possibly extirpated. |

| Common Name *Scientific Name* | Status* (Federal/State/ USFS/CRPR) | Blooming Period[a] | Elevation Range (feet)[a] | Suitable Habitat Type[a] | Likelihood to Occur within Project Area | Known or Potential Occurrence Determination |
|---|---|---|---|---|---|---|
| Orcutt's pincushion *Chaenactis glabriuscula* var. *orcuttiana* | - / - / - / 1B.1 | April - July | 0 - 330 | Coastal dunes and bluffs. | Not Expected | No suitable coastal dune or bluff habitat is present in the Project Area. Known occurrence within 5 miles of the Project Area is possibly extirpated. |
| Salt marsh bird's-beak *Chloropyron maritimum* ssp. *maritimum* | FE / CE / - / 1B.2 | May - October | 0 - 35 | Coast salt marshes. | Not Expected | No suitable salt marsh habitat is present in Project Area. Only known extant occurrence of this species within 5 miles of the Project Area is in the Carpinteria salt marsh. |
| Umbrella larkspur *Delphinium umbraculorum* | - / - / - / 1B.3 | April - June | 1,600 - 5,300 | Mesic oak woodlands. | Low | Potential suitable habitat exists in oak woodland communities of Project Area; however, mesic oak woodland habitat is infrequent. Known occurrence of this species is from 1964. No records of this species have been recorded within the vicinity of the Project in recent years. |
| Ojai fritillary *Fritillaria ojaiensis* | - / - / FSS / 1B.2 | February - May | 990 - 1,650 | Occurs on rocky slopes and in river basins. Known from mesic broadleaf upland forest, chaparral, and lower montane coniferous forest habitats. | Low | Known from seven occurrences within 5 miles of the Project Area. Potential suitable habitat is present within the forested drainages of the Project Area; however, mesic woodland habitats are infrequent. |

| Common Name *Scientific Name* | Status* (Federal/State/ USFS/CRPR) | Blooming Period[a] | Elevation Range (feet)[a] | Suitable Habitat Type[a] | Likelihood to Occur within Project Area | Known or Potential Occurrence Determination |
|---|---|---|---|---|---|---|
| Mesa horkelia *Horkelia cuneata* var. *puberula* | - / - / FSS / 1B.1 | February - September | 230 - 2,900 | Dry, sandy coastal chaparral. | Low | Potential suitable habitat is present in chaparral communities; however, the only dated known occurrence of this species within 5 miles of the Project Area is from 1896. No records of this taxon have been recorded within the vicinity of the Project in recent years. |
| Southern California black walnut *Juglans californica* | - / - / - / 4.2 | March - May | 100 - 3,000 | Occurs on hillsides and in canyons in riparian forest, and coast live oak woodland communities. | Present | Documented in all Project segments in scrub and woodland habitats during 2014 botanical surveys. Also documented in the Project Area during 2012 and 2013 surveys. |
| Coulter's goldfields *Lasthenia glabrata* ssp. *Coulteri* | - / - / - / 2B.1 | April - May | 0 – 3,000 | Saline places and vernal pools. | Not Expected | No suitable saline or vernal pool habitat is present in Project Area. Only known extant occurrence of this species within 5 miles of the Project Area is in the Carpinteria salt marsh. |
| Pale-yellow layia *Layia heterotricha* | - / - / FSS / 1B.1 | April - June | 660 – 5,900 | Open clay, sandy, or alkaline soils in cismontane woodland, coastal scrub, pinyon juniper woodland, and valley and foothill grasslands. | Low | No occurrences of this species have been documented in the vicinity of the Project Area, but the Project is within known species range. Potential suitable habitat for this FSS species is present within the woodland, scrub, and grasslands of the Project Area. |

| Common Name *Scientific Name* | Status* (Federal/State/ USFS/CRPR) | Blooming Period[a] | Elevation Range (feet)[a] | Suitable Habitat Type[a] | Likelihood to Occur within Project Area | Known or Potential Occurrence Determination |
|---|---|---|---|---|---|---|
| Ross' pitcher sage *Lepechinia rossii* | - / - / FSS / 1B.2 | May - September | 1,550 – 3,900 | Chaparral. | Low | No occurrences of this species have been documented in the vicinity of the Project Area, but the Project is within known species range. Possible suitable habitat for this FSS species exists in the chaparral communities of the Project Area. |
| Ocellated Humboldt lily *Lilium humboldtii* ssp. *Ocellatum* | - / - / - / 4.2 | May - August | 0 – 6,000 | Found in oak canyons, chaparral, yellow-pine forest, and riparian woodland. | Present | Documented within a drainage in Sutton Canyon on the west end of Segment 4 during 2012 and 2014 botanical surveys. |
| Santa Barbara honeysuckle *Lonicera subspicata* var. *subspicata* | - / - / FSS / 1B.2 | April - May | 0 – 3,300 | Found in chaparral, cismontane woodland, and coastal scrub communities. | Present | Documented in scrub and chaparral habitats in Segments 3B and 4 during 2014 botanical surveys. Also documented in Segment 4 during 2012 surveys. This species was not observed on Forest Service land. |
| Carmel Valley malacothrix *Malacothrix saxatilis* var. *arachnoidea* | - / - / FSS / 1B.2 | May - August (October) | 80 - 3,000 | Found on rocky, open banks, shale outcrops, cliff faces, in chaparral and coastal scrub. | Low | No occurrences of this species have been documented in the vicinity of the Project Area, but the Project is within known species range. Potential suitable rocky habitat for this FSS species exists in chaparral and scrub communities of the Project Area. |

| Common Name *Scientific Name* | Status* (Federal/State/ USFS/CRPR) | Blooming Period[a] | Elevation Range (feet)[a] | Suitable Habitat Type[a] | Likelihood to Occur within Project Area | Known or Potential Occurrence Determination |
|---|---|---|---|---|---|---|
| White-veined monardella *Monardella hypoleuca* ssp. *Hypoleuca* | - / - / - / 1B.3 | May - October | 0 - 5,000 | Oak woodland and chaparral habitat. | High | Known occurrences are within one mile of the Project Area and suitable chaparral and oak woodland habitat exists within the Project Area. |
| Ojai navarretia *Navarretia ojaiensis* | - / - / FSS / 1B.1 | May - July | 900 to 3,300 | Found on clay soils in openings in chaparral, coastal scrub, and valley and foothill grassland communities. | Moderate | Known from six extant occurrences within 5 miles of the Project Area. Potential suitable chaparral, scrub and grassland habitats are present in the Project Area. |
| Robbins' nemacladus *Nemacladus secundiflorus* var. *robbinsii* | - / - / FSS / 1B.2 | April - May | 1,100 – 5,600 | Dry, gravely slopes, and openings in chaparral and valley and foothill grasslands. | Low | No occurrences of this species have been documented in the vicinity of the Project Area, but the Project is within known species range. Potential suitable habitat for this FSS species exists in chaparral and grasslands in the Project Area. |
| Chaparral nolina *Nolina cismontane* | - / - / FSS / 1B.2 | May - July | 660 - 4,300 | Occurs in dry chaparral of coastal mountains. | Low | Known from two occurrences near Lake Casitas and Highway 150; however, the Project Area is on the northern edge of the species range. Potential suitable chaparral, communities are present in the Project Area. |
| Fish's milkwort *Polygala cornuta* var. *fishiae* | - / - / - / 4.3 | May - August | 300 - 4,200 | Occurs within chaparral and oak woodland communities. . | Present | Documented throughout Segments 1, 2, 3B, and 4 in coastal scrub and woodland habitats during 2014 botanical surveys. Also documented in Segment 3B during 2012 surveys. |

| Common Name *Scientific Name* | Status* (Federal/State/ USFS/CRPR) | Blooming Period[a] | Elevation Range (feet)[a] | Suitable Habitat Type[a] | Likelihood to Occur within Project Area | Known or Potential Occurrence Determination |
|---|---|---|---|---|---|---|
| Nuttall's scrub oak *Quercus dumosa* | - / - / FSS / 1B.1 | March - May | 0 - 700 | Found near the coast on sandy soils or sandstone in chaparral and coastal sage scrub habitats below 700 feet elevation. | Present | Documented in scrub woodland habitat on the west end of Segment 4 during 2012, 2013, and 2014 botanical surveys. This species was not observed on Forest Service land. |
| Hoffman's bitter gooseberry *Ribes amarum* var. *hoffmannii* | - / - / - / - | February - April | 50 - 6,300 | Chaparral and riparian woodland. | Not Expected | Documented in chaparral habitat on Segment 4 during 2013 surveys. The Hoffman's bitter gooseberry variety (*Ribes amarum* var. *hoffmannii*) is no longer considered to be distinct from the common species (*Ribes amarum*) and therefore, is no longer considered rare (Baldwin et al. 2012). |
| Sanford's arrowhead *Sagittaria sanfordii* | - / - / - / 1B.2 | May - October | 0 - 900 | Marshes, swamps, ponds, and assorted freshwater habitats. | Not Expected | Documented from one occurrence within 5 miles of the Project Area in a seasonal pool; however, this occurrence is believed to be extirpated. No suitable marsh, swamp, or pond habitat is present in Project Area. |
| Hoffman's sanicle *Sanicula hoffmannii* | - / - / - / 4.3 | March - May | 0 - 1,650 | Found in clay or serpentine soils of shrubby coastal hills, chaparral, and pine woodland habitats. | Present | Documented in scrub and woodland habitats in Segments 2, 3B, and 4 during 2014 and 2012 botanical surveys. |

| Common Name *Scientific Name* | Status* (Federal/State/ USFS/CRPR) | Blooming Period[a] | Elevation Range (feet)[a] | Suitable Habitat Type[a] | Likelihood to Occur within Project Area | Known or Potential Occurrence Determination |
|---|---|---|---|---|---|---|
| Salt Spring checkerbloom *Sidalcea neomexicana* | - / - / - / 2B.2 | April - June | 0 - 5,000 | Alkaline springs and marshes. | Not Expected | No suitable marsh or springs habitat is present in the Project Area. Only known occurrence of this species within 5 miles of the Project Area is from 1962 near Oak View. No records of this taxon have been recorded within the vicinity of the Project in recent years. |
| Southern jewelflower *Streptanthus campestris* | - / - / - / 1B.3 | May - June | 2,900 - 7,600 | Open, rocky coniferous forest, chaparral, and woodland. | Low | Known from one occurrence within 5 miles of the Project Area, near Divide Peak. Potential suitable rocky habitat is present in chaparral and woodland habitat of the Project Area. |
| Sonoran maiden fern *Thelypteris puberula* var. *sonorensis* | - / - / - / 2.2 | N/A | 160 - 2,700 | Occurs along streams and seepage areas. | Low | Known from one occurrence within 5 miles of the Project Area, in Romero Creek. Potential suitable habitat is present along drainages in the Project Area. |

*Status Notes:
Federal Status – Federal Endangered Species Act
FE – Federally listed endangered
State – California Endangered Species Act
CE – California State endangered
CR – California State rare
CRPR – California Native Plant Society Rare Plant Rank
1B – Rare, threatened, or endangered in CA and elsewhere CRPR Extensions
2 – Rare, threatened, or endangered in CA but common elsewhere 0.1. Seriously endangered in California
4 – Limited distribution (Watch-list) 0.3 Not very endangered in California
USFS – United States Forest Service
FSS – Forest Service Sensitive
(-) = no status given
[a] – unless otherwise noted, habitat, elevation, and blooming period from *The Jepson Manual, Second Edition* 2012 and CNPS 2014.

Eight special-status plant species were observed and mapped in the Project Area during the 2014 field surveys: Plummer's baccharis, Catalina mariposa lily,, ocellated Humboldt lily, Santa Barbara honeysuckle, Fish's milkwort, Nuttall's scrub oak, Southern California black walnut, and Hoffman's sanicle. Special-status plant species, including FSS plants, observed in the Project Area or with moderate or high potential for occurrence based on suitable habitat, soil types, and/or nearby populations, are described in more detail below, including their habitat preferences, distribution, and key characteristics.

**Hoover's bent grass (*Agrostis hooveri*)** (*FSS & CRPR 1B.2*). Hoover's bent grass is a tufted perennial grass ranging from 30 to 80 centimeters (cm) in height. Hoover's bent grass has panicle-like inflorescences and typically flowers from April to August. This species prefers dry, sandy soils in open chaparral and oak woodlands at elevations below 2,000 feet (Baldwin et al. 2012). Hoover's bent grass is a FSS plant species listed by the LPNF and is also considered rare, threatened, or endangered in California and elsewhere by the CNPS. This species is known from the south central and outer south Coast Ranges in San Luis Obispo and Santa Barbara counties; however, there are no known occurrences of this species in the vicinity of the Project Area. Chaparral and oak woodland communities are present in the Project Area, but the chaparral stands are generally dense and suitable sandy soils are infrequent. No Hoover's bent grass was observed during the 2014, 2013, or 2012 botanical surveys and this species is not expected to occur in the Project Area.

**Refugio manzanita (*Arctostaphylos refugioensis*)** (*FSS & CRPR 1B.2*). Refugio manzanita is an evergreen shrub to small tree that occurs in sandstone outcrops in chaparral and typically blooms December through March. It is known from the Santa Ynez Mountains at elevations ranging from 900 to 2,700 feet. This species is distinguished from other manzanita species by its dull, glaucous leaves, clasping leaf bases, and a glandular-hairy, pendent nascent inflorescence. Refugio manzanita is considered a FSS plant by the LPNF and is also considered rare, threatened, or endangered in California and elsewhere by the CNPS. This species of manzanita is not known to occur in the vicinity of the Project Area, and suitable sandstone outcrops are limited to small areas of the western portion of Segment 4. No Refugio manzanita was observed in the Project Area during 2014, 2013, or 2012 surveys.

**Plummer's baccharis (*Baccharis plummerae* ssp. *plummerae*)** (*CRPR 4.3*). Plummer's baccharis is a small, broad-leaved winter-deciduous shrub (< 2 meters tall) in the sunflower family (Asteraceae). This species has fine-curled, hair-covered, wand-like stems and 20- to 45-millimeter (mm), oblanceolate, toothed, three-veined (prominent), sessile leaves (Baldwin et al. 2012). The flowers generally bloom between August and November, are arranged in paniculate heads with a bell-shaped involucre, and are not particularly showy (Appendix C—Site Photographs 1 and 2). Plummer's baccharis typically occurs on rocky, well-drained, north-facing slopes in coastal sage scrub and oak woodland plant communities. Plummer's baccharis is

considered uncommon in California by the CNPS, but not very endangered, and can be locally abundant where it occurs. It ranges in distribution from southern coastal Santa Barbara County to coastal Los Angeles County, as well as Santa Cruz and Anacapa islands, below 6,000 feet in elevation. Occurrences of Plummer's baccharis were observed and mapped in Segments 1, 2, 3B, and 4 during the 2014 surveys.

**Catalina mariposa lily (*Calochortus catalinae*)** (*CRPR 4.2*). Catalina mariposa lily is a perennial herb that re-sprouts annually from a small bulb and typically blooms from March to May. This species has stems that are 20 to 40 cm long, generally branched above, and an inflorescence that consists of one to four bowl-shaped flowers (Baldwin et al. 2012). Sepals and petals are white or tinged lilac, with purple spots near the base (Appendix C—Site Photographs). Catalina mariposa lily prefers heavy soils in open grassland, chaparral, and coastal sage scrub communities, at elevations below 2,300 feet. Catalina mariposa is considered uncommon in California and fairly endangered by the CNPS, but can be locally abundant where it occurs. It ranges from southern San Luis Obispo County to San Diego County, and has been documented on Santa Rosa, Santa Cruz, and Santa Catalina islands. Occurrences of Catalina mariposa lily were observed and mapped in Segments 1, 3B, and 4 during the 2014 surveys.

**Slender mariposa lily (*Calochortus clavatus* var. *gracilis*)** (*FSS & CRPR 1B.2*). Slender mariposa lily is a perennial bulbiferous herb that produces small bulblets and typically blooms from May to June. The *Calochortus clavatus* complex (the common name is the club-haired mariposa lily complex) is a highly variable group with several varieties whose morphological characteristics often overlap. Slender mariposa lily is distinguished from other varieties of *C. clavatus* by a relatively short (20 to 40 cm), slender, usually straight stem, dark purple anthers, and typically a well-developed red-brown line above the shallow nectary (Baldwin et al. 2012). Slender mariposa lily is listed as a FSS plant by the LPNF and is also considered to be rare, threatened, or endangered in California and elsewhere by the CNPS. It is known from chaparral, coastal scrub, and grasslands in Ventura and Los Angeles counties at elevations below 3,300 feet. Distribution of slender mariposa lily was thought to limited to the San Gabriel Mountains, but populations have also been documented in the Santa Monica Mountains (J. Peak, personal observations 2012).

Several populations of the *Calochortus clavatus* complex were observed in the Project Area. The majority of the plants within these populations most closely meet the characteristics of *Calochortus clavatus* var. *pallidus* (club-haired mariposa lily), a common species throughout the Transverse Ranges, with some individuals that appear to be intermediate between *Calochortus clavatus* var. *pallidus* and *Calochortus clavatus* var. *gracilis*. Hybridization and hyper-variability is common with these two varieties, and these populations appear to be *Calochortus clavatus* var. *pallidus* with some potential intergradation with *Calochortus clavatus* var. *gracilis*.

Populations meeting all of the characteristics of slender mariposa lily were not observed during 2014, 2013 or 2012 botanical surveys of the Project Area.

**Late-flowered mariposa lily (*Calochortus fimbriatus*)** (*FSS & CRPR 1B.2*). Late-flowered mariposa lily is a perennial bulbiferous herb with a fibrous bulb coat. Stems are generally 30 to 90 cm long, with basal leaves that usually wither before anthesis. This species typically blooms from July to August and the inflorescence consists of one to eight widely bell-shaped flowers with sepals and petals that range from cream, to yellow, to purple, to dark red or red-brown, and have dense, long, wavy hairs bordering the edges of the petals. Late-flowered mariposa lily grows in dry, open woodland and chaparral, often in serpentine soils, at elevations below 3,000 feet. Late-flowered mariposa lily is listed as a FSS plant by the LPNF and is also considered to be rare, threatened, or endangered in California and elsewhere by the CNPS. Occurrences have been documented from Monterey County to Los Angeles County and east to Kern County, in the outer south Coast Ranges and western Traverse Ranges. A historical CNDDB occurrence for late-flowered mariposa lily is documented near Constructs 128 and 129 in Segment 4 and therefore, the likelihood for this species to occur in the Project Area was considered high.

Several reference populations of late-flowered mariposa lily were visited by field personnel on July 12 and 22, 2014, prior to and during summer field surveys of the Project Area. Reference populations are located on West Camino Cielo (Gaviota Coast) and East Camino Cielo (off Highway 154) in Santa Barbara County. Local populations were visited to assess the phenology and to ensure summer surveys were timed appropriately to capture this species. At the time of the field visits, reference populations of late-flowered mariposa lily were in full bloom, with numerous plants still in bud, and some that had gone to fruit.

All suitable habitats within the Project Area and locations near the historical CNDDB occurrences were thoroughly surveyed for late-flowered mariposa lily. The historical location near Construct 128 and 129 is no longer suitable habitat, as it is now overgrown with large shrubs and Cape ivy. No late-flowered mariposa lily was observed during the 2014, 2013, or 2012 botanical surveys and this species is not expected to occur in the Project Area.

**Southern California black walnut (*Juglans californica*)** (*CRPR 4.2*). Southern California black walnut is a small, broad-leaved, winter-deciduous tree with one to five trunks. It has pinnately divided leaves with 11 to 19 lanceolate to ovate toothed leaflets. This species generally blooms between March and May and trees produce spheric, leathery-husked, strong-smelling fruit (walnuts). This species can be found on slopes and in canyons at elevations between 100 and 3,000 feet, and it is often associated with riparian habitats and oak woodlands. Southern California black walnut is considered uncommon in California and fairly endangered by the CNPS, but can be locally abundant where it occurs. Southern California black walnut occurs from the Santa Lucia Mountains in Santa Barbara County, and along the coastal portions of the

Transverse Ranges, south to the northern Peninsular Ranges in northern San Diego County. Southern California Black Walnut forest is a fragmented, rare, and declining vegetation community, and it is threatened by urbanization and grazing, which inhibit natural reproduction (CNPS 2014). Southern California black walnut was observed and mapped in all Project segments during the 2014 botanical surveys.

**Ocellated Humboldt lily (*Lilium humboldtii* ssp. *ocellatum*)** (*CRPR 4.2*). Ocellated Humboldt lily is a bulb-forming perennial herb, with bulb scales that are often purple at the tip. This species typically blooms from May to August and flowers are yellow or light orange, with spots margined in red. Ocellated Humboldt lily can be found in oak canyons, chaparral, yellow-pine forest, and riparian woodland at elevations below 6,000 feet. Ocellated Humboldt lily is considered uncommon in California and fairly endangered by the CNPS, but can be locally abundant where it occurs. It is known to occur from San Luis Obispo County south to San Diego County and exists on Anacapa Island and Santa Rosa Island. Three ocellated Humboldt lily individuals were relocated and mapped in the Project Area during 2014 botanical surveys in a drainage along the access road in Sutton Canyon, in Segment 4. These are the only occurrences of this species in the Project Area.

**Santa Barbara honeysuckle (*Lonicera subspicata* var. *subspicata*)** (*FSS & CRPR 1B.2*). Santa Barbara honeysuckle is perennial evergreen shrub with twining or reclining stems. This variety is distinguished from the common *L. subspicata* var. *denudata* by its narrowly elliptic leaves that are three times longer than wide. Santa Barbara honeysuckle blooms between April and May and occurs in chaparral, cismontane woodland, and coastal scrub at elevations below 3,300 feet. Santa Barbara honeysuckle is considered a FSS plant by the LPNF and is also considered rare, threatened, or endangered in California and elsewhere by the CNPS. It is known from Santa Barbara and Los Angeles counties and Santa Catalina Island. Santa Barbara honeysuckle was observed and mapped on the west end of Segment 4 and along the Rincon Creek riparian corridor in Segment 3B during 2014 botanical surveys (Appendix C—Site Photographs). No Santa Barbara honeysuckle was observed on Forest Service land.

**White-veined monardella (*Monardella hypoleuca* ssp. *hypoleuca*)** (*CRPR 1B.3*). White-veined monardella is a fragrant subshrub in the mint family (Lamiaceae) that is known to occur in the outer South Coast Ranges and western Transverse Ranges in Santa Barbara, Ventura, and Los Angeles counties. White-veined monardella is considered rare, threatened, or endangered in California and elsewhere by the CNPS. This species blooms from May to October and has one to several clusters of pale to darker lavender flowers per main stem. White-veined monardella is found in oak woodland and chaparral habitats below elevations of 5,000 feet. Occurrences of white-veined monardella are documented within one mile of the Project Area; however, no *Monardella* species were observed during 2014, 2013, or 2012 botanical surveys.

**Ojai navarretia (*Navarretia ojaiensis*)** (*FSS & CRPR 1B.1*). Ojai navarretia is a small, prickly annual herb that is found on clay soils in openings in chaparral, coastal scrub, and valley and foothill grassland communities. This species generally blooms from May to July; flowers have strap-shaped calyx lobes that are white with a purple spot at the base of the lobes. Ojai navarretia is considered a FSS plant by the LPNF and is also considered rare, threatened, or endangered in California and elsewhere by the CNPS. It is known to occur only in Ventura County, and possibly Los Angeles County, at elevations from 900 to 3,300 feet. Occurrences of Ojai navarretia are documented within 5 miles of the Project Area; however, this species was not observed in the Project Area during 2014, 2013, or 2012 botanical surveys.

**Fish's milkwort (*Polygala cornuta* var. *fishiae*)** (*CRPR 4.3*). Fish's milkwort is a broad-leaved, winter-deciduous shrub that often forms dense thickets up to 7 feet wide. This species blooms from May through August and has bilateral flowers that are cream to green with dark pink buds (Appendix C—Site Photographs). Fish's milkwort can be found on exposed slopes growing in chaparral, oak woodland, riparian woodland, and coastal scrub habitats at elevations between 300 and 4,200 feet. Fish's milkwort is considered uncommon in California by the CNPS, but not very endangered, and can be locally abundant where it occurs. It is known to occur from Santa Barbara County in the outer South Coast Ranges, south through the Transverse Ranges, to the northern Peninsular Ranges in northern San Diego County. Occurrences of Fish's milkwort were observed and mapped in Segments 1, 2, 3B, and 4 during the 2014 botanical surveys.

**Nuttall's scrub oak (*Quercus dumosa*)** (*FSS & CRPR 1B.1*). Nuttall's scrub oak is a broad-leaved evergreen shrub that occurs on sandy, clay-loam, and sandstone soils of chaparral and coastal sage scrub habitats near the coast. Nuttall's scrub oak is considered a FSS plant by the LPNF and is also considered rare, threatened, or endangered in California and elsewhere by the CNPS. This species was previously believed to be more widespread, growing at elevations of up to 1,300 feet; however, it is now believed to have a much more limited range and is thought to occur only at elevations below 700 feet (Baldwin et al. 2012). In fact, widespread scrub oak populations from much of the cismontane woodland in California which were previously called *Q. dumosa* are now called *Q. berberidifolia* (CNPS 2014). Nuttall's scrub oak and *Q. berberidifolia* overlap in distribution and are distinguished only by elevation range and the presence of spreading, two- to six-rayed hairs on the finely tomentose lower leaf surface (*Q. dumosa*) versus appressed, four- to ten-rayed stellate hairs on the lower leaf surface (*Q. berberidifolia*). These two species readily hybridize and Nuttall's scrub oak is thought to be threatened by hybridization with *Q. berberidifolia*, as well as development, fire suppression, and vegetation fuels/management (CNPS 2014). Because the species are able to hybridize, various individual shrubs in one location may show characteristics of both species on a gradient scale.

Scrub oak woodland habitat was thoroughly examined during 2014 botanical surveys and it was determined that the majority of scrub oak present in the Project Area is *Q. berberidifolia*. Any scrub oak individuals examined that exhibited characteristics of *Q. dumosa* (i.e., presence of spreading hairs or finely tomentose lower leaf surface) were mapped as possible hybrids with *Q. berberidifolia*, including populations previously identified as Nuttall's scrub oak in 2013. Within the Project Area, scrub oak woodland is present on the west end of Segment 4 and positive identifications of Nuttall's scrub oak were made in those areas during the 2013 botanical surveys, ranging in elevation from approximately 650 to 1,300 feet. Because the majority of the scrub oak woodland in the Project Area is above 700 feet in elevation and most showed characteristics of both scrub oak species, it is likely that all documented occurrences of this species are hybrids. No Nuttall's scrub oak was observed on Forest Service land.

**Hoffman's sanicle (*Sanicula hoffmannii*)** (*CRPR 4.3*). Hoffmann's sanicle is a biennial to perennial herb in the carrot family (Apiaceae), with blue-green palmate leaves (Appendix C—Site Photographs). It has an umbel-like inflorescence, with green to yellow flowers that bloom from March through May. Hoffmann's sanicle is found on clay or serpentine soils in coastal sage scrub, chaparral, and pine woodland areas below 1,650 feet. Hoffmann's sanicle is considered uncommon in California by the CNPS, but not very endangered, and can be locally abundant where it occurs. It is known to occur from San Mateo County south to Santa Barbara County, and on Santa Rosa Island. Hoffmann's sanicle was observed and mapped in Segments 2, 3B, and 4 during the 2014 botanical surveys.

### 7.3 Special-status Species Abundance and Distribution within the Project Area

Table 4 provides a summary of the occurrences of special-status plant species observed and mapped in the Project Area during the 2014 field surveys. A complete list of all occurrences of special-status plant species and associated population and location data is included in Appendix D.

## Table 4. Special-status Plant Species Observed in the Project Area in 2014.

| Special-status Species (species code) | Number of Occurrences | Approximate Number of Plants Observed | Approximate Total Area* (acres) |
|---|---|---|---|
| **Segment 1** | | | |
| Plummer's baccharis (BAPLP) | 65 | 665 | 2.11 |
| Catalina mariposa lily (CACA) | 31 | 613 | 1.4 |
| Southern California black walnut (JUCAC) | 131 | 1,356 | 23.33 |
| Fish's milkwort (POCOF) | 192 | 2,177 | 35.80 |
| Subtotal Segment 1 | 419 | 4,811 | 62.63 |
| **Segment 2** | | | |
| Plummer's baccharis (BAPLP) | 21 | 411 | 3.27 |
| Southern California black walnut (JUCAC) | 74 | 1,708 | 50.99 |
| Fish's milkwort (POCOF) | 76 | 1,393 | 14.75 |
| Hoffman's sanicle (SAHO) | 2 | 35 | < 0.01 |
| Subtotal Segment 2 | 173 | 3,547 | 69.01 |
| **Segment 3A** | | | |
| Southern California black walnut (JUCAC) | 4 | 30 | 0.02 |
| **Segment 3B** | | | |
| Plummer's baccharis (BAPLP) | 92 | 1,436 | 4.73 |
| Catalina mariposa lily (CACA) | 1 | 60 | 0.08 |
| Southern California black walnut (JUCAC) | 31 | 262 | 10.19 |
| Santa Barbara honeysuckle (LOSUS) | 10 | 16 | 0.07 |
| Fish's milkwort (POCOF) | 74 | 840 | 4.01 |
| Hoffman's sanicle (SAHO) | 4 | 139 | 0.01 |
| Subtotal Segment 3B | 212 | 2,753 | 19.03 |
| **Segment 4** | | | |
| Plummer's baccharis (BAPLP) | 42 | 400 | 1.32 |
| Catalina mariposa lily (CACA) | 15 | 432 | 1.07 |
| Southern California black walnut (JUCAC) | 47 | 308 | 1.33 |
| Ocellated Humboldt lily (LIHUO) | 3 | 8 | < 0.1 |
| Santa Barbara honeysuckle (LOSUS) | 37 | 512 | 4.22 |
| Fish's milkwort (POCOF) | 10 | 40 | 0.02 |
| Nuttall's scrub oak (QUDU) | 31 | 406 | 7.49 |
| Hoffman's sanicle (SAHO) | 7 | 308 | 0.94 |
| Subtotal Segment 4 | 193 | 2,454 | 16.39 |
| **Total** | **1,001** | **13,595** | **167.08** |

*Approximate acreage within the survey area is based on polygon data only (see Appendix D for population data).

# 8. DISCUSSION

The purpose of this study was to establish the presence/absence of special-status botanical resources within the Project Area to ensure that implementation of Project activities will avoid special-status plant populations. A total of 1,001 occurrences of special-status plant species, consisting of approximately 13,595 plants, were observed and mapped during the 2014 botanical surveys. Approximately 50 occurrences of Santa Barbara honeysuckle, a CRPR 1B.2 species, and 40 occurrences of Nuttall's scrub oak, a CRPR 1B.1 species, were observed. All other special-status species are ranked as CRPR 4.2 or lower. No FSS species were observed on Forest Service Land.

Plants with a CRPR of 1B are rare throughout their range with the majority of them endemic to California. Most of the plants that are ranked 1B have declined significantly over the last century. Plants ranked with a 4 are of limited distribution or are infrequent throughout a broader area in California. While they are not considered rare from a statewide perspective, they are uncommon enough that their status is monitored regularly by CNPS.

Occurrences of Santa Barbara honeysuckle and Nuttall's scrub oak within the Project Area total approximately 4.29 acres and 7.49 acres, respectively. The approximate acreage of the remaining special-status plant populations in the Project Area is 155 acres (Plummer's baccharis [11.43 acres], Catalina mariposa lily [2.55 acres], Southern California black walnut [85.86 acres], ocellated Humboldt lily [0.1-acre], Fish's milkwort [54.58 acres], and Hoffman's sanicle [0.96-acre]), the majority located along Project roads. Acreage is calculated based on polygon data only; points collected within the Project Area represent nominal area.

**Segment 1 & Getty Tap:** Habitat in Segment 1 consists largely of scrub and chaparral habitats, with scattered annual grasslands and coast live oak woodlands throughout. Segment 1, including the Getty Tap area, contained the most special-status plant occurrences (419 points and polygons), the largest number of plants observed (approximately 4,811 individuals), and the second largest approximate acreage of occupancy by special-status plant species (62.63 acres).

The majority of the occurrences documented in Segment 1 are Fish's milkwort and Southern California black walnut. Plummer's baccharis also occurs regularly throughout Segment 1 and Catalina mariposa lily is present in several locations. All four of these species are considered to have limited distribution in California (CRPR 4); however, they are locally abundant in the vicinity of the Project Area.

Fish's milkwort and Plummer's baccharis are frequent along roadsides and are often scattered throughout the scrub communities both upslope and downslope of roads in Segment 1. Southern California black walnut occurs in woodland habitats on ridges and in canyons. Catalina

mariposa lily is scattered throughout open areas in scrub habitat, generally along roadsides and along eroded slopes adjacent to roads. Roads in Segment 1 are well established and will require little to no improvements to facilitate Project activities. Overall, few occurrences of special-status plants are located around towers and within proposed ground disturbance areas.

**Segment 2:** This segment of the Project Area consists of dense coast live oak and walnut woodlands, with scrub and chaparral habitat scattered throughout, and grassland habitat along the eastern end. Special-status plant species were documented along nearly the entire length of Segment 2 during 2014 botanical surveys. Segment 2 contains the largest approximate area of occupancy of special-status plants (69.01 acres) and the second largest number of plants observed (approximately 3,547 individuals) in the Project Area.

Four special-status plant species were observed and mapped in Segment 2: Plummer's baccharis, Southern California black walnut, Fish's milkwort, and Hoffmann's sanicle. All of the species are considered to have limited distribution in California, but are locally abundant in the vicinity of the Project Area. Populations of special-status plants in Segment 2 are distributed along the road edges, and upslope and downslope of roads, with few occurrences around or near existing towers. Project activities along Segment 2 will be limited to road improvements and minimal vegetation clearing around work areas.

**Segment 3A:** The majority of the habitat along Segment 3A is agricultural land and developed and ruderal areas. Four occurrences of Southern California black walnut, consisting of approximately 30 individuals (approximately 0.02-acre), were documented on the east end of Segment 3A during 2014 botanical surveys. Construction along Segment 3A is largely complete and little disturbance is expected to occur due to proposed reconductoring and existing wood pole removal. Some vegetation removal may be required on the east end of Segment 3A, near Southern California black walnut occurrences.

**Segment 3B:** Habitat diversity in Segment 3B is high, consisting of chaparral, scrub, woodland, agricultural, grassland, and ruderal/developed habitats. The majority of suitable habitat for special-status plant species is present on the eastern end of Segment 3B; the habitat transitions to avocado orchards toward the middle of the segment and agricultural areas dominate the western end. Segment 3B contained 212 special-status plant occurrences, consisting of approximately 2,753 individuals, and the approximate acreage of occupancy by special-status plant species was 19.03 acres. Six special-status plant species were observed and mapped in the habitats along Segment 3B, including one rare species, Santa Barbara honeysuckle.

As is the case with Segments 2 and 4, Plummer's baccharis, Fish's milkwort, and Southern California black walnut are widely distributed throughout Segment 3B on road edges and along slopes within woodland, chaparral, and scrub habitats, with few occurrences near existing poles

and/or within proposed ground disturbance areas. Catalina mariposa lily and Hoffmann's sanicle are also present along roads in this segment and are documented from one occurrence and four occurrences, respectively. The existing roads in Segment 3B are well established and will require little to no improvements to facilitate Project activities; minimal vegetation clearing may be required around existing poles and in works areas.

Ten occurrences of Santa Barbara honeysuckle were documented in Segment 3B, along the Rincon Creek riparian corridor, adjacent to the Highway 150 West lay down yard, a large, open, ruderal grassland area that will be used to stage Project equipment and construction materials. Rincon Creek and the associated riparian corridor are present along the southern edge of the laydown yard.

**Segment 4:** Habitat diversity in Segment 4 is also high and consists of woodland, chaparral, scrub, agricultural, grassland, developed, and ruderal/disturbed habitats. Segment 4 contained 193 special-status plant occurrences, consisting of approximately 2,454 individuals, and the approximate acreage of occupancy by special-status plant species was 16.39 acres.

Eight special-status plant species were observed and mapped in the habitats along Segment 4, including two rare species: Santa Barbara honeysuckle and Nuttall's scrub oak. The majority of the special-status plant occurrences, and all of the rare plant occurrences, are located on the west end of Segment 4; however, populations of Plummer's baccharis, Fish's milkwort, and Southern California black walnut are widely distributed throughout Segment 4 on road edges and along slopes within woodland, chaparral, and scrub habitats.

Within Segment 4, Catalina mariposa lily is distributed along the roadsides in grassy areas and in openings in chaparral on the western end of the segment between Constructs 121 and 129. Hoffmann's sanicle is also present in this area between Construct 131 and the northernmost portion of the access road. In addition, three occurrences of ocellated Humboldt lily, consisting of eight plants, are present in a riparian drainage on the northern portion of the access road, north of Construct 126. These are the only occurrences of ocellated Humboldt lily within the Project Area. Occurrences of Hoffmann's sanicle and Southern California black walnut are also present in the same riparian drainage.

Two rare plant species, Santa Barbara honeysuckle and Nuttall's scrub oak, are also documented on the west end of Segment 4. Santa Barbara honeysuckle occurs along roadsides in chaparral habitat and near work areas between Constructs 121 and 126, and Nuttall's scrub oak is documented between Constructs 120 and 131. The scrub oak woodland habitat in Segment 4 is dominated by common scrub oak (*Quercus berberidifolia*) and, based on species characteristics observed in the field, it is likely that the Nuttall's scrub oak documented within the Project Area are hybrids of *Q. berberidifolia* x *Q. dumosa*.

**LPNF Jurisdictional Areas:** LPNF jurisdictional locations are along Segment 4 and Project components located on Forest Service Land include the following: Constructs 96, 97, 101, and 104 and the associated spur roads as well as the roads that lead to Constructs 107-109. Habitat in these locations consists of coast live oak woodland, chaparral, and scrub vegetation types, and all except Construct 96 are adjacent to and/or partially within avocado orchards.

No FSS plant species were observed on LPNF jurisdictional land within the Project Area. Observations of special-status plant species in these locations were limited to three Southern California black walnut occurrences at Construct 96, two Southern California black walnut occurrences at Construct 97, and one Plummer's baccharis occurrence at Construct 101.

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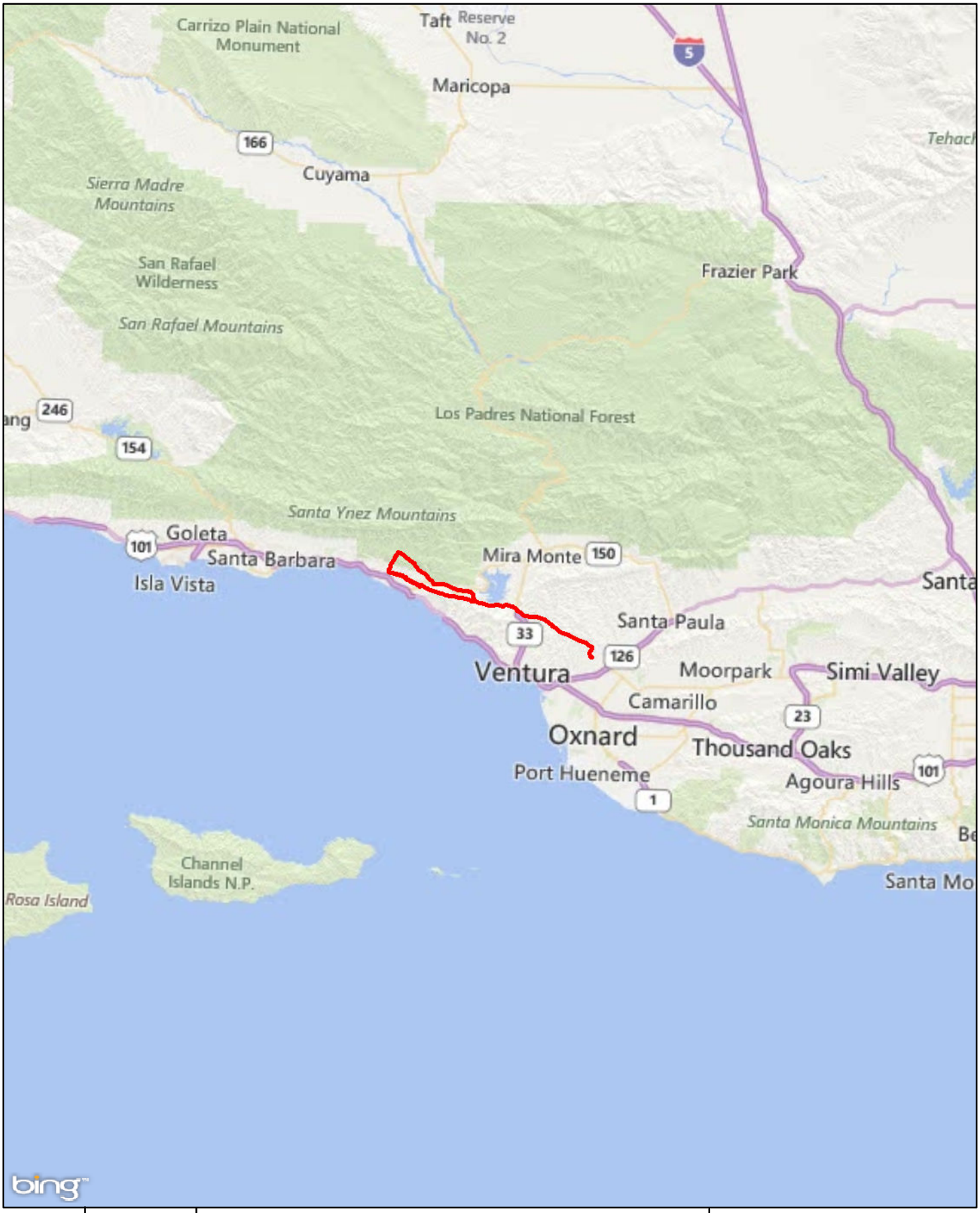
# APPENDIX A
# PROJECT MAPS

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SBCRP

Miles 0 10

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**Figure 1. Project Vicinity Map**

Santa Barbara County Reliability Project

Santa Barbara and Ventura Counties, CA

October 2014

GANDA

**SBCRP**

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

Miles: 0 – 2

Kilometers: 0 – 2

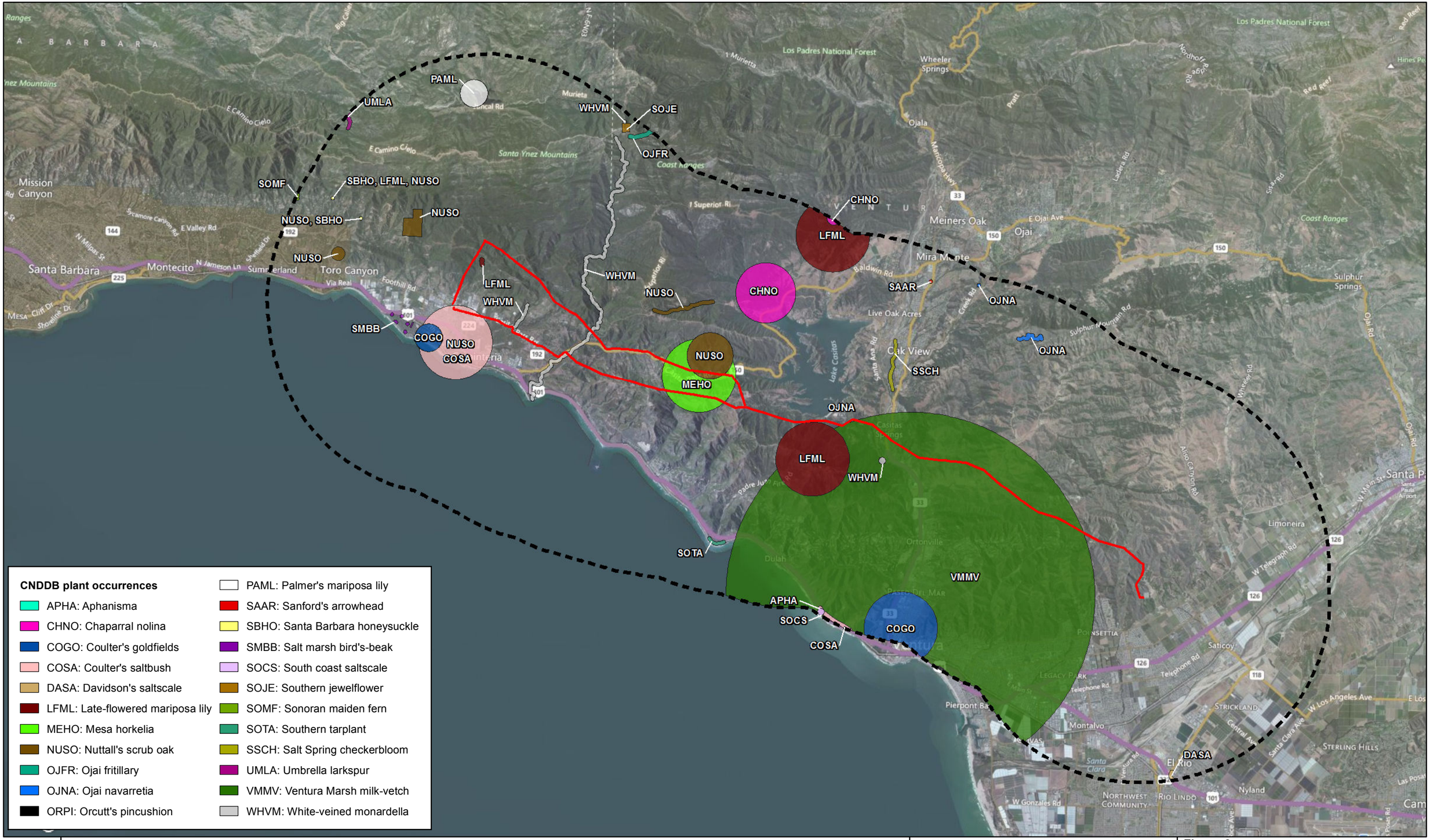
1:175,000

**Figure 2. Project Location Map**

Santa Barbara County Reliability Project

Santa Barbara and Ventura Counties, CA

October 2014




GANDA

SBCRP

5 Mile Buffer

1:150,000

Miles 0 2

Kilometers 0 4

Project Location

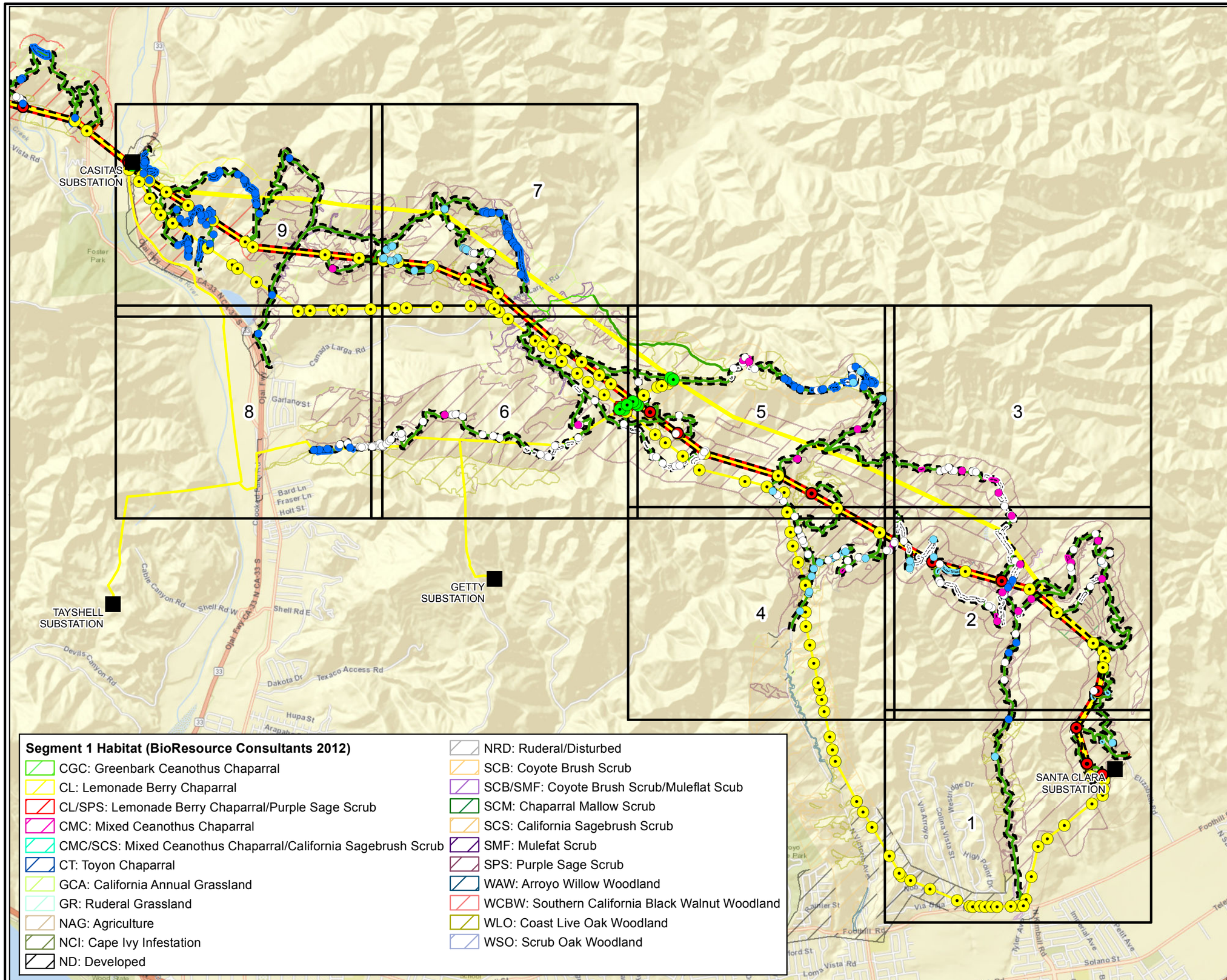
**Figure 3**
**CNDDB Plant Occurrences**

Santa Barbara County Reliability Project

Santa Barbara and Ventura Counties, CA
October 2014

**Figure 4**
**SBCRP Segment 1**
**Special-status Plant Occurrences Maps**

Ventura and Santa Barbara Counties, CA
October 2014




**Special-status Plant Observations 2014**

- Plummer's baccharis (Baccharis plummerae ssp. plummerae) (BAPLP)
- Catalina mariposa lily (Calochortus catalinae) (CACA)
- Southern California black walnut (Juglans californica) (JUCA)
- Fish's milkwort (Polygala cornuta var. fishae) (POCOF)
- Plummer's baccharis (Baccharis plummerae ssp. plummerae) (BAPLP)
- Catalina mariposa lily (Calochortus catalinae) (CACA)
- Southern California black walnut (Juglans californica) (JUCA)
- Fish's milkwort (Polygala cornuta var. fishae) (POCOF)

**Project Features**

- Substation Location
- Foundation to Be Removed
- Proposed Structure Locations
- Existing Structure Locations
- Potential Structures To Be Removed
- Botanical Survey Area 100

**Access Roads Centerline**

- Existing, 0 = No Improvement
- Existing, 3 = Medium Improvement
- Proposed 66 kV
- Proposed OPGW
- Existing SubTrans 66 kV Lines
- Construction Material Yards
- Construction Disturbance Areas (From
- Guard Structures

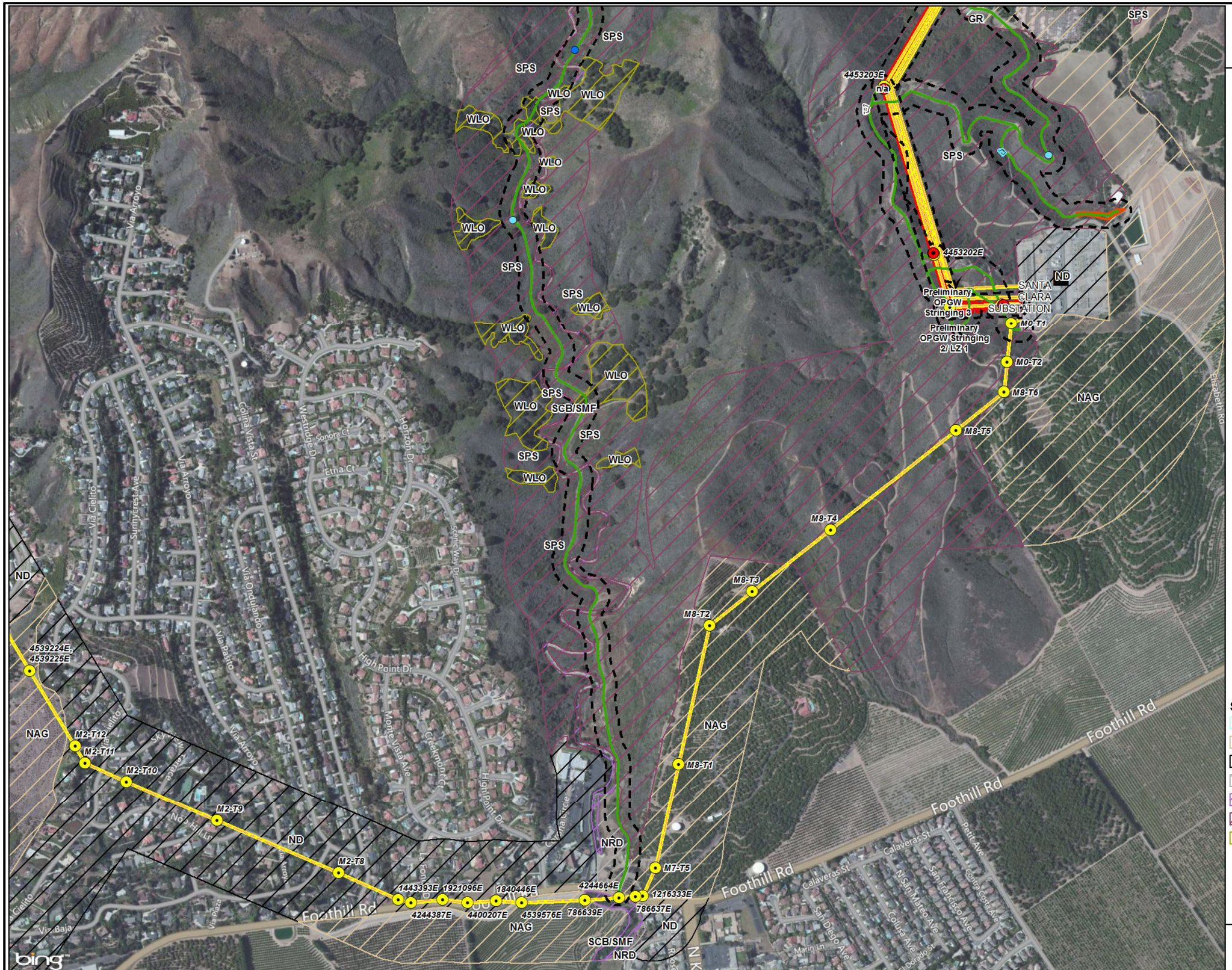
GANDA

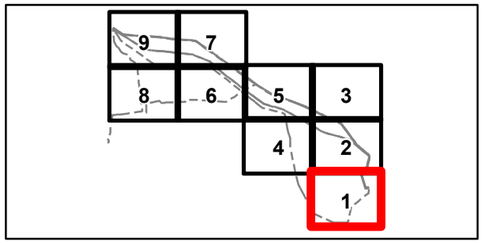
Miles 0 0.5

Kilometers 0 0.5

Map 1

**Figure 4**
**SBCRP Segment 1**
**Special-status Plant Occurrences Maps**
October 2014




**Special-status Plant Observations 2014**

- Plummer's baccharis (Baccharis plummerae ssp. plummerae) (BAPLP)
- Southern California black walnut (Juglans californica) (JUCA)
- Plummer's baccharis (Baccharis plummerae ssp. plummerae) (BAPLP)
- Fish's milkwort (Polygala cornuta var. fishae) (POCOF)

**Project Features**

- Substation Location
- Foundation to Be Removed
- Existing Structure Locations
- Botanical Survey Area 100 feet

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- SBCRP Segment 1
- Proposed 66 kV Alignment
- Proposed OPGW Alignment
- Existing SubTrans 66 kV Lines
- Construction Material Yards
- Construction Disturbance Areas (From TPD)
- Guard Structures

**Segment 1 Habitat (BioResource Consultants 2012)**

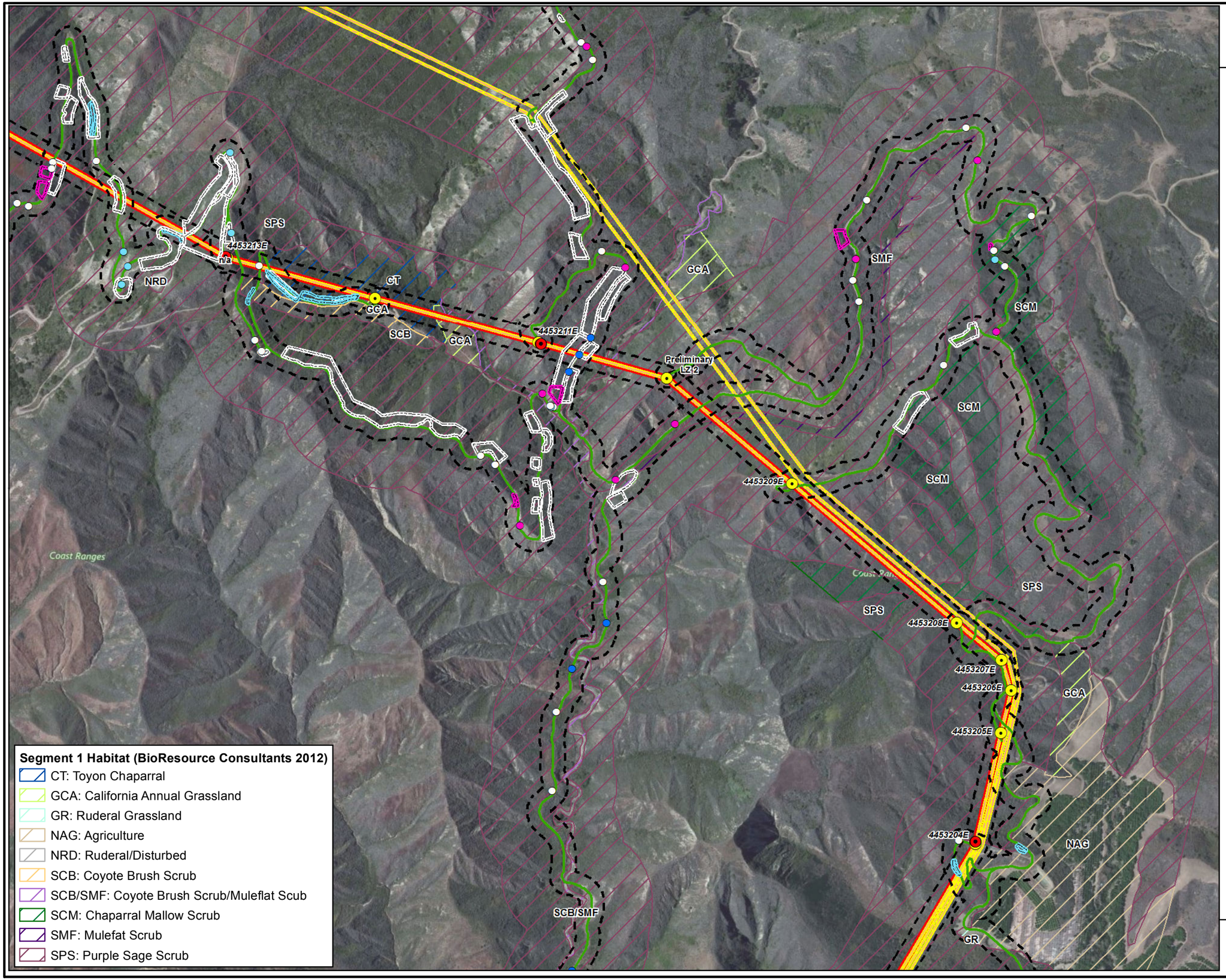
- GR: Ruderal Grassland
- NAG: Agriculture
- ND: Developed
- NRD: Ruderal/Disturbed
- SCB/SMF: Coyote Brush Scrub/Muleflat Scub
- SPS: Purple Sage Scrub
- WLO: Coast Live Oak Woodland

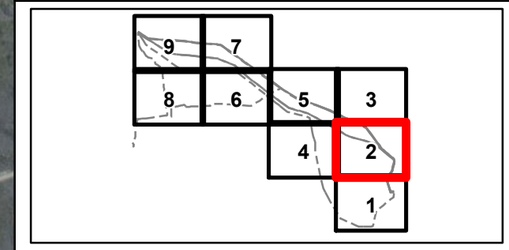
GANDA

Meters 0 200
Feet 0 400
1 inch = 750 feet

Map 2

**Figure 4**
**SBCRP Segment 1**
**Special-status Plant Occurrences Maps**
October 2014




**Special-status Plant Observations 2014**

- Plummer's baccharis (Baccharis plummerae ssp. plummerae) (BAPLP)
- Catalina mariposa lily (Calochortus catalinae) (CACA)
- Southern California black walnut (Juglans californica) (JUCA)
- Fish's milkwort (Polygala cornuta var. fishae) (POCOF)
- Plummer's baccharis (Baccharis plummerae ssp. plummerae) (BAPLP)
- Catalina mariposa lily (Calochortus catalinae) (CACA)
- Fish's milkwort (Polygala cornuta var. fishae) (POCOF)

**Project Features**

- Foundation to Be Removed
- Existing Structure Locations
- Botanical Survey Area 100

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- SBCRP Segment 1
- Proposed 66 kV
- Proposed OPGW
- Existing SubTrans 66 kV Lines
- Construction Disturbance Areas (From TPD)

GANDA

Meters 0 200
Feet 0 400

1 inch = 750 feet

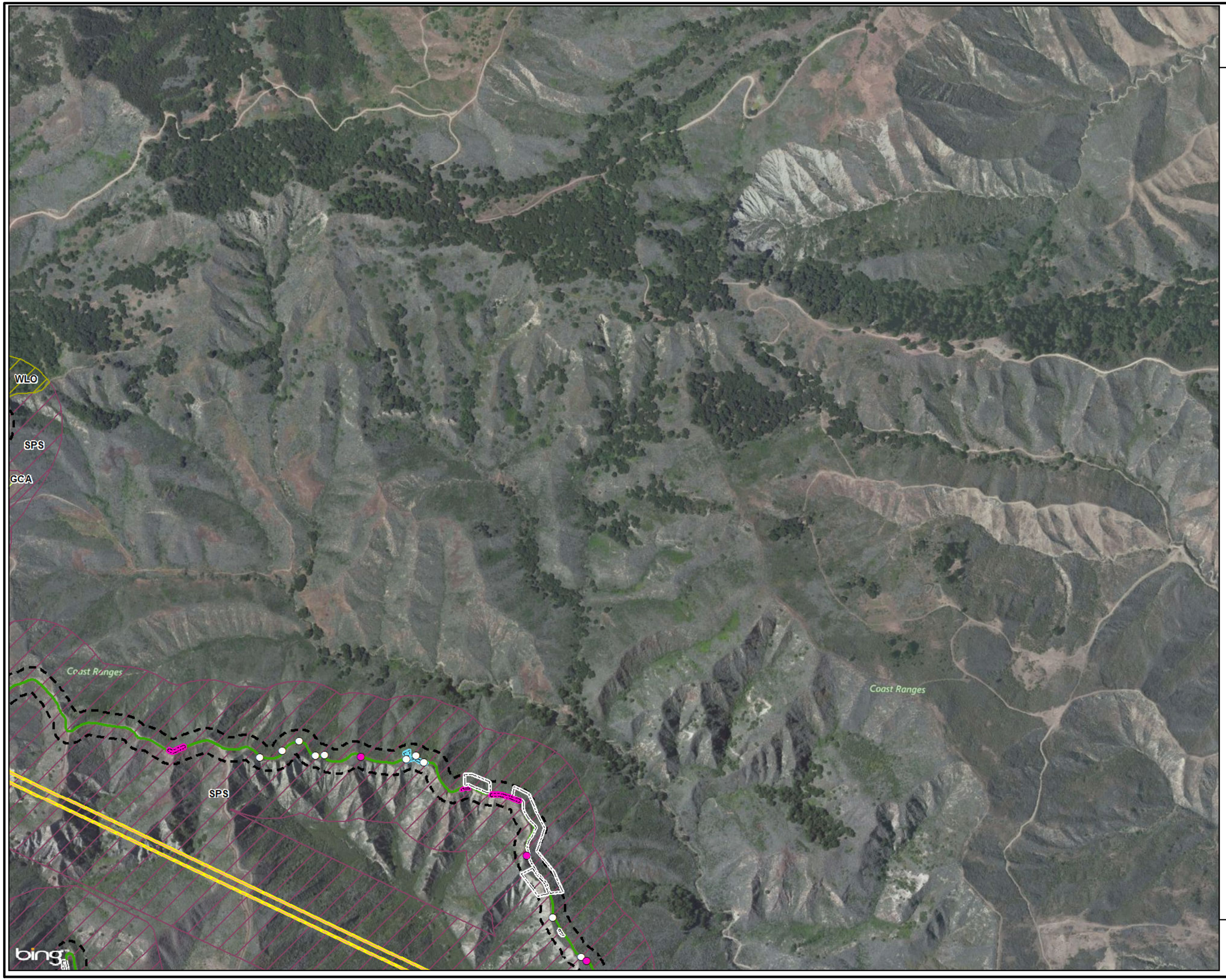
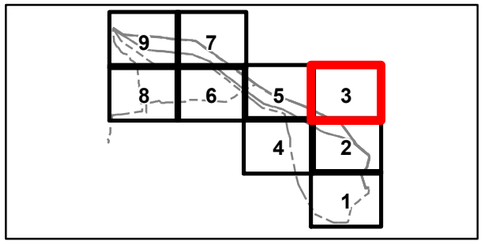



**Figure 4**
**SBCRP Segment 1**
**Special-status Plant Occurrences Maps**
October 2014

*Map 3*




**Special-status Plant Observations 2014**

- Catalina mariposa lily (Calochortus catalinae) (CACA)
- Fish's milkwort (Polygala cornuta var. fishae) (POCOF)
- Plummer's baccharis (Baccharis plummerae ssp. plummerae) (BAPLP)
- Catalina mariposa lily (Calochortus catalinae) (CACA)
- Fish's milkwort (Polygala cornuta var. fishae) (POCOF)

**Project Features**

- Botanical Survey Area 100

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- SBCRP Segment 1
- Proposed 66 kV
- Existing SubTrans 66 kV Lines

**Segment 1 Habitat (BioResource Consultants 2012)**

- GCA: California Annual
- SPS: Purple Sage Scrub
- WLO: Coast Live Oak Woodland

GANDA

Meters 0 200
Feet 0 400

1 inch = 750 feet

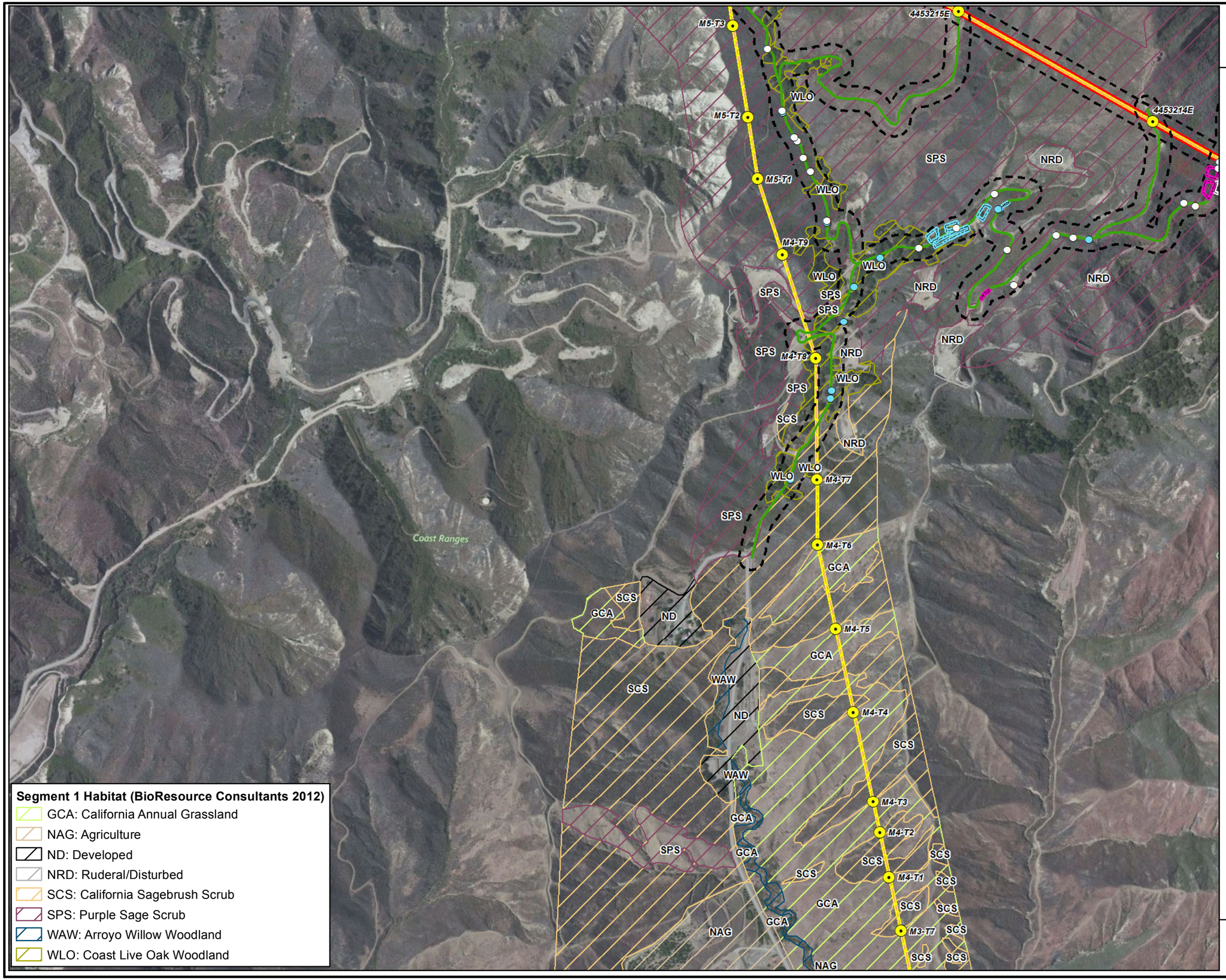
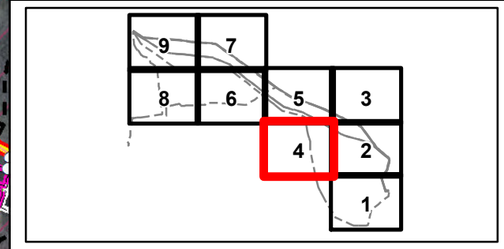



**Figure 4**
**SBCRP Segment 1**
**Special-status Plant Occurrences Maps**
October 2014

*Map 4*




**Special-status Plant Observations**

- Plummer's baccharis (Baccharis plummerae ssp. plummerae) (BAPLP)
- Fish's milkwort (Polygala cornuta var. fishae) (POCOF)
- Plummer's baccharis (Baccharis plummerae ssp. plummerae) (BAPLP)
- Catalina mariposa lily (Calochortus catalinae) (CACA)
- Fish's milkwort (Polygala cornuta var. fishae) (POCOF)

**Project Features**

- Existing Structure Locations
- Botanical Survey Area 100

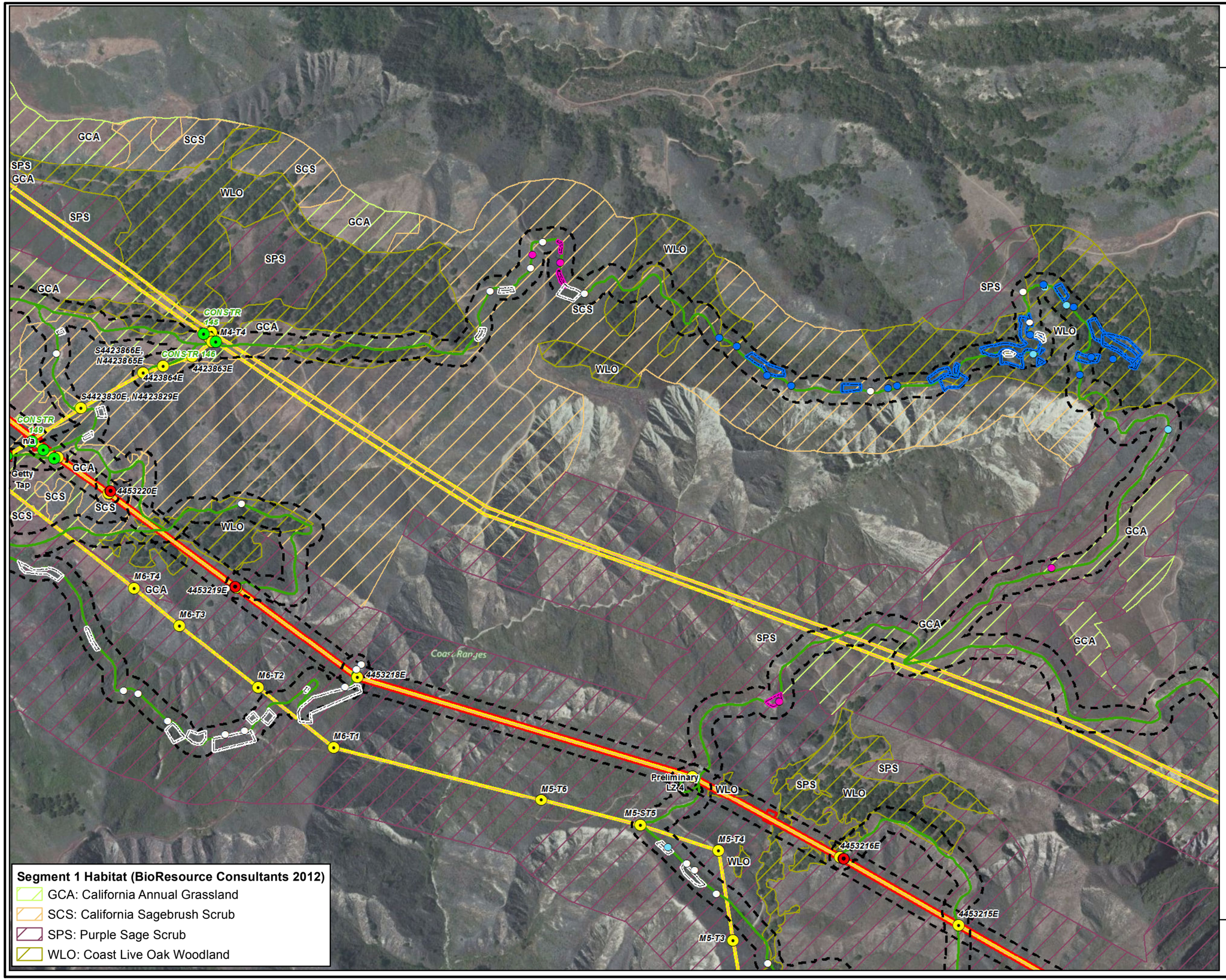
**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- SBCRP Segment 1
- Proposed 66 kV
- Proposed OPGW
- Existing SubTrans 66 kV Lines

GANDA

Meters 0 200
Feet 0 400

1 inch = 750 feet

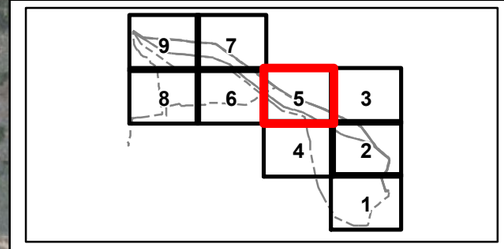



**Segment 1 Habitat (BioResource Consultants 2012)**

- GCA: California Annual Grassland
- SCS: California Sagebrush Scrub
- SPS: Purple Sage Scrub
- WLO: Coast Live Oak Woodland

**Figure 4**
**SBCRP Segment 1**
**Special-status Plant Occurrences Maps**
October 2014

*Map 5*




**Special-status Plant Observations 2014**

- Plummer's baccharis (Baccharis plummerae ssp. plummerae) (BAPLP)
- Catalina mariposa lily (Calochortus catalinae) (CACA)
- Southern California black walnut (Juglans californica) (JUCA)
- Fish's milkwort (Polygala cornuta var. fishae) (POCOF)
- Plummer's baccharis (Baccharis plummerae ssp. plummerae) (BAPLP)
- Catalina mariposa lily (Calochortus catalinae) (CACA)
- Southern California black walnut (Juglans californica) (JUCA)
- Fish's milkwort (Polygala cornuta var. fishae) (POCOF)

**Project Features**

- Foundation to Be Removed
- Proposed Structure Locations
- Existing Structure Locations
- Potential Structures To Be Removed
- Botanical Survey Area 100

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- SBCRP Segment 1
- Proposed 66 kV
- Proposed OPGW
- Existing SubTrans 66 kV Lines
- Construction Disturbance Areas (From TPD)
- Guard Structures

GANDA

Meters 0 200
Feet 0 400

1 inch = 750 feet

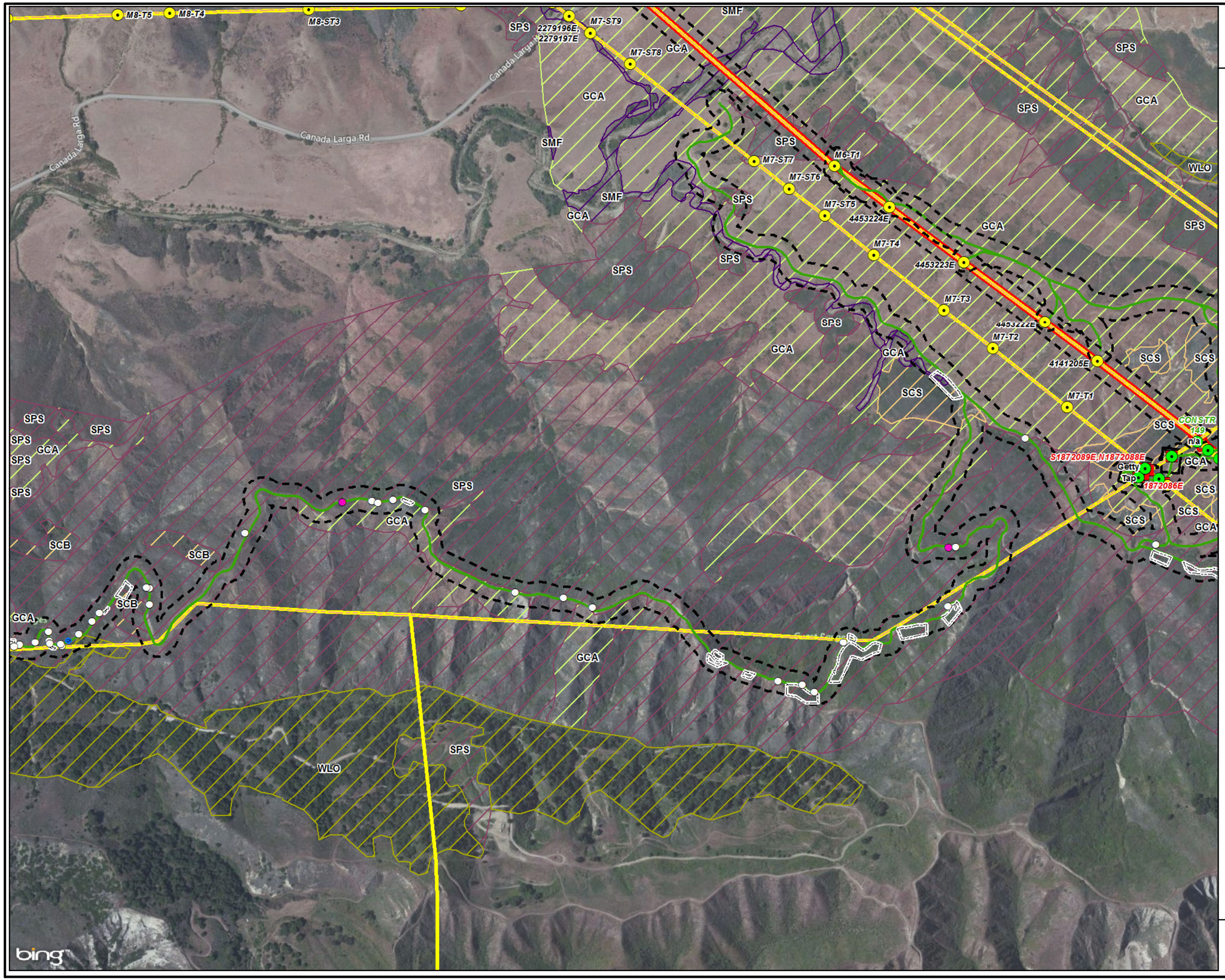
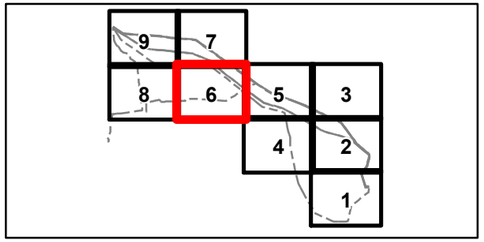



**Figure 4**
**SBCRP Segment 1**
**Special-status Plant Occurrences Maps**
October 2014

*Map 6*




**Special-status Plant Observations 2014**

- Catalina mariposa lily (Calochortus catalinae) (CACA)
- Fish's milkwort (Polygala cornuta var. fishae) (POCOF)
- Southern California black walnut (Juglans californica) (JUCA)
- Fish's milkwort (Polygala cornuta var. fishae) (POCOF)

**Project Features**

- Proposed Structure Locations
- Existing Structure Locations
- Potential Structures To Be Removed
- Botanical Survey Area 100

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- SBCRP Segment 1
- Proposed 66 kV
- Proposed OPGW
- Existing SubTrans 66 kV Lines
- Construction Disturbance Areas (From TPD)
- Guard Structures

**Segment 1 Habitat (BioResource Consultants 2012)**

- GCA: California Annual
- SCB: Coyote Brush Scrub
- SCS: California Sagebrush Scrub
- SMF: Mulefat Scrub
- SPS: Purple Sage Scrub
- WLO: Coast Live Oak Woodland

GANDA

Meters 0 200
Feet 0 400

1 inch = 750 feet

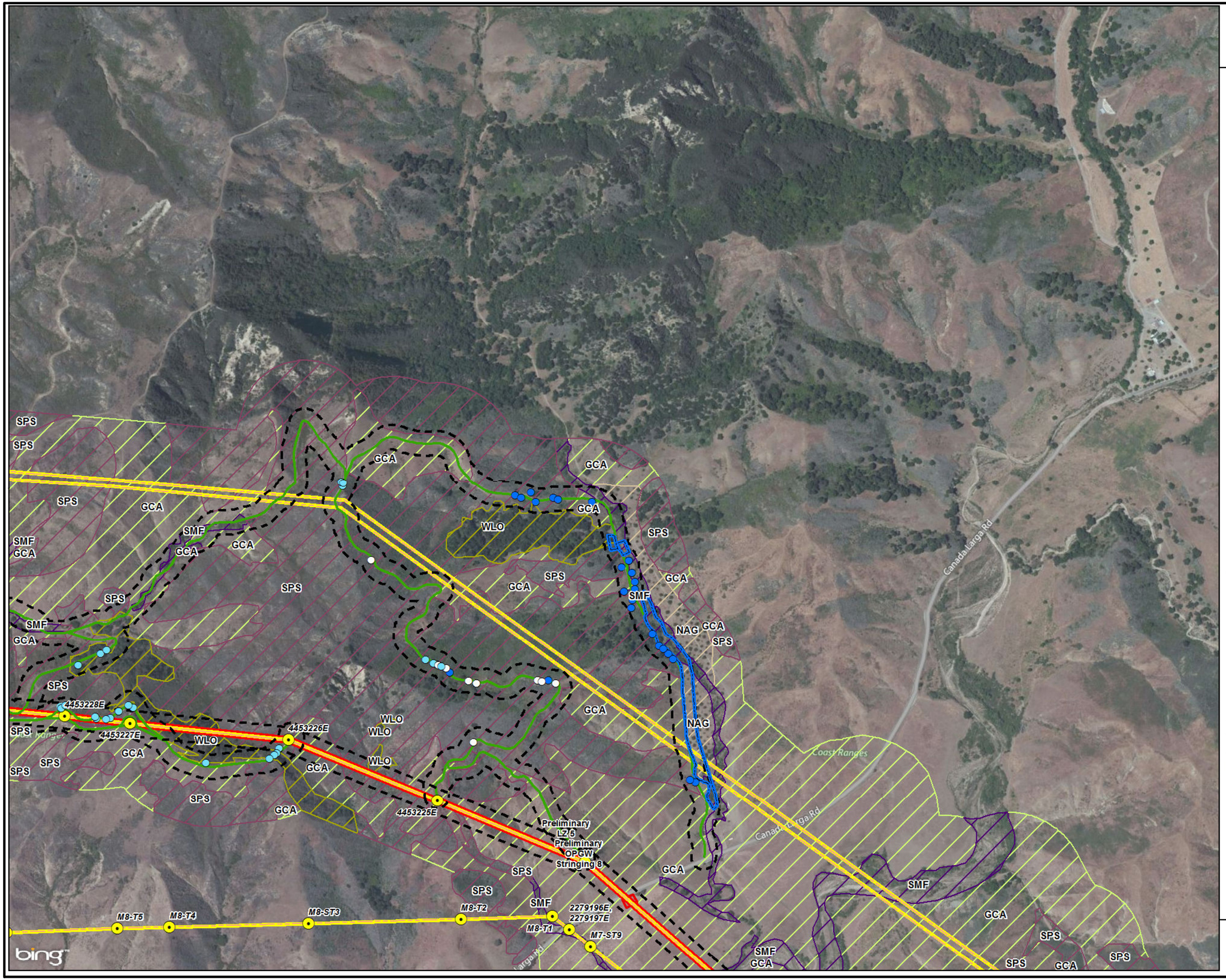
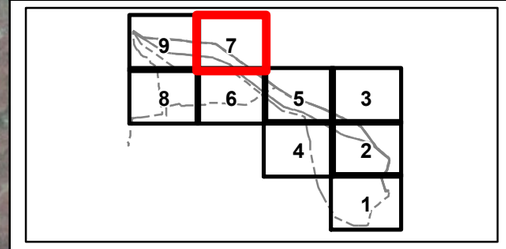



**Figure 4**
**SBCRP Segment 1**
**Special-status Plant Occurrences Maps**
October 2014

*Map 7*




**Special-status Plant Observations 2014**

- Plummer's baccharis (Baccharis plummerae ssp. plummerae) (BAPLP)
- Southern California black walnut (Juglans californica) (JUCA)
- Fish's milkwort (Polygala cornuta var. fishae) (POCOF)
- Plummer's baccharis (Baccharis plummerae ssp. plummerae) (BAPLP)
- Southern California black walnut (Juglans californica) (JUCA)

**Project Features**

- Existing Structure Locations
- Botanical Survey Area 100

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- SBCRP Segment 1
- Proposed 66 kV
- Proposed OPGW
- Existing SubTrans 66 kV Lines
- Construction Disturbance Areas (From TPD)
- Guard Structures

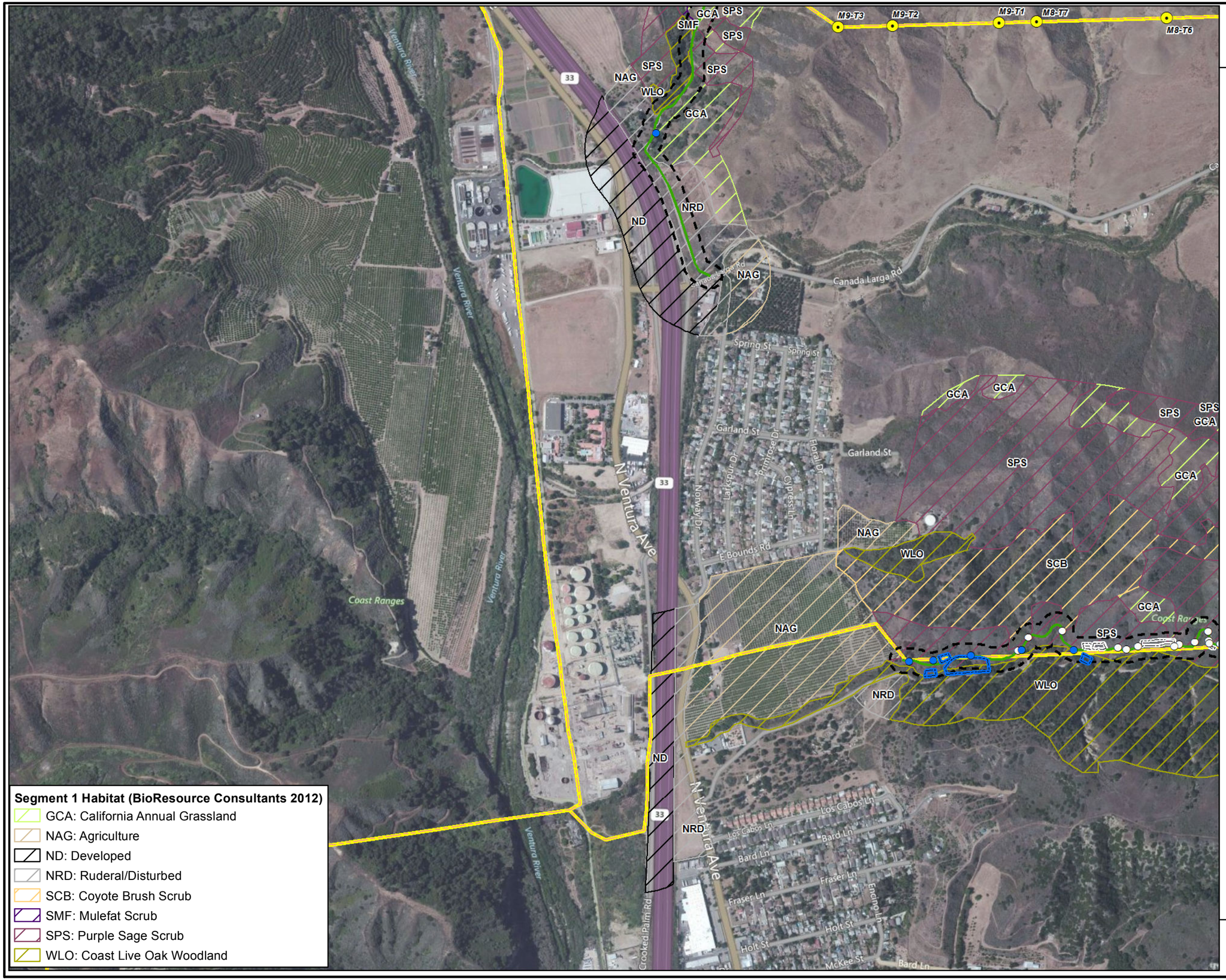
**Segment 1 Habitat (BioResource Consultants 2012)**

- GCA: California Annual Grassland
- NAG: Agriculture
- SMF: Mulefat Scrub
- SPS: Purple Sage Scrub
- WLO: Coast Live Oak Woodland

GANDA

Meters 0 200
Feet 0 400

1 inch = 750 feet

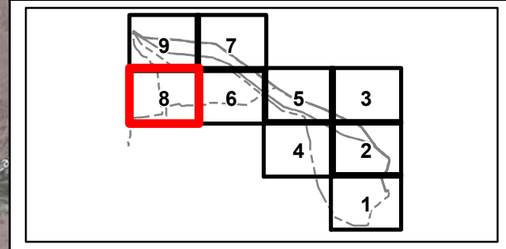



**Segment 1 Habitat (BioResource Consultants 2012)**

- GCA: California Annual Grassland
- NAG: Agriculture
- ND: Developed
- NRD: Ruderal/Disturbed
- SCB: Coyote Brush Scrub
- SMF: Mulefat Scrub
- SPS: Purple Sage Scrub
- WLO: Coast Live Oak Woodland

**Figure 4**
**SBCRP Segment 1**
**Special-status Plant Occurrences Maps**
October 2014

*Map 8*




**Special-status Plant Observations 2014**

- Southern California black walnut (Juglans californica) (JUCA)
- Fish's milkwort (Polygala cornuta var. fishae) (POCOF)
- Southern California black walnut (Juglans californica) (JUCA)
- Fish's milkwort (Polygala cornuta var. fishae) (POCOF)

**Project Features**

- Existing Structure Locations
- Botanical Survey Area 100 feet

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- SBCRP Segment 1
- Proposed 66 kV Alignment
- Existing SubTrans 66 kV Lines

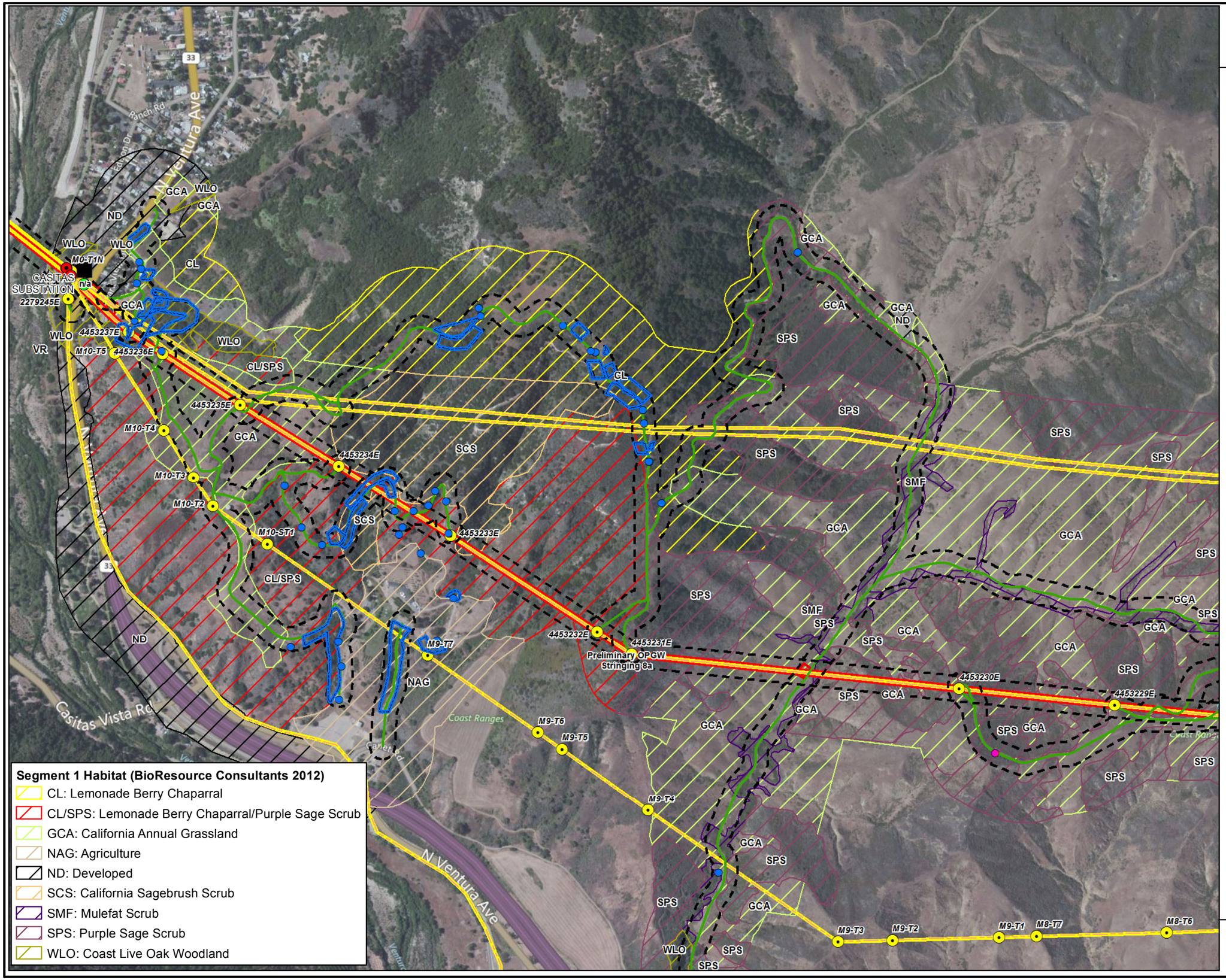
GANDA

Meters 0 200
Feet 0 400

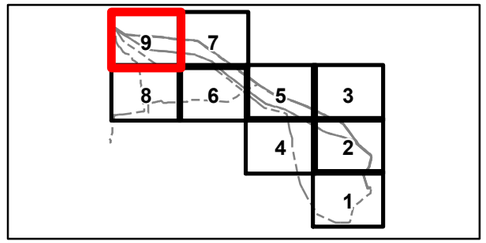
1 inch = 750 feet

Map 9

**Figure 4**
**SBCRP Segment 1**
**Special-status Plant Occurrences Maps**
October 2014




**Segment 1 Habitat (BioResource Consultants 2012)**
- CL: Lemonade Berry Chaparral
- CL/SPS: Lemonade Berry Chaparral/Purple Sage Scrub
- GCA: California Annual Grassland
- NAG: Agriculture
- ND: Developed
- SCS: California Sagebrush Scrub
- SMF: Mulefat Scrub
- SPS: Purple Sage Scrub
- WLO: Coast Live Oak Woodland




**Special-status Plant Observations 2014**
- Plummer's baccharis (Baccharis plummerae ssp. plummerae) (BAPLP)
- Catalina mariposa lily (Calochortus catalinae) (CACA)
- Southern California black walnut (Juglans californica) (JUCA)
- Plummer's baccharis (Baccharis plummerae ssp. plummerae) (BAPLP)
- Southern California black walnut (Juglans californica) (JUCA)

**Project Features**
- Substation Location
- Foundation to Be Removed
- Proposed Structure Locations
- Existing Structure Locations
- Botanical Survey Area 100

**Access Roads Centerline**
- Existing, 3 = Medium Improvement
- SBCRP Segment 1
- Proposed 66 kV
- Proposed OPGW
- Existing SubTrans 66 kV Lines
- Construction Disturbance Areas (From TPD)
- Guard Structures

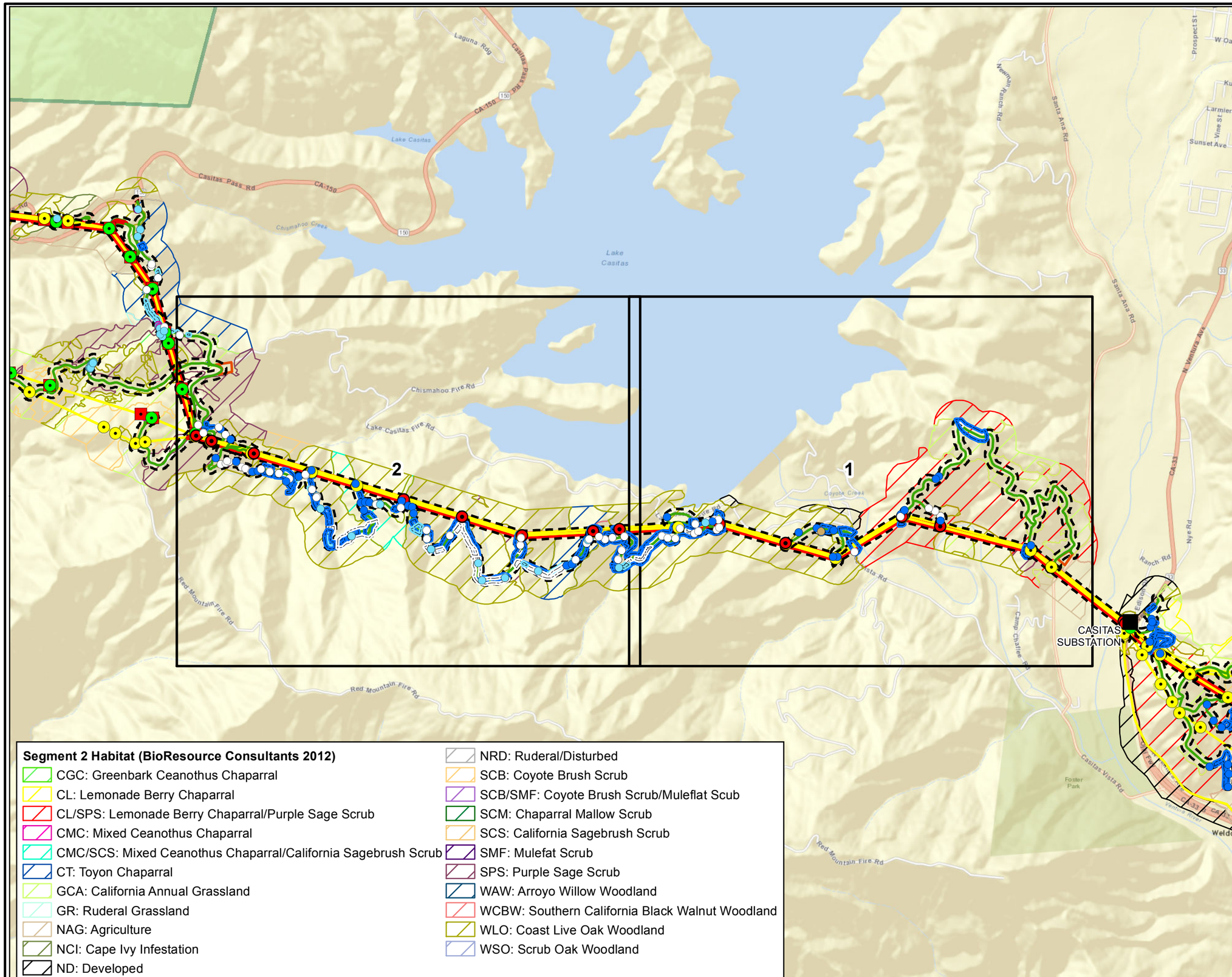
GANDA

Meters 0 200
Feet 0 400

1 inch = 750 feet

**Figure 5**
**SBCRP Segment 2**
**Special-status Plant Occurrences Maps**

Ventura and Santa Barbara Counties, CA
October 2014




**Special-status Plant Observations 2014**

- Plummer's baccharis (Baccharis plummerae ssp. plummerae) (BAPLP)
- Southern California black walnut (Juglans californica) (JUCA)
- Fish's milkwort (Polygala cornuta var. fishae) (POCOF)
- Hoffman's sanicle (Sanicula hoffmannii) (SAHO)
- Plummer's baccharis (Baccharis plummerae ssp. plummerae) (BAPLP)
- Southern California black walnut (Juglans californica) (JUCA)
- Fish's milkwort (Polygala cornuta var. fishae) (POCOF)

**Project Features**

- Substation Location
- Foundation to Be Removed
- Proposed Structure Locations
- Existing Structure Locations
- Potential Structures To Be Removed
- Botanical Survey Area 100

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- Existing, 4 = Heavy Improvement
- Existing, 5 = Design Road
- Proposed, 5 = Design Road
- Proposed 66 kV
- Proposed OPGW
- Existing SubTrans 66 kV Lines
- Civil Erosion Control Line
- Access Roads Edge
- Civil Erosion Control Features
- Construction Material Yards
- Construction Disturbance Areas (From
- Grading Limits
- Guard Structures
- Los Padres National Forest Boundary

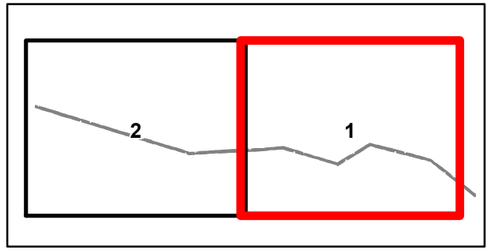
GANDA

Miles 0 0.5

Kilometers 0 0.5

**Figure 5**
**SBCRP Segment 2**
**Special-status Plant Occurrences Maps**
October 2014

*Map 1*




**Special-status Plant Observations 2014**

- Plummer's baccharis (Baccharis plummerae ssp. plummerae) (BAPLP)
- Southern California black walnut (Juglans californica) (JUCA)
- Fish's milkwort (Polygala cornuta var. fishae) (POCOF)
- Hoffman's sanicle (Sanicula hoffmannii) (SAHO)
- Southern California black walnut (Juglans californica) (JUCA)
- Fish's milkwort (Polygala cornuta var. fishae) (POCOF)

**Project Features**

- Foundation to Be Removed
- Existing Structure Locations
- Botanical Survey Area 100

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- SBCRP Segment 2
- Proposed 66 kV Alignment
- Proposed OPGW
- Existing SubTrans 66 kV Lines
- Construction Material Yards
- Construction Disturbance Areas (From TPD)
- Guard Structures

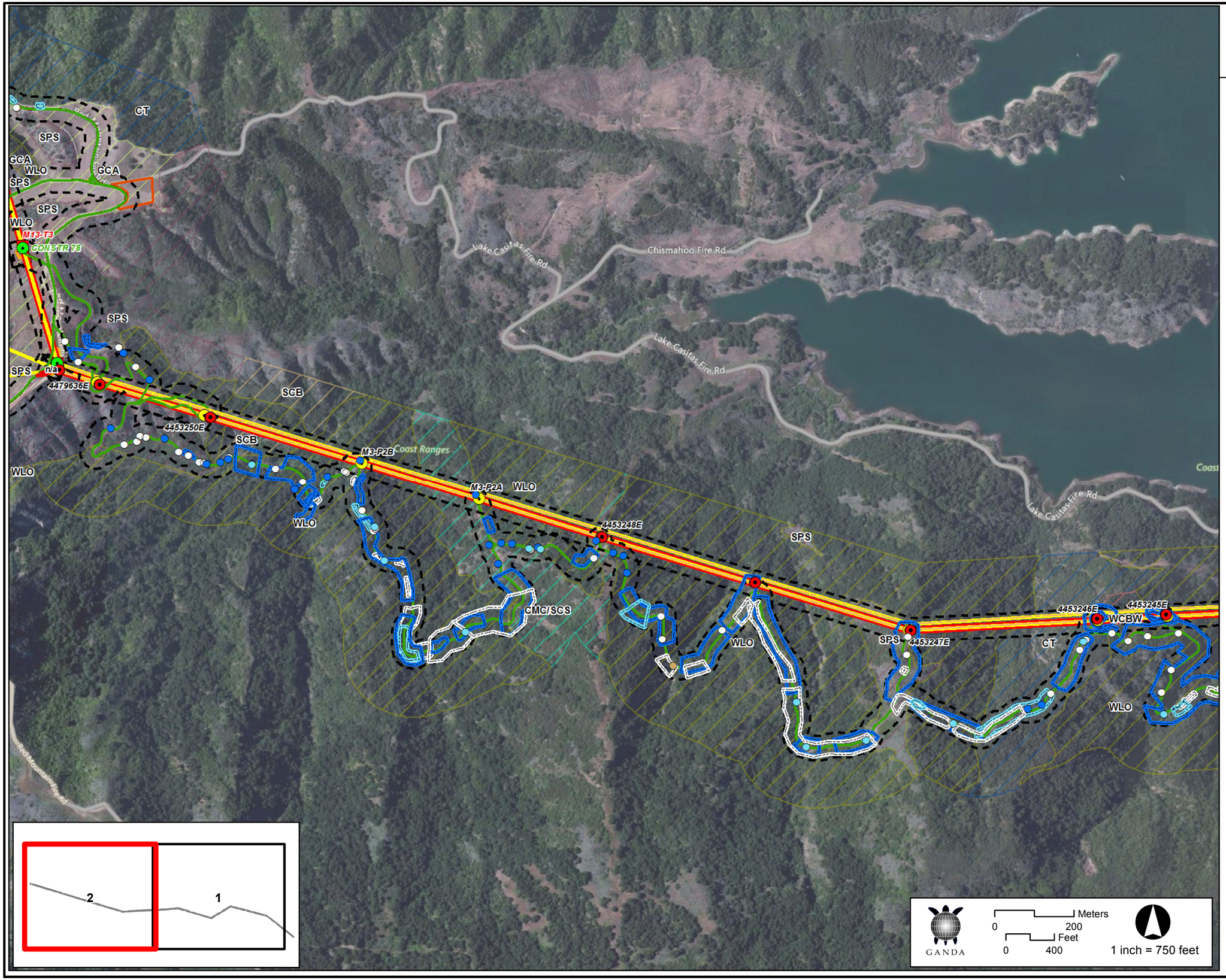
**Segment 2 Habitat (BioResource Consultants 2012)**

- CL/SPS: Lemonade Berry Chaparral/Purple Sage Scrub
- GCA: California Annual
- NAG: Agriculture
- ND: Developed
- SPS: Purple Sage Scrub
- WLO: Coast Live Oak Woodland

GANDA

Meters 0 200
Feet 0 400

1 inch = 750 feet




Map 2

**Figure 5**
**SBCRP Segment 2**
**Special-status Plant Occurrences Maps**
October 2014

**Special-status Plant Observations 2014**

- Plummer's baccharis (Baccharis plummerae ssp. plummerae) (BAPLP)
- Southern California black walnut (Juglans californica) (JUCA)
- Fish's milkwort (Polygala cornuta var. fishae) (POCOF)
- Hoffman's sanicle (Sanicula hoffmannii) (SAHO)
- Plummer's baccharis (Baccharis plummerae ssp. plummerae) (BAPLP)
- Southern California black walnut (Juglans californica) (JUCA)
- Fish's milkwort (Polygala cornuta var. fishae) (POCOF)

**Project Features**

- Foundation to Be Removed
- Proposed Structure Locations
- Existing Structure Locations
- Potential Structures To Be Removed
- Botanical Survey Area 100

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- Existing, 5 = Design Road
- Proposed, 5 = Design Road
- SBCRP Segment 2
- Proposed 66 kV Alignment
- Proposed OPGW
- Existing SubTrans 66 kV Lines
- Civil Erosion Control Line
- Access Roads Edge
- Civil Erosion Control Features
- Construction Material Yards
- Construction Disturbance Areas (From TPD)
- Grading Limits

**Segment 2 Habitat (BioResource Consultants 2012)**

- CMC/SCS: Mixed Ceanothus Chaparral/California Sagebrush Scrub
- CT: Toyon Chaparral
- GCA: California Annual
- SCB: Coyote Brush Scrub
- SPS: Purple Sage Scrub
- WCBW: Southern California Black Walnut Woodland
- WLO: Coast Live Oak Woodland

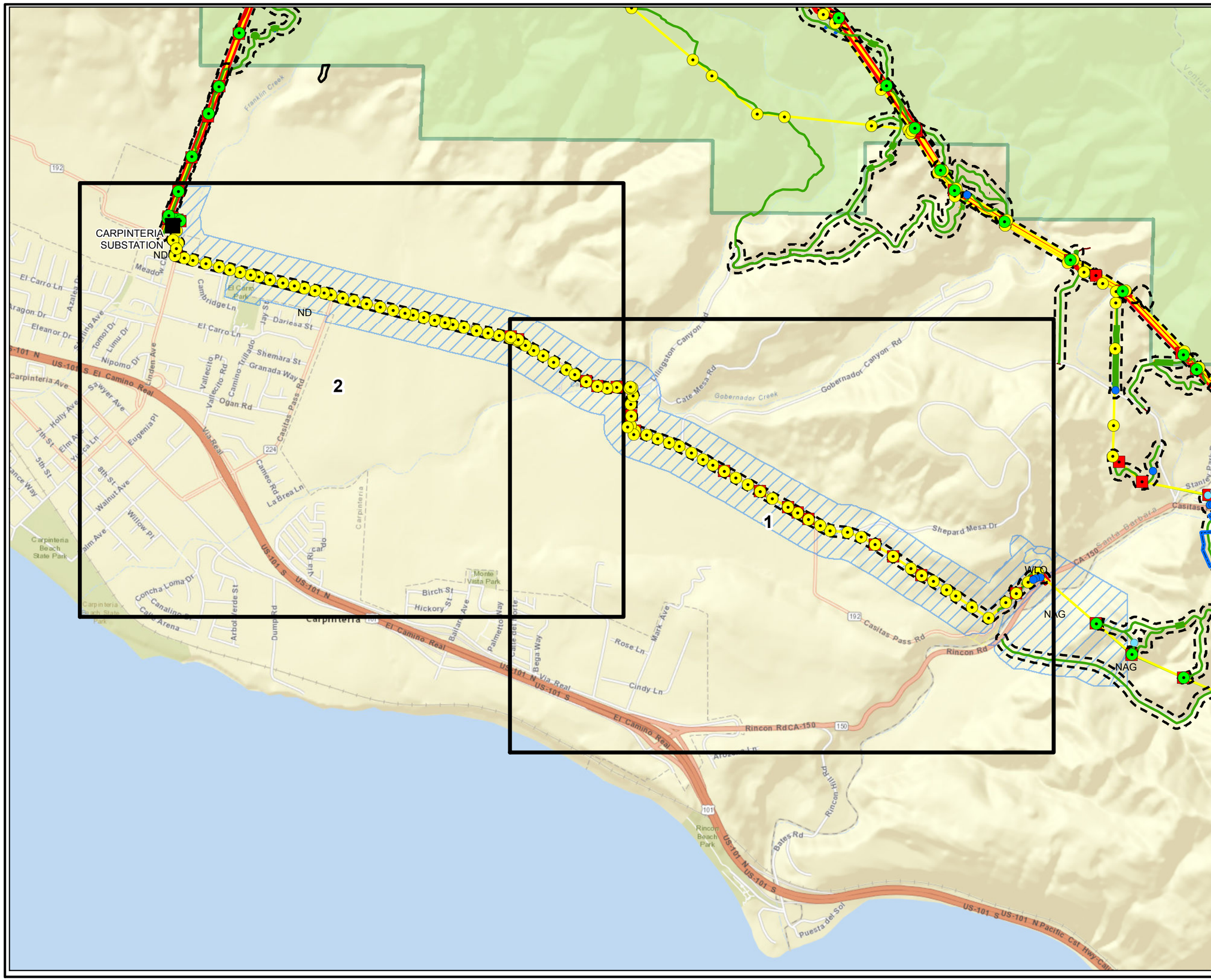



**Figure 6**
**SBCRP Segment 3A**
**Special-status Plant Occurrences Maps**

Ventura and Santa Barbara Counties, CA
October 2014

**Special-status Plant Observations 2014**

- Southern California black walnut (Juglans californica) (JUCA)
- Southern California black walnut (Juglans californica) (JUCA)

**Project Features**

- Substation Location
- Proposed Structure Locations
- Existing Structure Locations
- Potential Structures To Be Removed
- Botanical Survey Area 100

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- Existing, 4 = Heavy Improvement
- Existing, 5 = Design Road
- New, 5 = Design Road
- Proposed, 5 = Design Road
- Proposed 66 kV
- Proposed OPGW
- Existing SubTrans 66 kV Lines
- Civil Erosion Control Line
- Access Roads Edge
- Civil Erosion Control Features
- Construction Material Yards
- Construction Disturbance Areas (From TPD)
- Grading Limits
- Guard Structures

**Segment 3A Habitat (BioResource Consultants 2012)**

- NAG: Agriculture
- WLO: Coast Live Oak Woodland
- Los Padres National Forest Boundary

GANDA

Miles: 0 – 0.5
Kilometers: 0 – 0.5

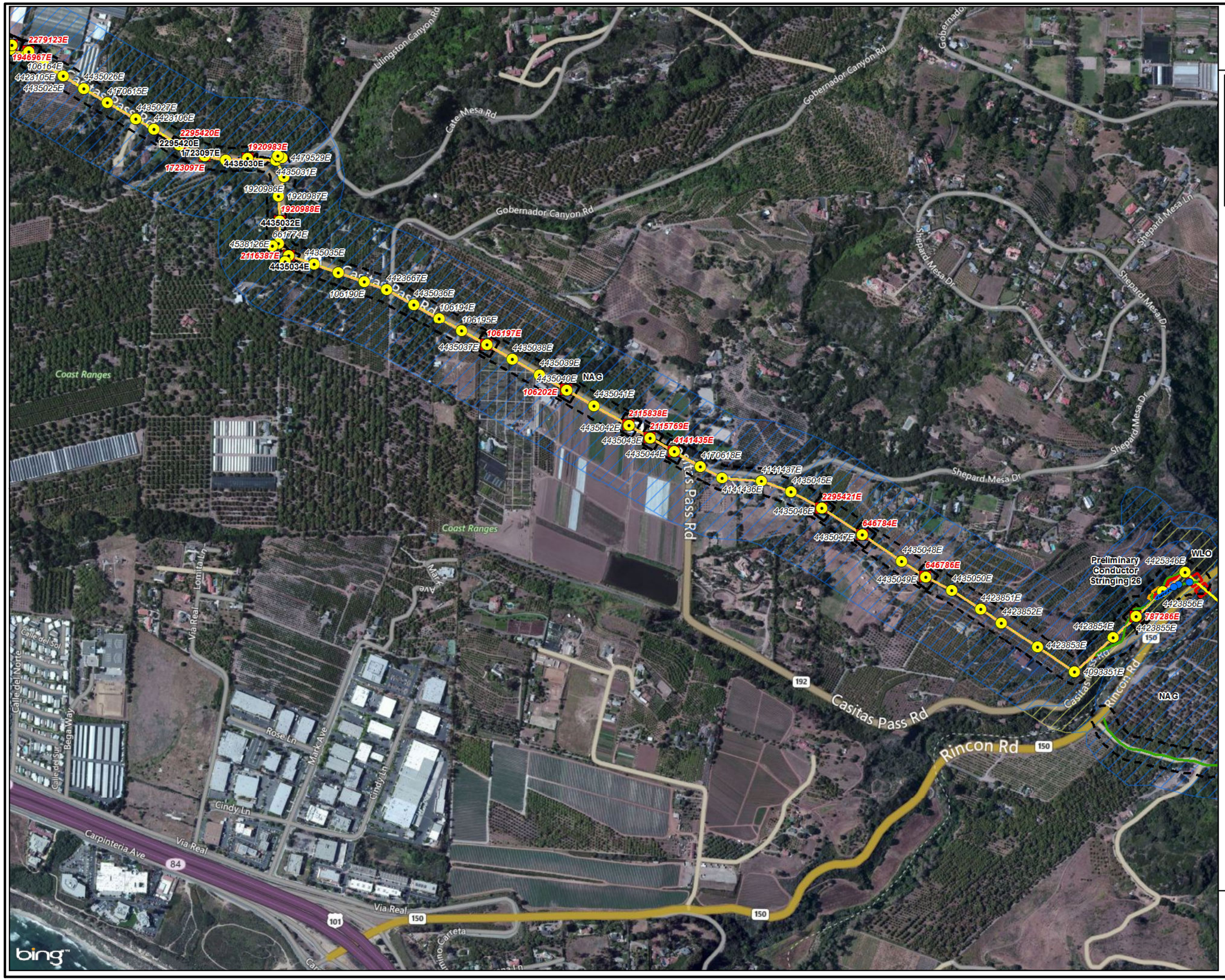
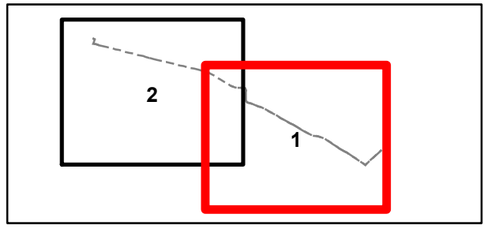



**Figure 6**
**SBCRP Segment 3A**
**Special-status Plant Occurrences Maps**
October 2014

*Map 1*




**Special-status Plant Observations**

- Southern California black walnut (Juglans californica) (JUCA)
- Southern California black walnut (Juglans californica) (JUCA)

**Project Features**

- Existing Structure Locations
- Potential Structures To Be
- Botanical Survey Area 100

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- Existing, 5 = Design Road
- Proposed, 5 = Design Road
- Proposed 66 kV
- SBCRP Segment 3a
- Existing SubTrans 66 kV Lines
- Access Roads Edge
- Civil Erosion Control Features
- Construction Disturbance Areas (From TPD)
- Grading Limits
- Guard Structures

**Segment 3A Habitat (BioResource Consultants 2012)**

- NAG: Agriculture
- WLO: Coast Live Oak Woodland

GANDA

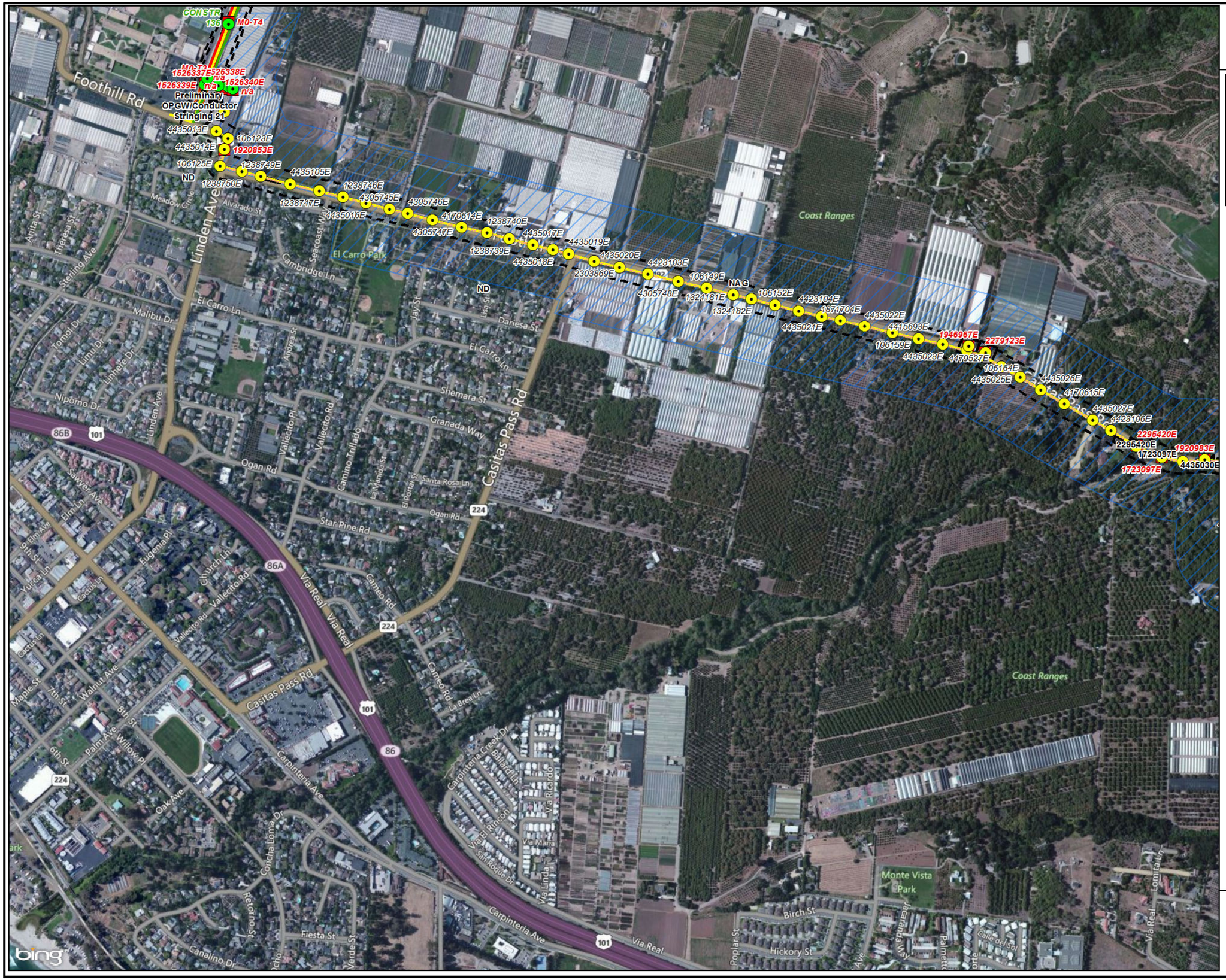
Meters 0 200

Feet 0 400

1 inch = 750 feet

Map 2

**Figure 6**
**SBCRP Segment 3A**
**Special-status Plant Occurrences Maps**
October 2014




**Project Features**

- Substation Location
- Proposed Structure Locations
- Existing Structure Locations
- Potential Structures To Be Removed
- Botanical Survey Area 100

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- Proposed 66 kV
- SBCRP Segment 3a
- Proposed OPGW
- Existing SubTrans 66 kV Lines
- Access Roads Edge
- Construction Material Yards
- Construction Disturbance Areas (From TPD)

**Segment 3A Habitat (BioResource Consultants 2012)**

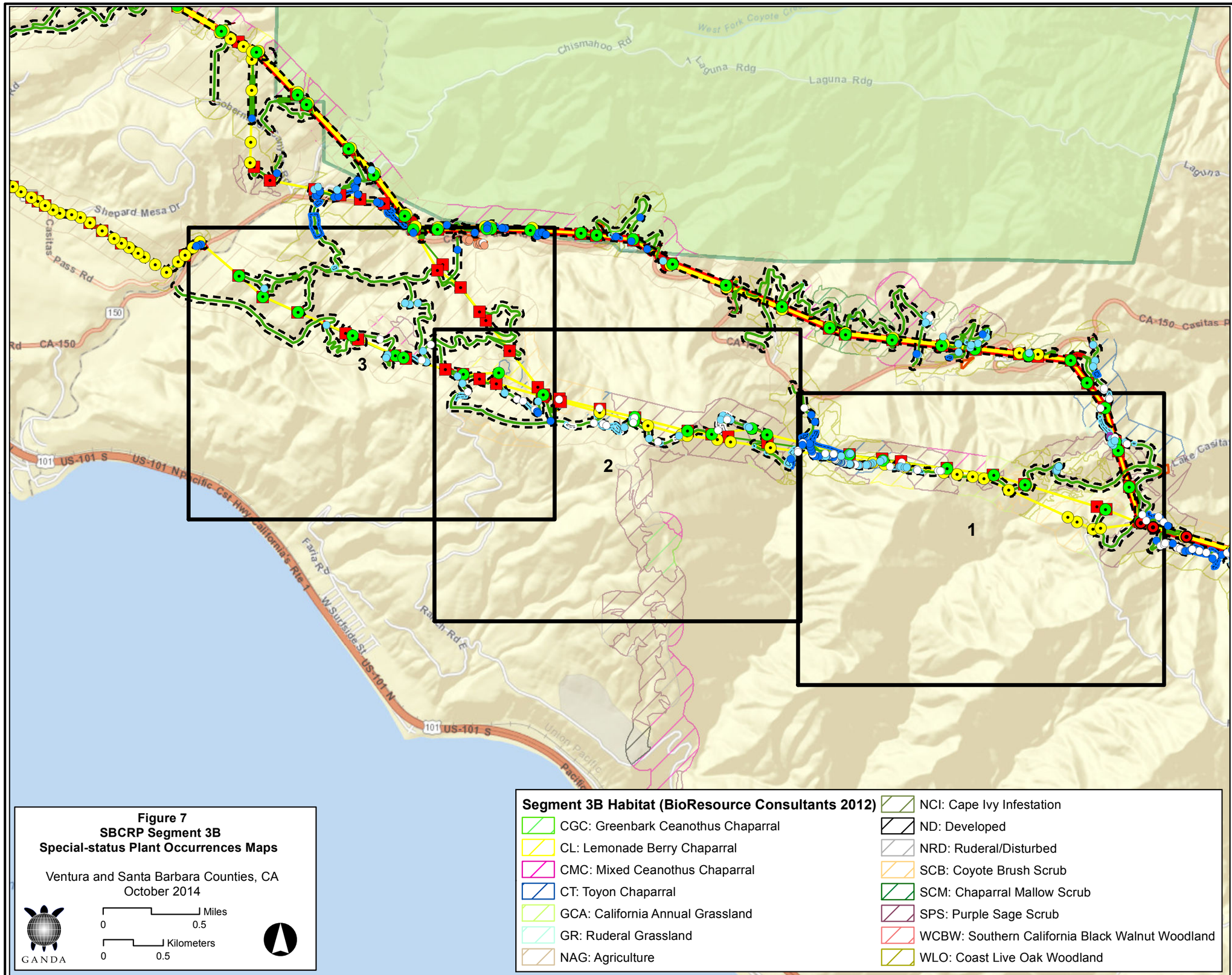
- NAG: Agriculture

GANDA

Meters 0 200

Feet 0 400

1 inch = 750 feet




**Special-status Plant Observations 2014**

- Plummer's baccharis (Baccharis plummerae ssp. plummerae) (BAPLP)
- Catalina mariposa lily (Calochortus catalinae) (CACA)
- Southern California black walnut (Juglans californica) (JUCA)
- Santa Barbara honeysuckle (Lonicera subspicata var. subspicata) (LOSUS)
- Fish's milkwort (Polygala cornuta var. fishae) (POCOF)
- Hoffman's sanicle (Sanicula hoffmannii) (SAHO)
- Plummer's baccharis (Baccharis plummerae ssp. plummerae) (BAPLP)
- Catalina mariposa lily (Calochortus catalinae) (CACA)
- Southern California black walnut (Juglans californica) (JUCA)
- Fish's milkwort (Polygala cornuta var. fishae) (POCOF)
- Hoffman's sanicle (Sanicula hoffmannii) (SAHO)

**Project Features**

- Foundation to Be Removed
- Proposed Structure Locations
- Existing Structure Locations
- Potential Structures To Be Removed
- Botanical Survey Area 100

**Access Roads Centerline**

- Existing, 0 = No Improvement
- Existing, 3 = Medium Improvement
- Existing, 4 = Heavy Improvement
- Existing, 5 = Design Road
- New, 5 = Design Road
- Proposed, 5 = Design Road
- Proposed 66 kV
- Proposed OPGW
- Existing SubTrans 66 kV Lines
- Civil Erosion Control Line
- Access Roads Edge
- Civil Erosion Control Features
- Construction Material Yards
- Construction Disturbance Areas (From
- Grading Limits
- Guard Structures
- Los Padres National Forest Boundary

**Segment 3B Habitat (BioResource Consultants 2012)**

- CGC: Greenbark Ceanothus Chaparral
- CL: Lemonade Berry Chaparral
- CMC: Mixed Ceanothus Chaparral
- CT: Toyon Chaparral
- GCA: California Annual Grassland
- GR: Ruderal Grassland
- NAG: Agriculture
- NCI: Cape Ivy Infestation
- ND: Developed
- NRD: Ruderal/Disturbed
- SCB: Coyote Brush Scrub
- SCM: Chaparral Mallow Scrub
- SPS: Purple Sage Scrub
- WCBW: Southern California Black Walnut Woodland
- WLO: Coast Live Oak Woodland

**Figure 7**
**SBCRP Segment 3B**
**Special-status Plant Occurrences Maps**

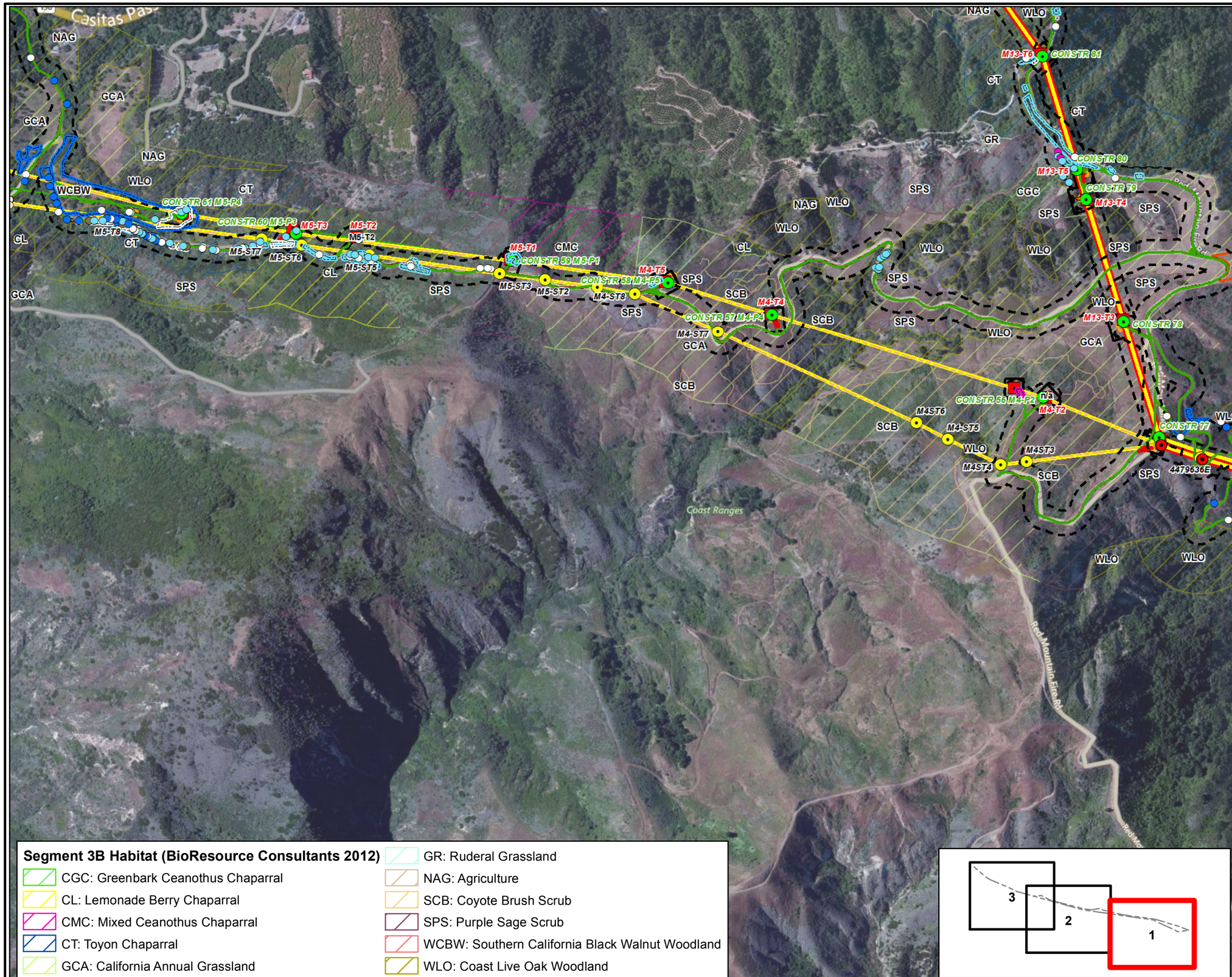
Ventura and Santa Barbara Counties, CA
October 2014

Miles 0 0.5
Kilometers 0 0.5

GANDA

**Figure 7**
**SBCRP Segment 3B**
**Special-status Plant Occurrences Maps**
October 2014

*Map 1*




**Segment 3B Habitat (BioResource Consultants 2012)**

- CGC: Greenbark Ceanothus Chaparral
- CL: Lemonade Berry Chaparral
- CMC: Mixed Ceanothus Chaparral
- CT: Toyon Chaparral
- GCA: California Annual Grassland
- GR: Ruderal Grassland
- NAG: Agriculture
- SCB: Coyote Brush Scrub
- SPS: Purple Sage Scrub
- WCBW: Southern California Black Walnut Woodland
- WLO: Coast Live Oak Woodland

**Special-status Plant Observations 2014**

- Plummer's baccharis (Baccharis plummerae ssp. plummerae) (BAPLP)
- Catalina mariposa lily (Calochortus catalinae) (CACA)
- Southern California black walnut (Juglans californica) (JUCA)
- Fish's milkwort (Polygala cornuta var. fishae) (POCOF)
- Hoffman's sanicle (Sanicula hoffmannii) (SAHO)
- Plummer's baccharis (Baccharis plummerae ssp. plummerae) (BAPLP)
- Catalina mariposa lily (Calochortus catalinae) (CACA)
- Southern California black walnut (Juglans californica) (JUCA)
- Fish's milkwort (Polygala cornuta var. fishae) (POCOF)
- Hoffman's sanicle (Sanicula hoffmannii) (SAHO)

**Project Features**

- Foundation to Be Removed
- Proposed Structure Locations
- Existing Structure Locations
- Potential Structures To Be Removed
- Botanical Survey Area 100

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- Existing, 4 = Heavy Improvement
- Existing, 5 = Design Road
- Proposed, 5 = Design Road
- SBCRP Segment 3b
- Proposed 66 kV
- Proposed OPGW
- Existing SubTrans 66 kV Lines
- Civil Erosion Control Line
- Access Roads Edge
- Civil Erosion Control Features
- Construction Material Yards
- Construction Disturbance Areas (From TPD)
- Grading Limits

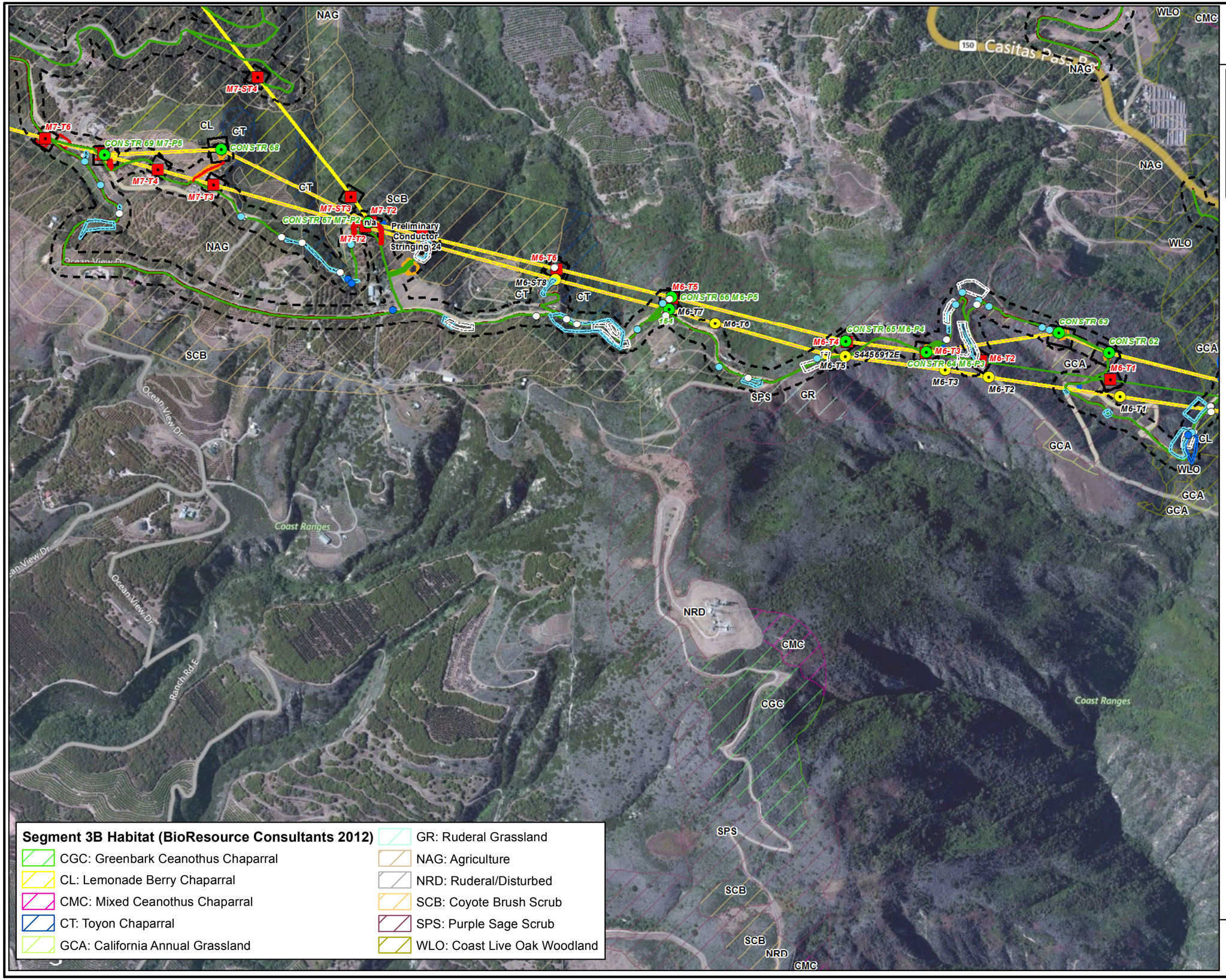
GANDA

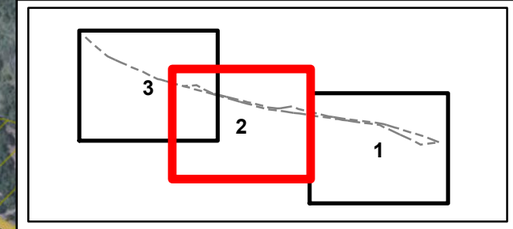
Meters 0 200
Feet 0 400

1 inch = 750 feet

**Figure 7**
**SBCRP Segment 3B**
**Special-status Plant Occurrences Maps**
October 2014

*Map 2*




**Special-status Plant Observations 2014**

- Plummer's baccharis (Baccharis plummerae ssp. plummerae) (BAPLP)
- Southern California black walnut (Juglans californica) (JUCA)
- Fish's milkwort (Polygala cornuta var. fishae) (POCOF)
- Plummer's baccharis (Baccharis plummerae ssp. plummerae) (BAPLP)
- Southern California black walnut (Juglans californica) (JUCA)
- Fish's milkwort (Polygala cornuta var. fishae) (POCOF)

**Project Features**

- Proposed Structure Locations
- Existing Structure Locations
- Potential Structures To Be Removed
- Botanical Survey Area 100

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- Existing, 5 = Design Road
- New, 5 = Design Road
- Proposed, 5 = Design Road
- SBCRP Segment 3b
- Proposed 66 kV
- Existing SubTrans 66 kV Lines
- Access Roads Edge
- Civil Erosion Control Features
- Construction Disturbance Areas (From TPD)
- Grading Limits
- Guard Structures

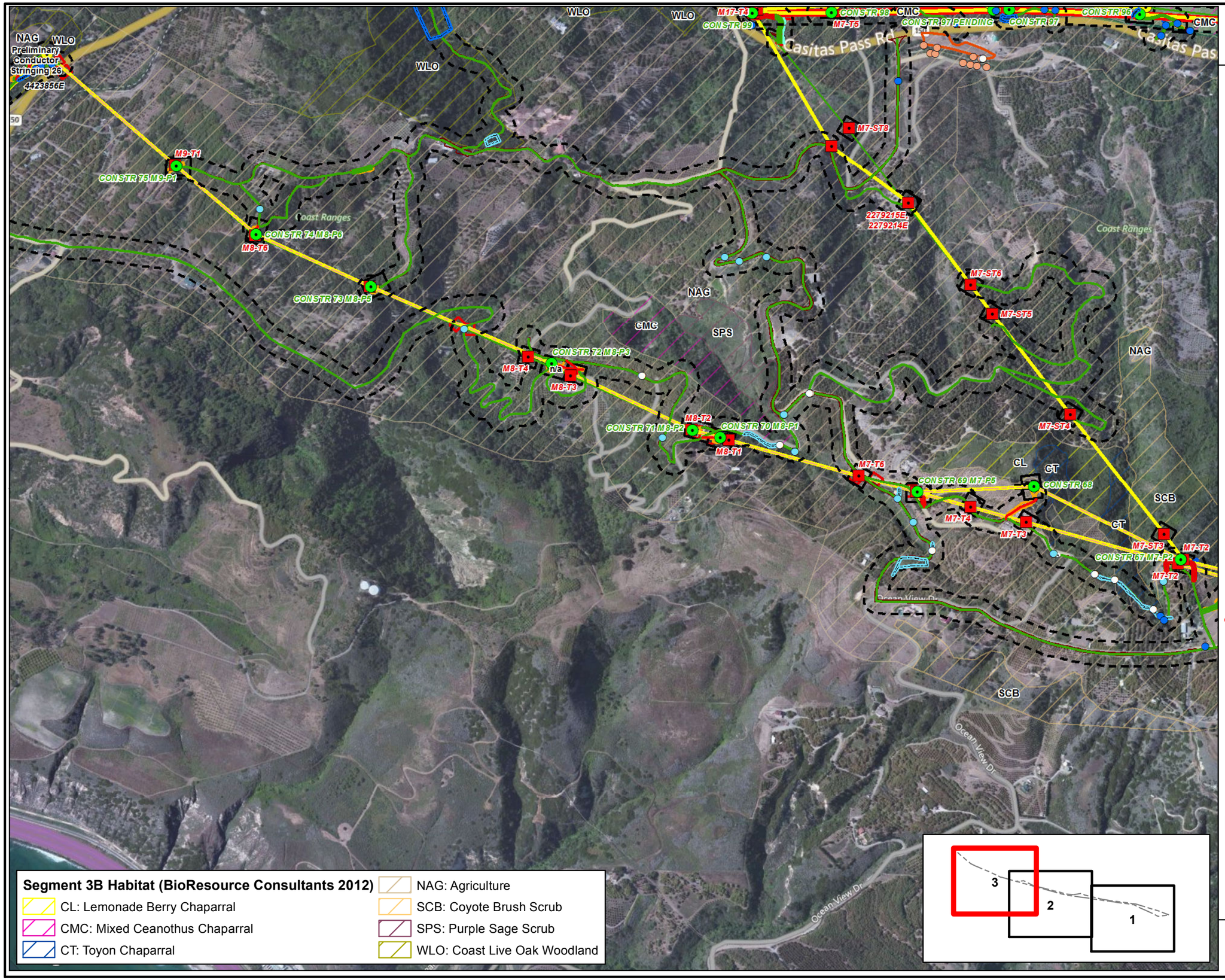
**Segment 3B Habitat (BioResource Consultants 2012)**

- CGC: Greenbark Ceanothus Chaparral
- CL: Lemonade Berry Chaparral
- CMC: Mixed Ceanothus Chaparral
- CT: Toyon Chaparral
- GCA: California Annual Grassland
- GR: Ruderal Grassland
- NAG: Agriculture
- NRD: Ruderal/Disturbed
- SCB: Coyote Brush Scrub
- SPS: Purple Sage Scrub
- WLO: Coast Live Oak Woodland

GANDA

Meters 0 200
Feet 0 400

1 inch = 750 feet




**Segment 3B Habitat (BioResource Consultants 2012)**

- CL: Lemonade Berry Chaparral
- CMC: Mixed Ceanothus Chaparral
- CT: Toyon Chaparral
- NAG: Agriculture
- SCB: Coyote Brush Scrub
- SPS: Purple Sage Scrub
- WLO: Coast Live Oak Woodland

**Figure 7**
**SBCRP Segment 3B**
**Special-status Plant Occurrences Maps**
October 2014

*Map 3*

**Special-status Plant Observations 2014**

- Plummer's baccharis (Baccharis plummerae ssp. plummerae) (BAPLP)
- Southern California black walnut (Juglans californica) (JUCA)
- Santa Barbara honeysuckle (Lonicera subspicata var. subspicata) (LOSUS)
- Fish's milkwort (Polygala cornuta var. fishae) (POCOF)
- Plummer's baccharis (Baccharis plummerae ssp. plummerae) (BAPLP)
- Southern California black walnut (Juglans californica) (JUCA)
- Fish's milkwort (Polygala cornuta var. fishae) (POCOF)

**Project Features**

- Proposed Structure Locations
- Existing Structure Locations
- Potential Structures To Be
- Botanical Survey Area 100

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- Existing, 4 = Heavy Improvement
- Existing, 5 = Design Road
- New, 5 = Design Road
- Proposed, 5 = Design Road
- SBCRP Segment 3b
- Proposed 66 kV
- Proposed OPGW
- Existing SubTrans 66 kV Lines
- Civil Erosion Control Line
- Access Roads Edge
- Civil Erosion Control Features
- Construction Material Yards
- Construction Disturbance Areas (From TPD)
- Grading Limits
- Guard Structures
- Los Padres National Forest Boundary

GANDA

Meters 0 200
Feet 0 400

1 inch = 750 feet

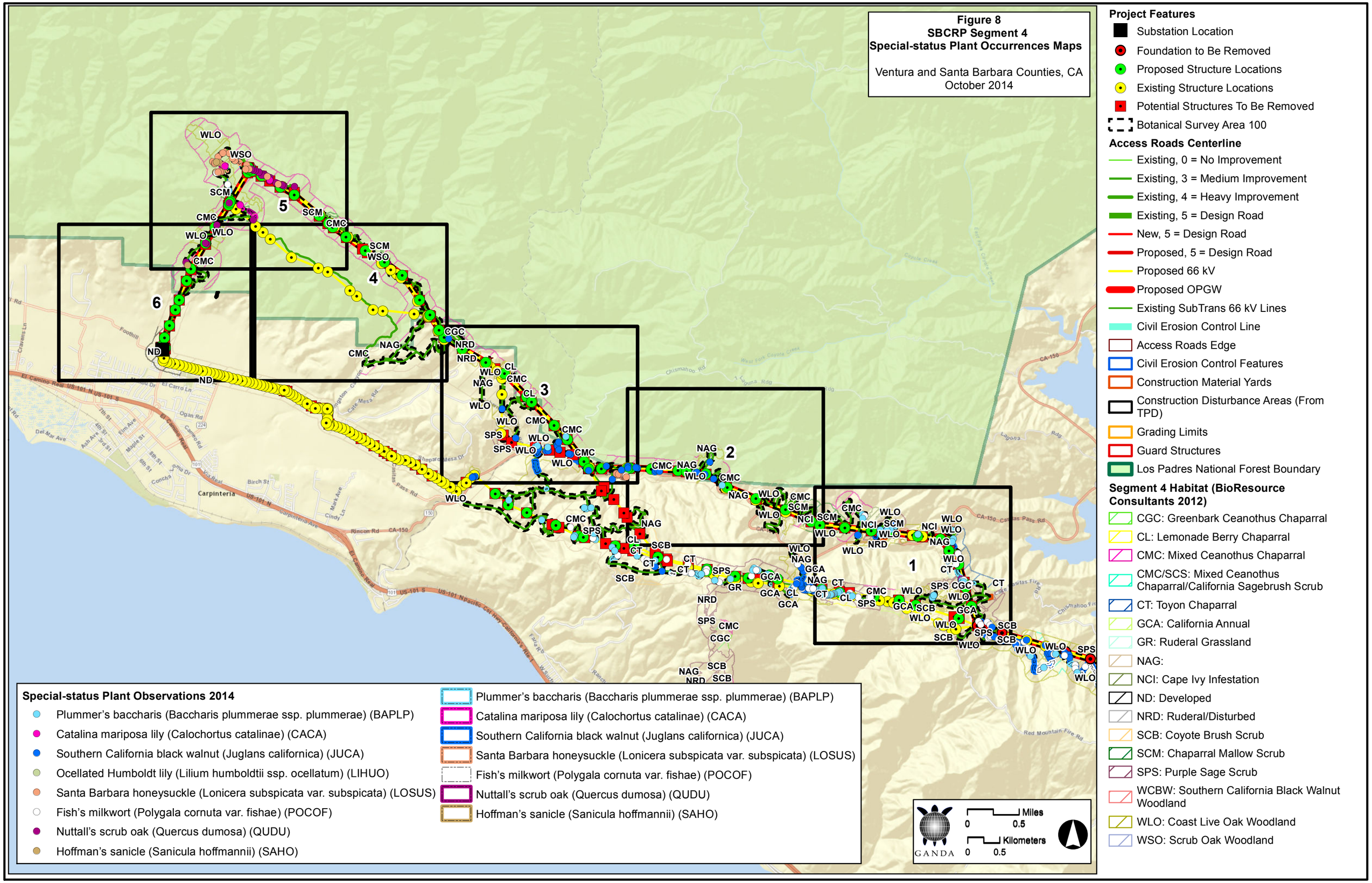


Figure 8
SBCRP Segment 4
Special-status Plant Occurrences Maps
Ventura and Santa Barbara Counties, CA
October 2014
Project Features
Substation Location
Foundation to Be Removed
Proposed Structure Locations
Existing Structure Locations
Potential Structures To Be Removed
Botanical Survey Area 100
Access Roads Centerline
Existing, 0 = No Improvement
Existing, 3 = Medium Improvement
Existing, 4 = Heavy Improvement
Existing, 5 = Design Road
New, 5 = Design Road
Proposed, 5 = Design Road
Proposed 66 kV
Proposed OPGW
Existing SubTrans 66 kV Lines
Civil Erosion Control Line
Access Roads Edge
Civil Erosion Control Features
Construction Material Yards
Construction Disturbance Areas (From TPD)
Grading Limits
Guard Structures
Los Padres National Forest Boundary
Segment 4 Habitat (BioResource Consultants 2012)
CGC: Greenbark Ceanothus Chaparral
CL: Lemonade Berry Chaparral
CMC: Mixed Ceanothus Chaparral
CMC/SCS: Mixed Ceanothus Chaparral/California Sagebrush Scrub
CT: Toyon Chaparral
GCA: California Annual
GR: Ruderal Grassland
NAG:
NCI: Cape Ivy Infestation
ND: Developed
NRD: Ruderal/Disturbed
SCB: Coyote Brush Scrub
SCM: Chaparral Mallow Scrub
SPS: Purple Sage Scrub
WCBW: Southern California Black Walnut Woodland
WLO: Coast Live Oak Woodland
WSO: Scrub Oak Woodland
Special-status Plant Observations 2014
Plummer's baccharis (Baccharis plummerae ssp. plummerae) (BAPLP)
Catalina mariposa lily (Calochortus catalinae) (CACA)
Southern California black walnut (Juglans californica) (JUCA)
Ocellated Humboldt lily (Lilium humboldtii ssp. ocellatum) (LIHUO)
Santa Barbara honeysuckle (Lonicera subspicata var. subspicata) (LOSUS)
Fish's milkwort (Polygala cornuta var. fishae) (POCOF)
Nuttall's scrub oak (Quercus dumosa) (QUDU)
Hoffman's sanicle (Sanicula hoffmannii) (SAHO)
Plummer's baccharis (Baccharis plummerae ssp. plummerae) (BAPLP)
Catalina mariposa lily (Calochortus catalinae) (CACA)
Southern California black walnut (Juglans californica) (JUCA)
Santa Barbara honeysuckle (Lonicera subspicata var. subspicata) (LOSUS)
Fish's milkwort (Polygala cornuta var. fishae) (POCOF)
Nuttall's scrub oak (Quercus dumosa) (QUDU)
Hoffman's sanicle (Sanicula hoffmannii) (SAHO)
GANDA
Miles
0 0.5
Kilometers
0 0.5
1
2
3
4
5
6
Carpinteria
El Camino Real
US-101 N
US-101 S
CA-150
Foothill
Rincon Rd
Ogan Rd
Del Mar Ave
Vista Real
Birch St
Carpinteria Ave
Chismahoo Rd
Red Mountain Fire Rd

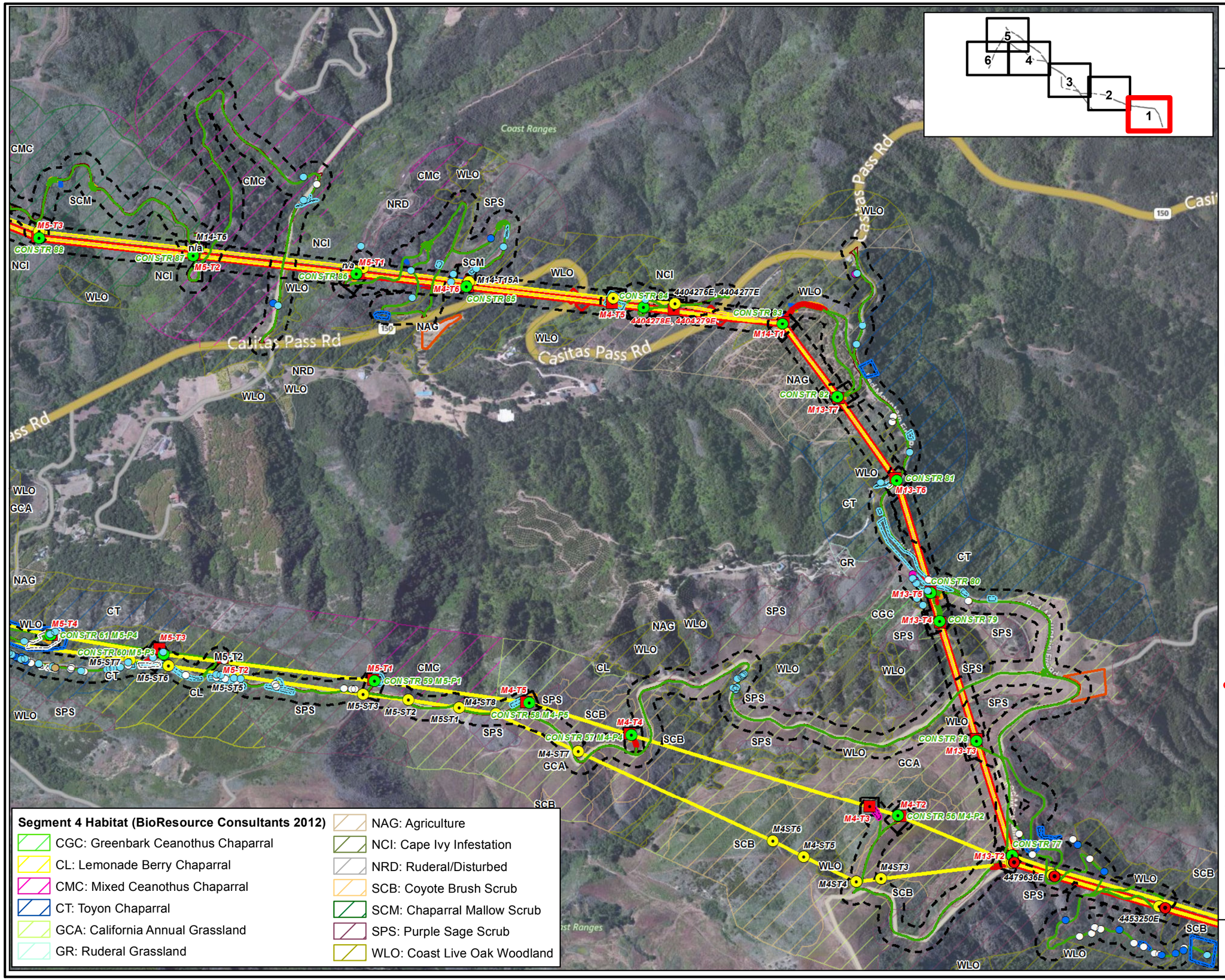



**Figure 8**
**SBCRP Segment 4**
**Special-status Plant Occurrences Maps**
October 2014

*Map 1*

**Special-status Plant Observations 2014**

- Plummer's baccharis (Baccharis plummerae ssp. plummerae) (BAPLP)
- Catalina mariposa lily (Calochortus catalinae) (CACA)
- Southern California black walnut (Juglans californica) (JUCA)
- Fish's milkwort (Polygala cornuta var. fishae) (POCOF)
- Hoffman's sanicle (Sanicula hoffmannii) (SAHO)
- Plummer's baccharis (Baccharis plummerae ssp. plummerae) (BAPLP)
- Catalina mariposa lily (Calochortus catalinae) (CACA)
- Southern California black walnut (Juglans californica) (JUCA)
- Fish's milkwort (Polygala cornuta var. fishae) (POCOF)

**Project Features**

- Foundation to Be Removed
- Proposed Structure Locations
- Existing Structure Locations
- Potential Structures To Be
- Botanical Survey Area 100

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- Existing, 4 = Heavy Improvement
- Existing, 5 = Design Road
- Proposed, 5 = Design Road
- SBCRP Segment 4
- Proposed 66 kV
- Proposed OPGW
- Existing SubTrans 66 kV Lines
- Civil Erosion Control Line
- Access Roads Edge
- Civil Erosion Control Features
- Construction Material Yards
- Construction Disturbance Areas (From TPD)
- Grading Limits
- Guard Structures

GANDA

Meters 0 200
Feet 0 400

1 inch = 750 feet

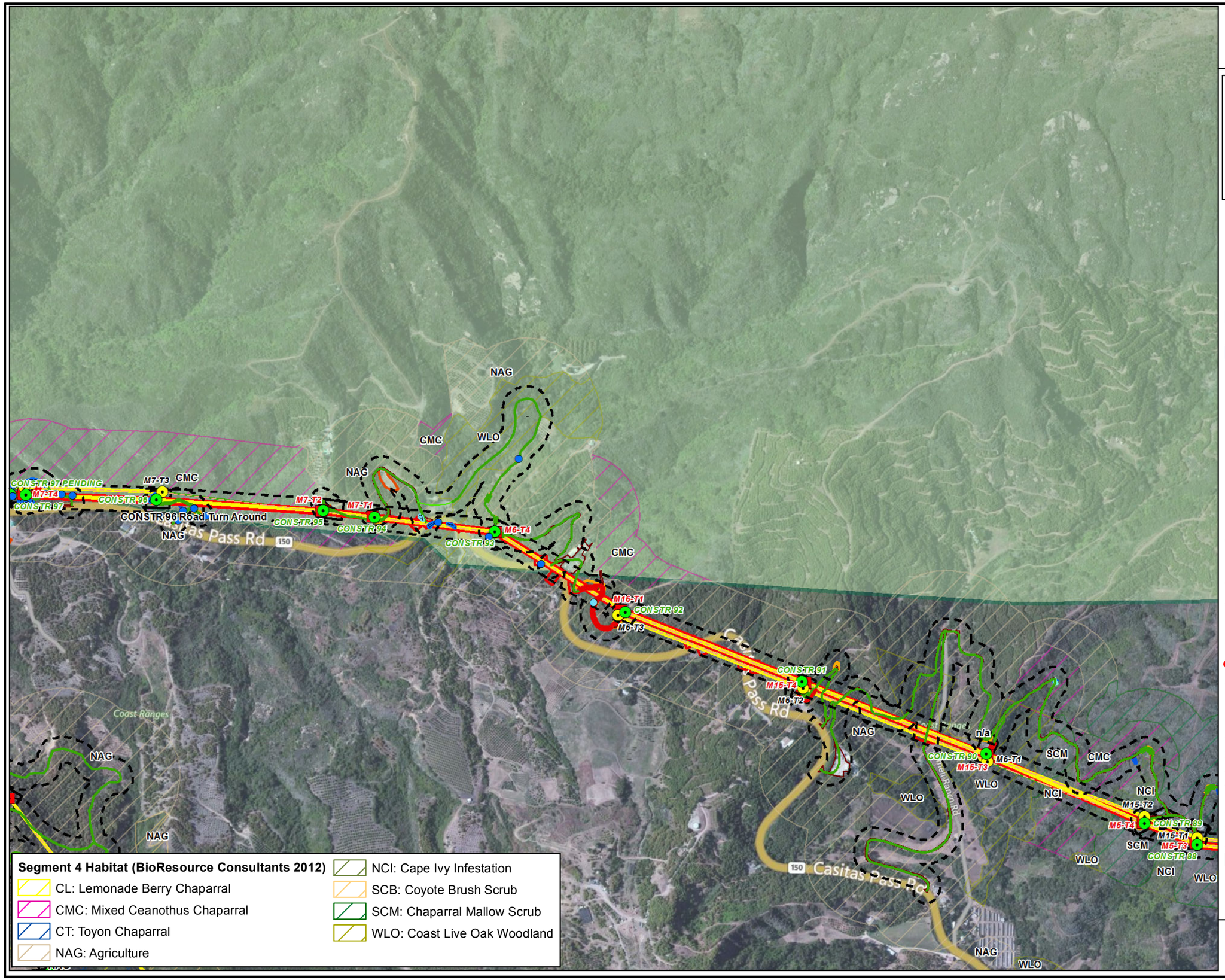
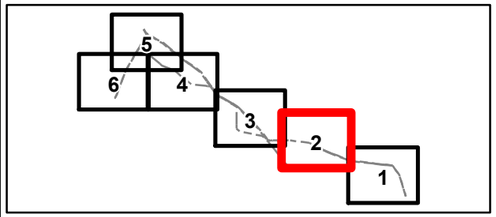



**Figure 8**
**SBCRP Segment 4**
**Special-status Plant Occurrences Maps**
October 2014

*Map 2*




**Special-status Plant Observations 2014**

- Plummer's baccharis (Baccharis plummerae ssp. plummerae) (BAPLP)
- Southern California black walnut (Juglans californica) (JUCA)
- Plummer's baccharis (Baccharis plummerae ssp. plummerae) (BAPLP)
- Southern California black walnut (Juglans californica) (JUCA)

**Project Features**

- Proposed Structure Locations
- Existing Structure Locations
- Potential Structures To Be Removed
- Botanical Survey Area 100

**Access Roads Centerline**

- Existing, 0 = No Improvement
- Existing, 3 = Medium Improvement
- Existing, 4 = Heavy Improvement
- Existing, 5 = Design Road
- New, 5 = Design Road
- Proposed, 5 = Design Road
- SBCRP Segment 4
- Proposed 66 kV
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- Civil Erosion Control Line
- Access Roads Edge
- Civil Erosion Control Features
- Construction Material Yards
- Construction Disturbance Areas (From TPD)
- Grading Limits
- Guard Structures
- Los Padres National Forest Boundary

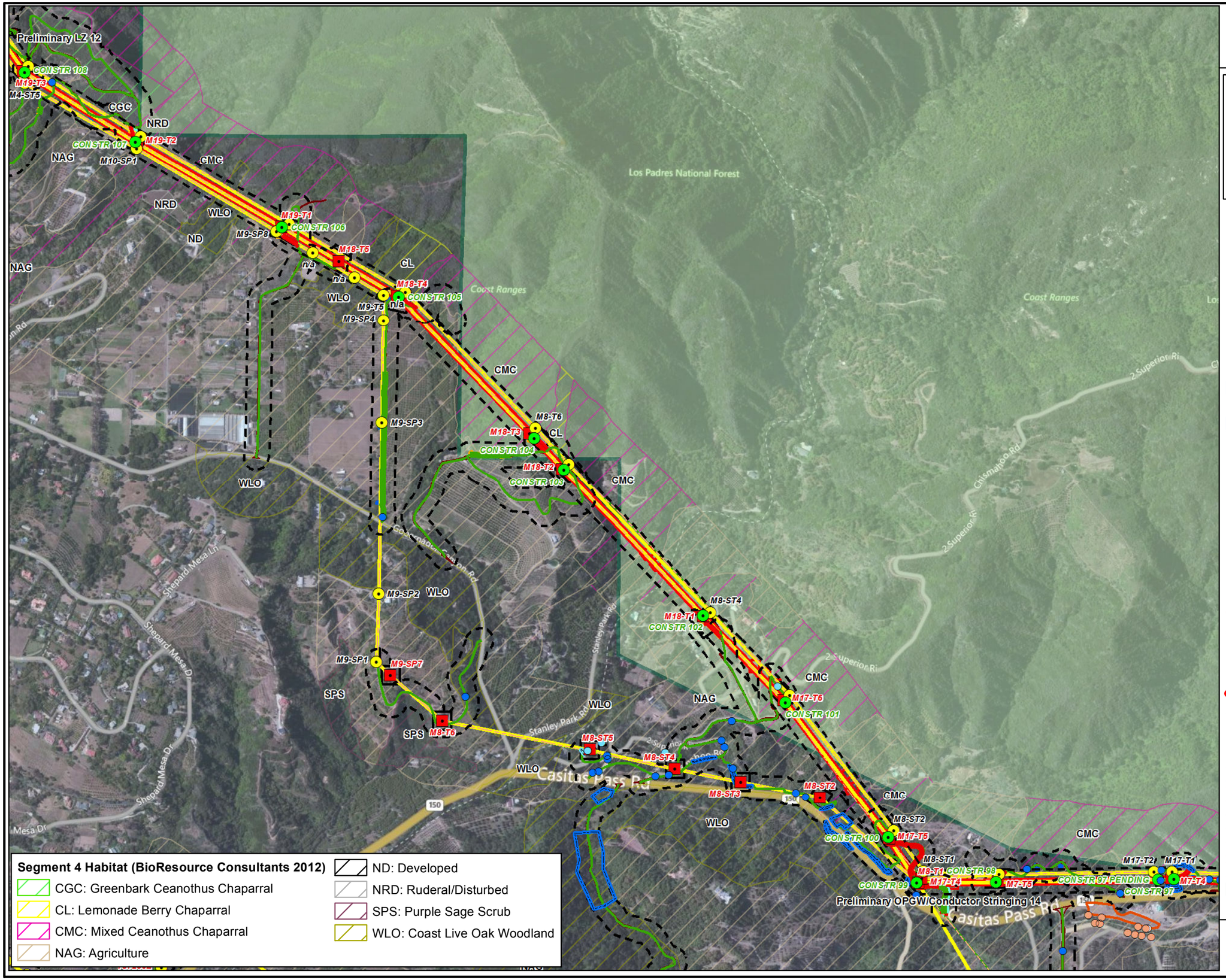
GANDA

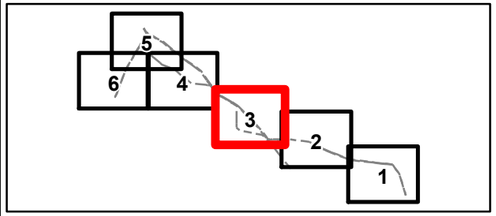
Meters 0 200
Feet 0 400

1 inch = 750 feet

Map 3

# Figure 8
## SBCRP Segment 4
## Special-status Plant Occurrences Maps
October 2014




**Special-status Plant Observations 2014**

- Plummer's baccharis (Baccharis plummerae ssp. plummerae) (BAPLP)
- Southern California black walnut (Juglans californica) (JUCA)
- Santa Barbara honeysuckle (Lonicera subspicata var. subspicata) (LOSUS)
- Fish's milkwort (Polygala cornuta var. fishae) (POCOF)
- Plummer's baccharis (Baccharis plummerae ssp. plummerae) (BAPLP)
- Southern California black walnut (Juglans californica) (JUCA)

**Project Features**

- Proposed Structure Locations
- Existing Structure Locations
- Potential Structures To Be Removed
- Botanical Survey Area 100

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- Existing, 5 = Design Road
- New, 5 = Design Road
- Proposed, 5 = Design Road
- SBCRP Segment 4
- Proposed 66 kV
- Proposed OPGW
- Existing SubTrans 66 kV Lines
- Civil Erosion Control Line
- Access Roads Edge
- Civil Erosion Control Features
- Construction Material Yards
- Construction Disturbance Areas (From TPD)
- Grading Limits
- Guard Structures
- Los Padres National Forest Boundary

GANDA

Meters 0 200
Feet 0 400

1 inch = 750 feet

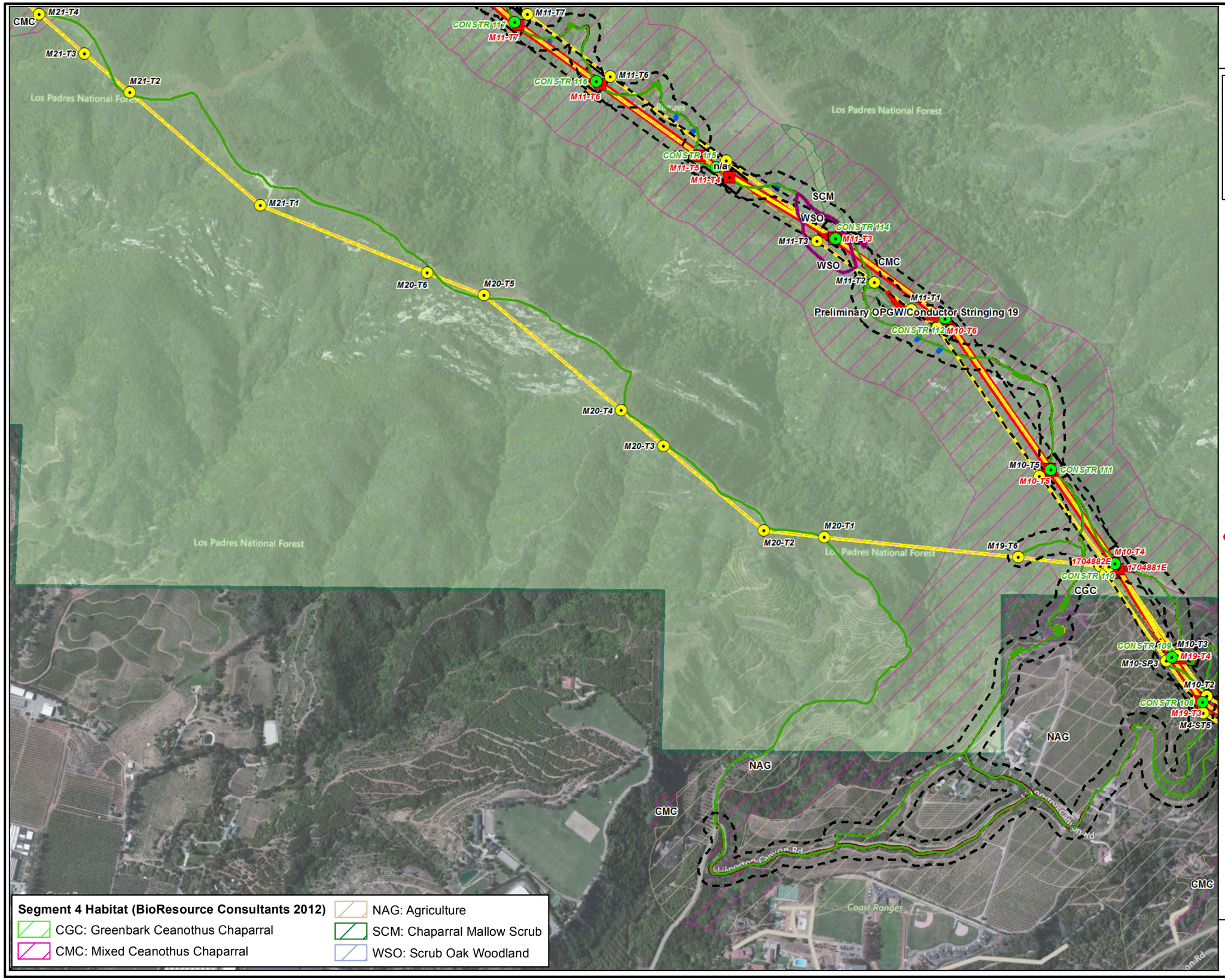
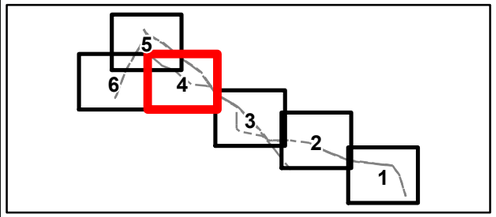



**Figure 8**
**SBCRP Segment 4**
**Special-status Plant Occurrences Maps**
October 2014

*Map 4*




**Special-status Plant Observations 2014**

- Nuttall's scrub oak (Quercus dumosa) (QUDU)

**Project Features**

- Proposed Structure Locations
- Existing Structure Locations
- Potential Structures To Be Removed
- Botanical Survey Area 100

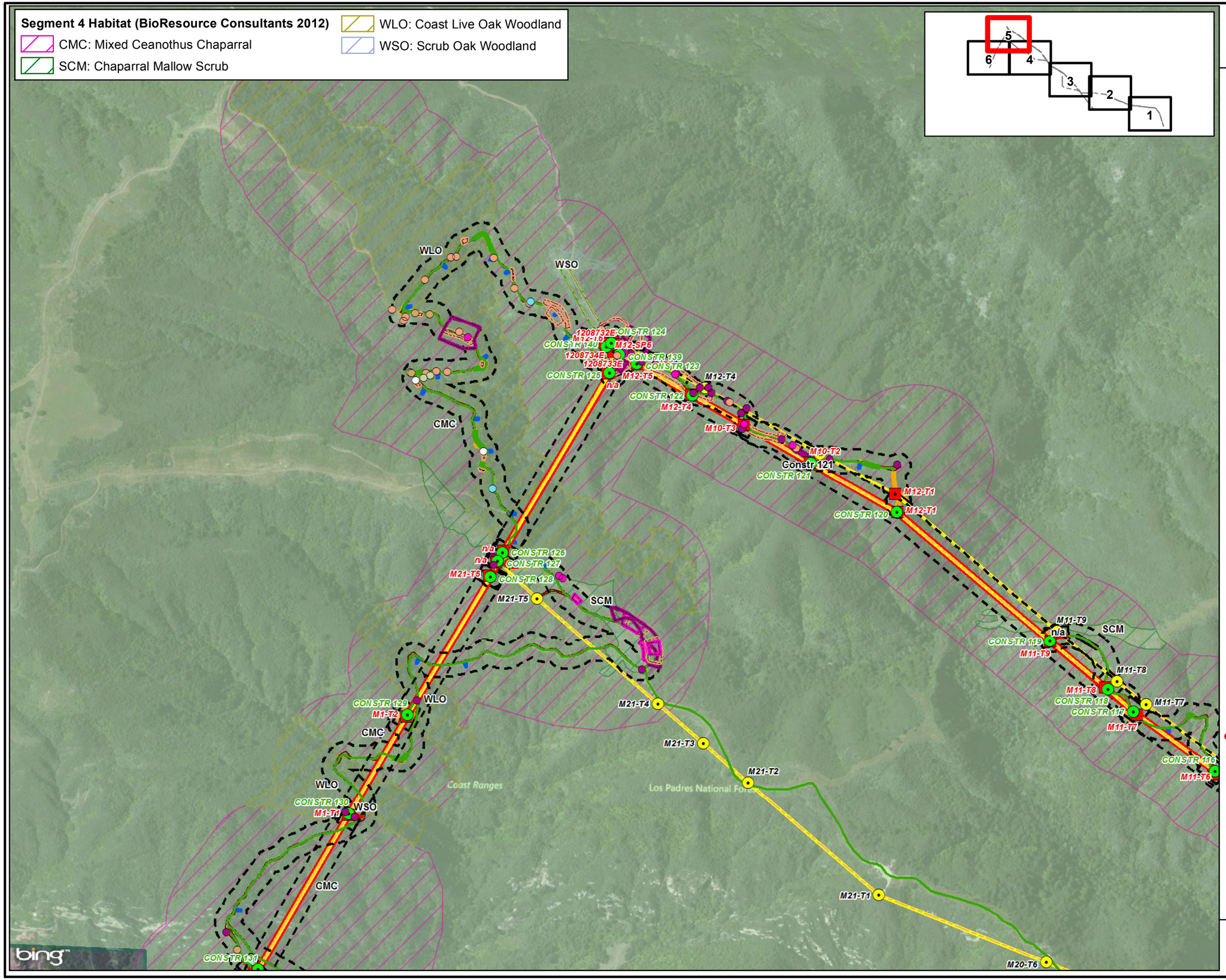
**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- Existing, 4 = Heavy Improvement
- Existing, 5 = Design Road
- New, 5 = Design Road
- Proposed, 5 = Design Road
- SBCRP Segment 4
- Proposed 66 kV
- Proposed OPGW
- Existing SubTrans 66 kV Lines
- Access Roads Edge
- Civil Erosion Control Features
- Construction Disturbance Areas (From TPD)
- Grading Limits
- Los Padres National Forest Boundary

GANDA

Meters 0 200
Feet 0 400

1 inch = 750 feet




Map 5

**Figure 8**
**SBCRP Segment 4**
**Special-status Plant Occurrences Maps**
October 2014

**Special-status Plant Observations 2014**

- Plummer's baccharis (Baccharis plummerae ssp. plummerae) (BAPLP)
- Catalina mariposa lily (Calochortus catalinae) (CACA)
- Ocellated Humboldt lily (Lilium humboldtii ssp. ocellatum) (LIHUO)
- Santa Barbara honeysuckle (Lonicera subspicata var. subspicata) (LOSUS)
- Fish's milkwort (Polygala cornuta var. fishae) (POCOF)
- Nuttall's scrub oak (Quercus dumosa) (QUDU)
- Hoffman's sanicle (Sanicula hoffmannii) (SAHO)
- Catalina mariposa lily (Calochortus catalinae) (CACA)
- Santa Barbara honeysuckle (Lonicera subspicata var. subspicata) (LOSUS)
- Nuttall's scrub oak (Quercus dumosa) (QUDU)
- Hoffman's sanicle (Sanicula hoffmannii) (SAHO)

**Project Features**

- Proposed Structure Locations
- Existing Structure Locations
- Potential Structures To Be
- Botanical Survey Area 100

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- Existing, 4 = Heavy Improvement
- Existing, 5 = Design Road
- Proposed, 5 = Design Road
- SBCRP Segment 4
- Proposed 66 kV
- Proposed OPGW
- Existing SubTrans 66 kV Lines
- Civil Erosion Control Line
- Access Roads Edge
- Civil Erosion Control Features
- Construction Material Yards
- Construction Disturbance Areas (From TPD)
- Grading Limits
- Los Padres National Forest Boundary

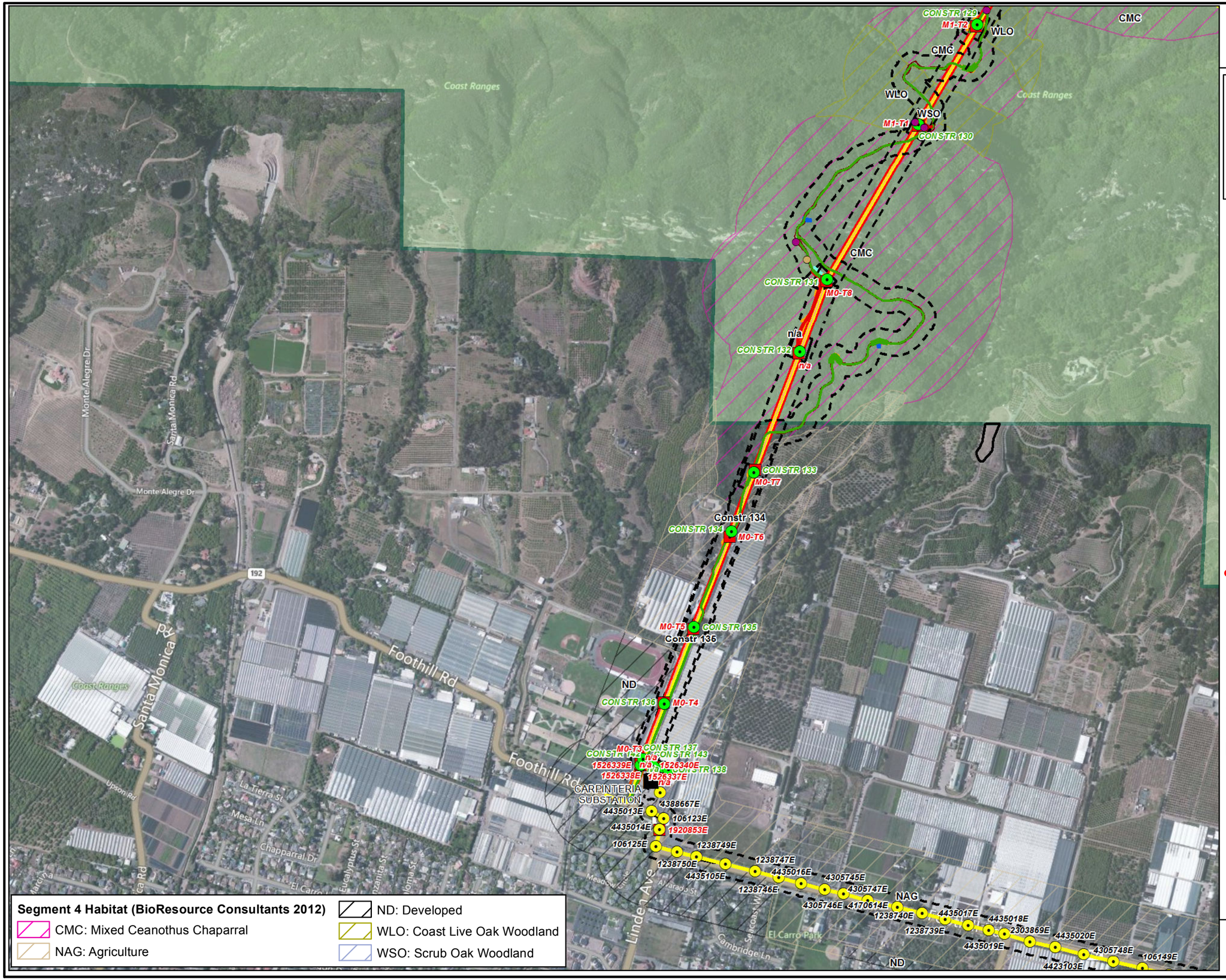
GANDA

Meters 0 200
Feet 0 400

1 inch = 750 feet

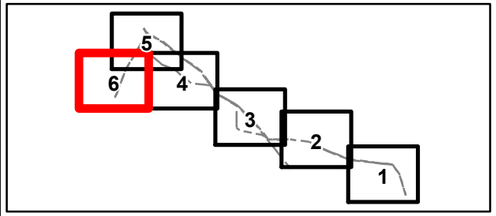
Map 6

**Figure 8**
**SBCRP Segment 4**
**Special-status Plant Occurrences Maps**
October 2014




**Segment 4 Habitat (BioResource Consultants 2012)**

- CMC: Mixed Ceanothus Chaparral
- NAG: Agriculture
- ND: Developed
- WLO: Coast Live Oak Woodland
- WSO: Scrub Oak Woodland




**Special-status Plant Observations 2014**

- Nuttall's scrub oak (Quercus dumosa) (QUDU)
- Hoffman's sanicle (Sanicula hoffmannii) (SAHO)

**Project Features**

- Substation Location
- Proposed Structure Locations
- Existing Structure Locations
- Potential Structures To Be
- Botanical Survey Area 100

**Access Roads Centerline**

- Existing, 3 = Medium Improvement
- Existing, 4 = Heavy Improvement
- Existing, 5 = Design Road
- Proposed, 5 = Design Road
- SBCRP Segment 4
- Proposed 66 kV
- Proposed OPGW
- Existing SubTrans 66 kV Lines
- Civil Erosion Control Line
- Access Roads Edge
- Civil Erosion Control Features
- Construction Material Yards
- Construction Disturbance Areas (From TPD)
- Grading Limits
- Los Padres National Forest Boundary

GANDA

Meters 0 200
Feet 0 400

1 inch = 750 feet

# APPENDIX B
# VASCULAR PLANT INVENTORY

| Family | *Scientific Name* | Common Name |
|---|---|---|
| | **FERNS AND FERN-ALLIES** | |
| **Dryopteridaceae** | | |
| | *Dryopteris arguta* | coastal wood fern |
| **Equisetaceae** | | |
| | *Equisetum arvense* | scouring rush |
| | *Equisetum telmateia* ssp. *braunii* | giant horsetail |
| **Polypodiaceae** | | |
| | *Polypodium californicum* | California polypody |
| **Pteridaceae** | | |
| | *Adiantum jordanii* | California maiden-hair |
| | *Pellaea andromedifolia* | coffee fern |
| | *Pentagramma triangularis* ssp. *triangularis* | goldenback fern |
| | *Pteridium aquilinum* | western brackenfern |
| | **GYMNOSPERMS** | |
| **Cupressaceae** | | |
| | *Hesperocyparis macrocarpa*** | Monterey cypress |
| | **ANGIOSPERMS - Dicots** | |
| **Adoxaceae** | | |
| | *Sambucus nigra* ssp. *caerulea* | blue elderberry |
| **Aizoaceae** | | |
| | *Carpobrotus chilensis*** | sea fig |
| | *Carpobrotus edulis*** | Hottentot fig |
| **Amaranthaceae** | | |
| | *Amaranthus blitoides* | procumbent pigweed |
| | *Amaranthus deflexus** | large-fruit pigweed |
| | *Amaranthus retroflexus** | redroot pigweed |
| **Anacardiaceae** | | |
| | *Malosma laurina* | laurel sumac |
| | *Rhus integrifolia* | lemonade berry |
| | *Rhus ovata* | sugarbush |
| | *Schinus molle** | Peruvian pepper tree |
| | *Toxicodendron diversilobum* | poison oak |
| **Annonaceae** | | |
| | *Annona cherimola* | cherimoya |
| **Apiaceae** | | |
| | *Anthriscus caucalis* | bur-chervil |
| | *Apiastrum angustifolium* | mock parsley, wild celery |
| | *Conium maculatum** | poison hemlock |
| | *Daucus carota* | Queen Anne's lace |
| | *Daucus pusillus* | rattlesnake weed |
| | *Foeniculum vulgare** | wild fennel |
| | *Sanicula crassicaulis* | Pacific sanicle |
| | ***Sanicula hoffmannii*** | **Hoffman's snakeroot** |
| | *Tauschia hartwegii* | Hartweg's umbrellawort |
| | *Torilis arvensis** | hedge parsley |
| | *Torilis nodosa** | rattlesnake plant |
| | *Yabea microcarpa* | false carrot |
| **Apocynaceae** | | |
| | *Araujia sericifera** | bladder-flower |
| | *Asclepias fascicularis* | narrow-leaf milkweed |
| **Araliaceae** | | |
| | *Hedera helix** | English ivy |
| **Asparagaceae** | | |
| | *Asparagus asparagoides** | African asparagus fern |
| **Asteraceae** | | |
| | *Achillea millefolium* var. *millefolium* | white yarrow |
| | *Acourtia microcephala* | sacapellote |
| | *Ageratina adenophora* | sticky snakeroot |
| | *Agoseris grandiflora* | large-flowered agoseris |

| Family | *Scientific Name* | Common Name |
|---|---|---|
| | *Ambrosia psilostachya* var. *californica* | ragweed, western ambrosia |
| | *Artemisia californica* | California sagebrush |
| | *Artemisia douglasiana* | mugwort |
| | *Baccharis pilularis* | coyote brush |
| | ***Baccharis plummerae* ssp. *plummerae*** | **Plummer's baccharis** |
| | *Baccharis salicifolia* ssp. *salicifolia* | mulefat |
| | *Bidens pilosa** | common beggar-ticks |
| | *Brickellia californica* | California brickellbush |
| | *Carduus pycnocephalus* ssp. *pycnocephalus** | Italian thistle |
| | *Centaurea melitensis** | tocalote |
| | *Centaurea solstitialis** | yellow star-thistle |
| | *Cirsium vulgare** | bull thistle |
| | *Corethrogyne filaginifolia* | sandaster |
| | *Cynara cardunculus** | artichoke thistle |
| | *Deinandra fasciculata* | clustered tarplant |
| | *Delairea odorata** | Cape ivy |
| | *Dimorphotheca ecklonis*** | African daisy |
| | *Encelia californica* | California bush sunflower |
| | *Erigeron bonariensis** | flax-leaved horseweed |
| | *Erigeron canadensis* | horseweed |
| | *Erigeron foliosus* var. *foliosus* | slender fleabane |
| | *Eriophyllum confertiflorum* var. *confertiflorum* | golden yarrow |
| | *Glebionis coronaria** | garland, crown daisy |
| | *Hazardia squarrosa* var. *obtusa* | sawtooth goldenbush |
| | *Helminthotheca echioides** | bristly ox-tongue |
| | *Holocarpha heermannii* | Heermann's tarweed |
| | *Hypochaeris glabra** | smooth cat's-ear |
| | *Isocoma menziesii* var. *menziesii* | coast goldenbush |
| | *Lactuca serriola** | prickly wild lettuce |
| | *Lepidospartum squamatum* | scale-broom |
| | *Logfia filaginoides* | California cottonrose |
| | *Logfia gallica** | daggerleaf cottonrose |
| | *Madia gracilis* | slender tarplant |
| | *Malacothrix saxatilis* var. *tenuifolia* | tenuated cliff-aster |
| | *Matricaria discoidea** | rayless chamomile |
| | *Pseudognaphalium californicum* | California cudweed |
| | *Rafinesquia californica* | California chicory |
| | *Senecio vulgaris** | common groundsel |
| | *Silybum marianum** | milk thistle |
| | *Sonchus asper* ssp. *asper** | spiny sowthistle |
| | *Sonchus oleraceus** | common sowthistle |
| | *Stephanomeria cichoriacea* | chicoryleaf wire-lettuce |
| | *Symphyotrichum chilense* | California aster |
| | *Symphyotrichum greatae* | Greata's aster |
| | *Urospermum picroides** | prickly goldenfleece |
| | *Venegasia carpesioides* | canyon sunflower |
| | *Xanthium spinosum* | spiny cocklebur |
| | *Xanthium strumarium* | cocklebur |
| **Boraginaceae** | | |
| | *Cryptantha intermedia* var. *intermedia* | common cryptantha |
| | *Cryptantha muricata* | pointed cryptantha |
| | *Heliotropium curassavicum* var. *oculatum* | seaside heliotrope, alkali heliotrope |
| | *Emmenanthe penduliflora* var. *penduliflora* | whispering bells |
| | *Eucrypta chrysanthemifolia* | eucrypta |
| | *Pectocarya linearis* ssp. *ferocula* | slender pectocarya |
| | *Phacelia cicutaria* | caterpillar phacelia |
| | *Phacelia grandiflora* | giant-flowered phacelia |
| | *Phacelia viscida* var. *albiflora* | white phacelia |
| | *Pholistoma auritum* var. *auritum* | fiesta flower |
| **Brassicaceae** | | |
| | *Brassica nigra** | black mustard |
| | *Brassica tournefortii** | Saharan mustard |

| Family | *Scientific Name* | Common Name |
|---|---|---|
| | *Capsella bursa-pastoris** | shepherd's purse |
| | *Hirschfeldia incana** | wild mustard |
| | *Lepidium draba** | heart-podded hoary cress |
| | *Lobularia maritima** | sweet alyssum |
| | *Nasturtium officinale* | watercress |
| | *Raphanus sativus** | wild radish |
| | *Sisymbrium altissimum* * | tumble mustard |
| | *Sisymbrium irio** | London rocket |
| | *Sisymbrium orientale** | Oriental hedge mustard |
| **Cactaceae** | | |
| | *Cylindropuntia prolifera* | coast cholla |
| | *Hylocereus* sp.** | dragonfruit |
| | *Opuntia littoralis* | coast prickly pear |
| **Caprifoliaceae** | | |
| | *Lonicera hispidula* | pink honeysuckle |
| | *Lonicera interrupta* | chapparal honeysuckle |
| | *Lonicera subspicata* var. *denudata* | southern honeysuckle |
| | ***Lonicera subspicata* var. *subspicata*** | **Santa Barbara honeysuckle** |
| | *Symphoricarpos albus* var. *laevigatus* | common snowberry |
| | *Symphoricarpos mollis* | creeping snowberry |
| **Caryophyllaceae** | | |
| | *Polycarpon tetraphyllum* var. *tetraphyllum* | four-leaved allseed |
| | *Silene gallica** | windmill pink |
| | *Silene laciniata* ssp. *laciniata* | cardinal catchfly |
| | *Spergularia marina* | sand spurry |
| | *Stellaria media** | chickweed |
| **Chenopodiaceae** | | |
| | *Atriplex lentiformis* ssp. *breweri* | Brewer's big saltbush |
| | *Atriplex semibaccata** | Australian saltbush |
| | *Bassia hyssopifolia** | five horn bassia, fivehook bassia |
| | *Chenopodium album** | lamb's quarters |
| | *Chenopodium californicum* | California goosefoot, soaproot |
| | *Chenopodium murale** | nettle-leaf goosefoot |
| | *Emex spinosa** | devils thorn |
| | *Kochia scoparia** | summer cypress |
| | *Salsola tragus** | Russian thistle, tumbleweed |
| **Convolvulaceae** | | |
| | *Calystegia macrostegia* ssp. *cyclostegia* | coast morning-glory |
| | *Calystegia occidentalis* | western morning glory |
| | *Convolvulus arvensis** | bindweed |
| | *Cuscuta subinclusa* | canyon dodder |
| **Crassulaceae** | | |
| | *Dudleya lanceolata* | lanceleaf liveforever |
| **Cucurbitaceae** | | |
| | *Cucurbita foetidissima* | buffalo gourd, calabazilla |
| | *Marah macrocarpa* | California man-root |
| **Ericaceae** | | |
| | *Arctostaphylos glandulosa* ssp. *mollis* | Santa Ynez Mountains manzanita |
| | *Comarostaphylis diversifolia* ssp. *planifolia* | flat leaf summer holly |
| **Euphorbiaceae** | | |
| | *Croton setigerus* | turkey-mullein |
| | *Euphorbia albomarginata* | rattlesnake spurge |
| | *Euphorbia maculata** | spotted spurge |
| | *Euphorbia peplus** | petty spurge |
| | *Euphorbia prostrata** | prostrate sandmat |
| | *Ricinus communis** | castor bean |
| **Fabaceae** | | |
| | *Acmispon americanus* var. *americanus* | Spanish clover |
| | *Acmispon glaber* var. *glaber* | deerweed |
| | *Acmispon maritimus* var. *maritimus* | hosackia |
| | *Astragalus trichopodus* var. *phoxus* | antisell three-pod milkvetch |
| | *Lathyrus vestitus* var. *vestitus* | Pacific peavine |

| Family | *Scientific Name* | Common Name |
|---|---|---|
| | *Lotus corniculatus** | bird's-foot trefoil |
| | *Lupinus bicolor* | miniature lupine |
| | *Lupinus longifolius* | long-leaved bush lupine |
| | *Lupinus succulentus* | fleshy lupine |
| | *Medicago polymorpha** | burclover |
| | *Melilotus albus** | white sweetclover |
| | *Melilotus indicus** | sourclover |
| | *Robinia pseudoacacia** | black locust |
| | *Vicia sativa** | spring vetch |
| | *Vicia villosa** | hairy vetch |
| **Fagaceae** | | |
| | *Quercus agrifolia* var. *agrifolia* | coast live oak |
| | *Quercus berberidifolia* | scrub oak |
| | ***Quercus dumosa*** | **Nuttall's scrub oak** |
| **Geraniaceae** | | |
| | *Erodium botrys** | longbeak stork's bill |
| | *Erodium cicutarium** | redstem filaree |
| | *Erodium moschatum** | whitestem filaree |
| | *Geranium dissectum** | cutleaf geranium |
| | *Geranium robertianum** | Robert geranium |
| **Grossulariaceae** | | |
| | *Ribes amarum* | bitter gooseberry |
| | *Ribes californicum* | hillside gooseberry |
| | *Ribes malvaceum* var. *malvaceum* | chaparral currant |
| | *Ribes speciosum* | fucshia-flowered gooseberry |
| **Juglandaceae** | | |
| | ***Juglans californica*** | **Southern California black walnut** |
| **Lamiaceae** | | |
| | *Clinopodium douglasii* | yerba buena |
| | *Marrubium vulgare** | horehound |
| | *Salvia columbariae* | chia |
| | *Salvia leucophylla* | purple sage |
| | *Salvia mellifera* | black sage |
| | *Salvia spathacea* | hummingbird sage |
| | *Stachys bullata* | hedge nettle |
| **Lauraceae** | | |
| | *Persea americana*** | avocado |
| | *Umbellularia californica* | California bay laurel |
| **Malvaceae** | | |
| | *Lantana montevidensis** | trailing lantana |
| | *Malacothamnus fasciculatus* var. *fasciculatus* | chaparral mallow |
| | *Malva parviflora** | cheeseweed |
| | *Sidalcea malviflora* ssp. *californica* | California globe mallow |
| **Montiaceae** | | |
| | *Claytonia perfoliata* ssp. *perfoliata* | miner's lettuce |
| **Myrsinaceae** | | |
| | *Anagallis arvensis** | scarlet pimpernel |
| **Myrtaceae** | | |
| | *Eucalyptus globulus*** | blue gum |
| | *Psidium* sp. ** | guava |
| **Nyctaginaceae** | | |
| | *Mirabilis laevis* var. *crassifolia* | California four o'clock |
| **Oleaceae** | | |
| | *Fraxinus velutina* | velvet ash |
| **Onagraceae** | | |
| | *Clarkia unguiculata* | elegant clarkia |
| | *Epilobium canum* ssp. *canum* | California fuschia |
| | *Eremothera boothii* ssp. *decorticans* | Booth's sun cup |
| | *Oenothera sinuosa** | wavy-leaved guara |
| | *Oenothera xenogaura** | scented guara |
| **Orobanchaceae** | | |
| | *Castilleja affinis* ssp. *affinis* | coast paintbrush |

| Family | *Scientific Name* | Common Name |
|---|---|---|
| | *Cordylanthus rigidus* ssp. *Rigidus* | stiff-branch bird's beak |
| **Oxalidaceae** | | |
| | *Oxalis corniculata** | creeping wood sorrel |
| | *Oxalis pes-caprae** | Bermuda buttercup |
| **Paeoniaceae** | | |
| | *Paeonia californica* | California peony |
| **Papaveraceae** | | |
| | *Eschscholzia californica* | California poppy |
| | *Romneya coulteri*** | Matilija poppy |
| **Passifloraceae** | | |
| | *Passiflora* sp. ** | passionfruit |
| **Phrymaceae** | | |
| | *Mimulus aurantiacus* var. *aurantiacus* | sticky monkeyflower |
| **Plantaginaceae** | | |
| | *Collinsia heterophylla* | chinese houses |
| | *Keckiella cordifolia* | heart-leaved bush penstemon |
| | *Kickxia elatine** | sharp-leaf fluellin |
| | *Plantago erecta* | California plantain |
| | *Plantago lanceolata** | English plantain |
| **Platanaceae** | | |
| | *Platanus racemosa* | western sycamore |
| **Plumbaginaceae** | | |
| | *Limonium californicum* | western marsh-rosemary |
| **Polemoniaceae** | | |
| | *Navarretia mitracarpa* | mitrefruit pincushionplant |
| **Polygalaceae** | | |
| | ***Polygala cornuta* var. *fishiae*** | **Fish's milkwort** |
| **Polygonaceae** | | |
| | *Eriogonum cinereum* | coastal buckwheat |
| | *Eriogonum elongatum* var. *elongatum* | longstem buckwheat |
| | *Eriogonum fasciculatum* var. *foliolosum* | leafy California buckwheat |
| | *Eriogonum parvifolium* | seacliff buckwheat (**confirm ID**) |
| | *Polygonum aviculare* ssp. *depressum** | knotweed |
| | *Rumex crispus** | curly dock |
| | *Pterostegia drymarioides* | fairy bowties |
| **Portulacaceae** | | |
| | *Portulaca oleracea** | common purslane |
| **Ranunculaceae** | | |
| | *Clematis ligusticifolia* | virgin’s bower |
| **Rhamnaceae** | | |
| | *Ceanothus cuneatus* var. *cuneatus* | buckbrush |
| | *Ceanothus megacarpus* var. *megacarpus* | bigpod ceanothus |
| | *Ceanothus oliganthus* | hoary ceanothus |
| | *Ceanothus spinosus* | greenbark ceanothus |
| | *Ceanothus thyrsiflorus* var. *thyrsiflorus* | blueblossom |
| | *Rhamnus crocea* | redberry |
| | *Rhamnus ilicifolia* | hollyleaf redberry |
| **Rosaceae** | | |
| | *Adenostoma fasciculatum* | chamise |
| | *Cercocarpus betuloides* var. *betuloides* | birchleaf mountain mahogany |
| | *Heteromeles arbutifolia* | toyon |
| | *Holodiscus discolor* | oceanspray |
| | *Prunus ilicifolia* | hollyleaf cherry |
| | *Rosa californica* | California wildrose |
| | *Rubus ursinus* | Pacific blackberry |
| **Rubiaceae** | | |
| | *Galium angustifolium* ssp. *angustifolium* | chaparral bedstraw |
| | *Galium aparine* | common bedstraw |
| | *Galium porrigens* | climbing bedstraw |
| **Rutaceae** | | |
| | *Citrus x limon*** | lemon |
| | *Citrus x sinensis*** | orange |

| Family | *Scientific Name* | Common Name |
|---|---|---|
| **Salicaceae** | | |
| | *Populus fremontii* | Fremont's cottonwood |
| | *Populus trichocarpa* | black cottonwood |
| | *Salix exigua* | sandbar willow |
| | *Salix lasiolepis* | arroyo willow |
| | *Salix laevigata* | red willow |
| **Scrophulariaceae** | | |
| | *Scrophularia californica* | California figwort |
| **Simaroubaceae** | | |
| | *Ailanthus altissima** | Tree of heaven |
| **Solanaceae** | | |
| | *Datura wrightii* | jimson weed |
| | *Nicotiana glauca** | tree tobacco |
| | *Solanum americanum* | white nightshade |
| | *Solanum douglasii* | Douglas' nightshade |
| | *Solanum xanti* | chaparral nightshade |
| **Tamaricaceae** | | |
| | *Tamarix aphylla** | athel |
| | *Tamarix ramosissima** | saltcedar |
| **Urticaceae** | | |
| | *Urtica dioica* ssp. *holosericea* | hoary nettle |
| | *Urtica urens* | dwarf nettle |
| **Verbenaceae** | | |
| | *Lantana camara*** | lantana |
| | *Verbena lasiostachys* | western verbena |
| **Viscaceae** | | |
| | *Phoradendron leucarpum* ssp. *tomentosum* | Pacific mistletoe |
| **Vitaceae** | | |
| | *Vitis californica* | California wild grape |
| **Zygophyllaceae** | | |
| | *Tribulus terrestris** | puncture vine |
| | **ANGIOSPERMS- Monocots** | |
| **Agavaceae** | | |
| | *Chlorogalum pomeridianum* var. *pomeridianum* | soap plant |
| **Arecaceae** | | |
| | *Phoenix canariensis*** | Canary Island palm |
| **Asphodelaceae** | | |
| | *Asphodelus fistulosus** | onion weed |
| **Iridaceae** | | |
| | *Sisyrinchium bellum* | western blue-eyed-grass |
| **Juncaceae** | | |
| | *Juncus patens* | spreading rush |
| **Liliaceae** | | |
| | *Calochortus albus* | white globe lily |
| | ***Calochortus catalinae*** | **Catalina mariposa lily** |
| | *Calochortus clavatus* var. *pallidus* | club-haired mariposa lily |
| | ***Lilium humboldtii* ssp. *ocellatum*** | **ocellated Humboldt lily** |
| **Poaceae** | | |
| | *Avena barbata** | slender wild oats |
| | *Avena fatua** | wild oats |
| | *Avena sativa** | cultivated oat |
| | *Avena sterilis** | animated oat |
| | *Brachypodium distachyon** | shortfoot brachypodium |
| | *Bromus carinatus* | California brome |
| | *Bromus catharticus* var. *catharticus** | rescue grass |
| | *Bromus diandrus** | ripgut brome |
| | *Bromus hordeaceus** | soft chess |
| | *Bromus madritensis* ssp. *madritensis** | foxtail chess |
| | *Bromus madritensis* ssp. *rubens** | red brome |
| | *Bromus sterilis** | poverty brome |

| Family | *Scientific Name* | Common Name |
|---|---|---|
| | *Chloris virgata** | feather finger grass |
| | *Cynodon dactylon** | Bermuda grass |
| | *Distichlis spicata* | salt grass |
| | *Echinochloa crus-galli** | barnyard grass |
| | *Elymus condensatus* | giant wild-rye |
| | *Eragrostis* sp. | love grass |
| | *Festuca bromoides** | slender fescue |
| | *Festuca perennis** | Italian rye |
| | *Gastridium phleoides* | nit grass |
| | *Hordeum marinum* ssp. *gussoneanum** | Mediterranean barley |
| | *Hordeum murinum* ssp. *glaucum** | summer barley |
| | *Lamarckia aurea** | goldentop |
| | *Melica imperfecta* | California melic |
| | *Muhlenbergia microsperma* | littleseed muhly |
| | *Paspalum dilatatum** | dallis grass |
| | *Pennisetum setaceum** | fountaingrass |
| | *Phalaris aquatica** | harding grass |
| | *Schismus arabicus** | Arabian grass |
| | *Stipa cernua* | nodding needle grass |
| | *Stipa lepida* | foothill needle grass |
| | *Stipa miliaceum** | smilo grass |
| | *Stipa pulchra* | purple needle grass |
| | *Triticum aestivum** | wheat |
| **Strelitziaceae** | | |
| | *Strelitzia reginae*** | bird-of-paradise |
| **Themidaceae** | | |
| | *Bloomeria crocea* var. *crocea* | goldenstars |
| | *Dichelostemma capitatum* ssp. *capitatum* | blue dicks |

Notes: Scientific nomenclature follows *The Jepson Manual: Vascular Plants of California, Second Edition* , Baldwin et al. (2012).
Species in bold type are listed as rare, threatened, or endangered by the California Native Plant Society (CNPS 2014).
An "*" indicates non-native species which have become naturalized or persist without cultivation.
An "**" indicates non-native species which been planted as landscaping or is an agricultural crop plant.

# APPENDIX C
# SITE PHOTOGRAPHS

**Photograph 1.** Representative view of Plummer's baccharis in flower. Photograph taken in Segment 1, May 2014.

**Photograph 2.** Representative view of Plummer's baccharis growth habit. Photograph taken in Segment 1, May 2014.

**Photograph 3.** Representative view of Catalina mariposa lily in flower. Photograph taken in Segment 1, May 2014.

**Photograph 4.** Representative view of Catalina mariposa lily in fruit. Photograph taken in Segment 1, May 2014.

**Photograph 5.** Representative view of Santa Barbara honeysuckle in flower. Photograph taken in Segment 4, May 2014.

**Photograph 6.** Representative view of Fish's milkwort in flower. Photograph taken in Segment 3B, May 2014.

**Photograph 7.** Representative view of Fish's milkwort growth habit. Photograph taken in Segment 1, May 2014.

**Photograph 8.** Representative view of Hoffmann's sanicle leaves. Photograph taken in Segment 4, May 2014.

# APPENDIX D

# SPECIAL-STATUS SPECIES POPULATION DATA

| Date | Surveyor Initials | Plant Code | Scientific Name | Common Name | Population ID | Feature Type | Easting | Northing | Population Size | Cover Class | % Vegetative | % Flowering | % Fruiting | Nearest Construct | Potential Threat | Other Threat | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/15/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-001 | Point | 281233.5022 | 3806719.507 | 5 | 2% | 100 | 0 | 0 | M13-T5 | Access Road | | |
| 5/15/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-002 | Point | 281243.6347 | 3806707.084 | 1 | <1% | 100 | 0 | 0 | M13-T5 | Access Road | | |
| 5/15/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-003 | Point | 280778.26 | 3806448.227 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | |
| 5/15/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-004 | Point | 280789.9534 | 3806470.472 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | |
| 5/15/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-005 | Point | 280799.7706 | 3806476.77 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | |
| 5/15/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-006 | Point | 279342.8145 | 3806553.031 | 4 | <1% | 100 | 0 | 0 | CONSTR 60 M5 P3 | Ground Dist. Area | | |
| 5/15/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-007 | Point | 279316.7285 | 3806539.076 | 4 | <1% | 100 | 0 | 0 | CONSTR 60 M5 P3 | Access Road | | along access rd to tower |
| 5/15/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-008 | Point | 279027.8206 | 3806526.059 | 4 | 2% | 100 | 0 | 0 | CONSTR 61 M5 P4 | Access Road | | along access rd |
| 5/15/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-009 | Point | 278993.4807 | 3806539.51 | 3 | <1% | 100 | 0 | 0 | CONSTR 61 M5 P4 | Access Road | | along access rd |
| 5/15/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-010 | Point | 281100.7007 | 3807490.849 | 1 | <1% | 100 | 0 | 0 | access road | Other | | |
| 5/15/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-011 | Point | 281113.8517 | 3807358.554 | 3 | 35% | 100 | 0 | 0 | access road | Other | | |
| 5/15/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-012 | Point | 281098.5128 | 3807312.008 | 2 | 5% | 100 | 0 | 0 | access road | Other | | |
| 5/15/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-013 | Point | 281229.4339 | 3807038.184 | 1 | 5% | 100 | 0 | 0 | M13-T6 | Access Road | | |
| 5/15/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-014 | Point | 281155.7793 | 3806962.996 | 2 | 5% | 100 | 0 | 0 | CONSTR 81 | Access Road | | |
| 5/15/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-015 | Point | 280784.9723 | 3806443.141 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | |
| 5/15/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-016 | Point | 280787.0172 | 3806449.809 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | |
| 5/15/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-017 | Point | 280806.4223 | 3806483.878 | 2 | 5% | 100 | 0 | 0 | access road | Access Road | | |
| 5/15/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-018 | Point | 280803.8575 | 3806480.71 | 1 | 2% | 100 | 0 | 0 | access road | Access Road | | |

| Date | Surveyor Initials | Plant Code | Scientific Name | Common Name | Population ID | Feature Type | Easting | Northing | Population Size | Cover Class | % Vegetative | % Flowering | % Fruiting | Nearest Construct | Potential Threat | Other Threat | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/15/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-019 | Point | 279475.9289 | 3806494.323 | 3 | 5% | 100 | 0 | 0 | M5-ST5 | Access Road | | |
| 5/15/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-020 | Point | 279486.3016 | 3806492.423 | 1 | 5% | 100 | 0 | 0 | M5-ST5 | Access Road | | |
| 5/15/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-021 | Point | 279520.5646 | 3806485.438 | 5 | 15% | 100 | 0 | 0 | M5-ST5 | Access Road | | |
| 5/15/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-022 | Point | 279536.7758 | 3806484.09 | 6 | 15% | 100 | 0 | 0 | M5-ST5 | Access Road | | |
| 5/15/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-023 | Point | 279252.9222 | 3806526.792 | 2 | 15% | 100 | 0 | 0 | M5-ST7 | Access Road | | along downhill side of road |
| 5/15/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-024 | Point | 279234.0925 | 3806516.047 | 1 | 15% | 100 | 0 | 0 | M5-ST7 | Access Road | | upslope edge of road |
| 5/15/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-025 | Point | 279214.7106 | 3806512.338 | 2 | 15% | 100 | 0 | 0 | M5-ST7 | Access Road | | upslope of road |
| 5/15/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-026 | Point | 279207.933 | 3806512.331 | 1 | 2% | 100 | 0 | 0 | M5-ST7 | Access Road | | upslope of road |
| 5/15/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-027 | Point | 279199.2693 | 3806509.802 | 3 | <1% | 100 | 0 | 0 | M5-ST7 | Access Road | | upslope of road |
| 5/15/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-028 | Point | 279134.3103 | 3806507.873 | 2 | 15% | 100 | 0 | 0 | M5-T4 | Access Road | | upslope of road |
| 5/15/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-029 | Point | 279069.0519 | 3806516.137 | 1 | 10% | 100 | 0 | 0 | M5-T4 | Access Road | | upslope of road |
| 5/15/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-030 | Point | 279062.2272 | 3806518.099 | 1 | <1% | 100 | 0 | 0 | CONSTR 61 M5 P4 | Access Road | | upslope of road |
| 5/15/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-031 | Point | 278983.5607 | 3806537.851 | 6 | 5% | 100 | 0 | 0 | M5-T8 | Access Road | | upslope of road |
| 5/15/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-032 | Point | 278959.4826 | 3806549.818 | 5 | 2% | 100 | 0 | 0 | M5-T8 | Access Road | | upslope of road |
| 5/15/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-033 | Point | 278951.9374 | 3806553.895 | 3 | <1% | 100 | 0 | 0 | M5-T8 | Access Road | | upslope of road |
| 5/15/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-034 | Point | 278943.8859 | 3806557.235 | 3 | <1% | 100 | 0 | 0 | M5-T8 | Access Road | | upslope of road |
| 5/15/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-035 | Point | 278911.6323 | 3806580.554 | 2 | <1% | 100 | 0 | 0 | M5-T8 | Access Road | | downslope of road |
| 5/15/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-036 | Point | 278841.7121 | 3806583.32 | 3 | 2% | 100 | 0 | 0 | M5-T8 | Ground Dist. Area | | upslope of access road |

| Date | Surveyor Initials | Plant Code | Scientific Name | Common Name | Population ID | Feature Type | Easting | Northing | Population Size | Cover Class | % Vegetative | % Flowering | % Fruiting | Nearest Construct | Potential Threat | Other Threat | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/15/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-037 | Point | 278862.8544 | 3806582.753 | 2 | 2% | 100 | 0 | 0 | M5-T8 | Ground Dist. Area | | upslope of access road |
| 5/15/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-038 | Polygon | 281156.3405 | 3806955.343 | 40 | 15% | 100 | 0 | 0 | CONSTR 81 | Ground Dist. Area | under tower along access road | |
| 5/15/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-039 | Polygon | 279501.7861 | 3806531.64 | 10 | 5% | 100 | 0 | 0 | M5-T2 | Ground Dist. Area | | on slopes around tower |
| 5/15/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-040 | Polygon | 281230.2966 | 3807080.6 | 10 | 5% | 100 | 0 | 0 | M5-T2 | Access Road | | |
| 5/15/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-041 | Polygon | 281151.252 | 3806889.375 | 20 | 5% | 100 | 0 | 0 | CONSTR 81 | Access Road | | |
| 5/15/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-042 | Polygon | 281362.5861 | 3806682.546 | 12 | 5% | 100 | 0 | 0 | M13-T5 | Access Road | | |
| 5/15/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-043 | Polygon | 281432.6252 | 3806666.614 | 25 | 5% | 100 | 0 | 0 | M13-T4 | Access Road | | |
| 5/15/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-044 | Polygon | 280230.7051 | 3806416.591 | 12 | <1% | 100 | 0 | 0 | M4-T5 | Access Road | | |
| 5/15/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-045 | Polygon | 279880.3769 | 3806479.539 | 15 | 2% | 100 | 0 | 0 | M5-T1 | Access Road | | |
| 5/15/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-046 | Polygon | 279635.8602 | 3806456.118 | 50 | <1% | 100 | 0 | 0 | M5-ST5 | Access Road | | |
| 5/15/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-047 | Polygon | 279631.3849 | 3806473.171 | 15 | 5% | 100 | 0 | 0 | M5-ST5 | Access Road | | |
| 5/15/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-048 | Polygon | 279540.08 | 3806467.513 | 20 | 5% | 100 | 0 | 0 | M5-ST5 | Access Road | | |
| 5/15/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-049 | Polygon | 279499.5257 | 3806479.131 | 30 | <1% | 100 | 0 | 0 | M5-ST5 | Access Road | | |
| 5/15/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-050 | Polygon | 279461.3806 | 3806487.014 | 12 | <1% | 100 | 0 | 0 | M5-ST5 | Access Road | | |
| 5/15/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-051 | Polygon | 279502.3828 | 3806494.03 | 10 | 5% | 100 | 0 | 0 | M5-ST5 | Access Road | | |
| 5/15/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-052 | Polygon | 279395.298 | 3806494.708 | 40 | 2% | 100 | 0 | 0 | M5-ST6 | Access Road | | upslope of access road |
| 5/15/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-053 | Polygon | 279313.9994 | 3806520.687 | 20 | <1% | 100 | 0 | 0 | M5-ST6 | Access Road | | upslope of access road |
| 5/15/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-054 | Polygon | 279261.6569 | 3806518.195 | 5 | <1% | 100 | 0 | 0 | M5-ST7 | Access Road | | upslope of access road |

| Date | Surveyor Initials | Plant Code | Scientific Name | Common Name | Population ID | Feature Type | Easting | Northing | Population Size | Cover Class | % Vegetative | % Flowering | % Fruiting | Nearest Construct | Potential Threat | Other Threat | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/15/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-055 | Polygon | 278912.1038 | 3806566.752 | 35 | 2% | 100 | 0 | 0 | M5-T8 | Access Road | | upslope of access road |
| 5/15/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-056 | Polygon | 281221.205 | 3806771.507 | 20 | 2% | 100 | 0 | 0 | M13-T5 | Access Road | | mucked up polygon, put a 20ft buffer on either side of the road from line mapped |
| 5/19/2014 | SH | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-057 | Point | 291201.3629 | 3804231.968 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | |
| 5/19/2014 | SH | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-058 | Point | 291198.6909 | 3804241.613 | 2 | <1% | 100 | 0 | 0 | access road | Access Road | | |
| 5/19/2014 | ES | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-059 | Point | 290674.5066 | 3803672.1 | 7 | 5% | 100 | 0 | 0 | 4453227E | Access Road | | |
| 5/19/2014 | ES | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-060 | Point | 290637.9737 | 3803662.716 | 7 | 5% | 100 | 0 | 0 | 4453227E | Access Road | | |
| 5/19/2014 | ES | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-061 | Point | 290581.6573 | 3803644.914 | 3 | <1% | 100 | 0 | 0 | 4453227E | Access Road | | |
| 5/19/2014 | ES | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-062 | Point | 291439.767 | 3803780.236 | 1 | 2% | 100 | 0 | 0 | access road | Access Road | | |
| 5/19/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-063 | Point | 291041.9159 | 3803570.438 | 1 | 5% | 95 | 5 | 0 | 4453226E | Access Road | | |
| 5/19/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-064 | Point | 291036.5143 | 3803558.49 | 1 | 5% | 100 | 0 | 0 | 4453226E | Access Road | | |
| 5/19/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-065 | Point | 291030.1424 | 3803553.219 | 6 | 5% | 100 | 0 | 0 | 4453226E | Access Road | | |
| 5/19/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-066 | Point | 291018.1394 | 3803544.575 | 1 | <1% | 100 | 0 | 0 | 4453226E | Access Road | | |
| 5/19/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-067 | Point | 290856.9878 | 3803534.267 | 1 | 5% | 100 | 0 | 0 | access road | Access Road | | |
| 5/19/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-068 | Point | 290662.3854 | 3803679.073 | 8 | 5% | 100 | 0 | 0 | 4453227E | Access Road | | |
| 5/19/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-069 | Point | 290616.7712 | 3803647.135 | 4 | 2% | 100 | 0 | 0 | 4453227E | Access Road | | |
| 5/19/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-070 | Point | 290606.2361 | 3803643.077 | 5 | <1% | 100 | 0 | 0 | 4453227E | Access Road | | |
| 5/19/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-071 | Point | 290578.3311 | 3803650.196 | 1 | <1% | 100 | 0 | 0 | 4453227E | Access Road | | |
| 5/19/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-072 | Point | 290494.117 | 3803670.959 | 10 | 25% | 100 | 0 | 0 | 4453228E | Access Road | | under tower |

| Date | Surveyor Initials | Plant Code | Scientific Name | Common Name | Population ID | Feature Type | Easting | Northing | Population Size | Cover Class | % Vegetative | % Flowering | % Fruiting | Nearest Construct | Potential Threat | Other Threat | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/19/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-073 | Point | 290504.736 | 3803677.994 | 8 | 2% | 100 | 0 | 0 | 4453228E | Access Road | | under tower |
| 5/19/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-074 | Point | 291411.2331 | 3803792.354 | 9 | 5% | 100 | 0 | 0 | access road | Access Road | | upslope of access road |
| 5/19/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-075 | Point | 291430.0001 | 3803784.019 | 3 | 2% | 100 | 0 | 0 | access road | Access Road | | upslope of access road |
| 5/19/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-076 | Point | 291449.99 | 3803775.737 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | upslope of access road |
| 5/19/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-077 | Point | 290536.5853 | 3803778.467 | 1 | 10% | 100 | 0 | 0 | access road | Access Road | | |
| 5/19/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-078 | Point | 290591.8667 | 3803807.559 | 1 | 2% | 100 | 0 | 0 | access road | Access Road | | |
| 5/19/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-079 | Point | 290608.0511 | 3803817.07 | 2 | 5% | 100 | 0 | 0 | access road | Access Road | | |
| 5/19/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-080 | Point | 291538.5018 | 3803733.994 | 4 | 15% | 100 | 0 | 0 | access road | Access Road | | |
| 5/19/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-081 | Point | 291203.289 | 3804238.627 | 3 | 25% | 100 | 0 | 0 | access road | Access Road | | |
| 5/19/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-082 | Polygon | 290493.1634 | 3803676.841 | 20 | 15% | 100 | 0 | 0 | 4453228E | Access Road | under tower and along access road | |
| 5/20/2014 | ES | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-083 | Point | 275408.4613 | 3807884.693 | 5 | <1% | 100 | 0 | 0 | access road | Access Road | | on upslope of access road |
| 5/20/2014 | ES | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-084 | Point | 275477.5518 | 3807894.865 | 6 | <1% | 100 | 0 | 0 | access road | Access Road | | on upslope of access road |
| 5/20/2014 | ES | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-085 | Point | 275517.4659 | 3807496.384 | 6 | <1% | 100 | 0 | 0 | access road | Access Road | | on upslope of access road |
| 5/20/2014 | ES | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-086 | Point | 275372.3498 | 3807896.046 | 10 | <1% | 100 | 0 | 0 | access road | Access Road | | on upslope of access road |
| 5/20/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-087 | Point | 295961.732 | 3802382.731 | 7 | 10% | 100 | 0 | 0 | access road | Access Road | | upslope of access road |
| 5/20/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-088 | Point | 296217.7562 | 3802068.905 | 10 | 10% | 100 | 0 | 0 | access road | Access Road | | upslope of access road |
| 5/20/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-089 | Point | 295877.9967 | 3802259.036 | 1 | 10% | 100 | 0 | 0 | access road | Access Road | | upslope of access road |
| 5/20/2014 | ES | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-090 | Polygon | 275516.215 | 3807495.361 | 35 | 25% | 100 | 0 | 90 | access road | Access Road | | scattered down slopm of access rd |

| Date | Surveyor Initials | Plant Code | Scientific Name | Common Name | Population ID | Feature Type | Easting | Northing | Population Size | Cover Class | % Vegetative | % Flowering | % Fruiting | Nearest Construct | Potential Threat | Other Threat | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/20/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-091 | Polygon | 295905.8355 | 3802427.776 | 15 | 5% | 100 | 0 | 0 | access road | Access Road | | upslope of access road, scattered throughout scrub |
| 5/21/2014 | SH | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-092 | Point | 279976.2331 | 3807509.422 | 2 | 5% | 100 | 0 | 0 | CONSTR 85 | Access Road | | upslope along row |
| 5/21/2014 | SH | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-093 | Point | 279850.0134 | 3807572.825 | 2 | 5% | 100 | 0 | 0 | CONSTR 86 | Access Road | | upslope along access road |
| 5/21/2014 | SH | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-094 | Point | 280210.8421 | 3807567.3 | 3 | 5% | 100 | 0 | 0 | M14-T15A | Access Road | | upslope along access road |
| 5/21/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-095 | Point | 279978.8129 | 3807440.901 | 1 | 20% | 100 | 0 | 0 | CONSTR 85 | Access Road | | upslope of access road |
| 5/21/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-096 | Point | 280140.5214 | 3807513.119 | 1 | <1% | 100 | 0 | 0 | M14-T15A | Access Road | | upslope of access road |
| 5/21/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-097 | Point | 280077.3368 | 3807479.425 | 2 | 2% | 100 | 0 | 0 | CONSTR 85 | Ground Dist. Area | guard structure | |
| 5/21/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-098 | Point | 280082.853 | 3807499.913 | 4 | 2% | 100 | 0 | 0 | CONSTR 85 | Access Road | | upslope of road |
| 5/21/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-099 | Point | 275102.5905 | 3809008.311 | 1 | 5% | 100 | 0 | 0 | M8-ST3 | Access Road | | upslope of access road |
| 5/21/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-100 | Point | 280567.4613 | 3807431.524 | 3 | 5% | 100 | 0 | 0 | CONSTR 84 | Access Road | | upslope of access road |
| 5/21/2014 | SH | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-101 | Polygon | 277089.1197 | 3808445.17 | 12 | 2% | 100 | 0 | 0 | CONSTR 94 | Access Road | | upslope from access road |
| 5/21/2014 | SH | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-102 | Polygon | 280132.4761 | 3807508.186 | 20 | 5% | 100 | 0 | 0 | M14-T15A | Ground Dist. Area | | under tower |
| 5/21/2014 | SH | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-103 | Polygon | 280046.3723 | 3807524.31 | 3 | 5% | 100 | 0 | 0 | CONSTR 85 | Access Road | | upslop along access road |
| 5/21/2014 | ES | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-104 | Polygon | 280485.6796 | 3807427.411 | 50+ | 25% | 100 | 0 | 90 | M4-T5 | Linear ROW | access road | starts upslope of access road. continues under and around tower and consructbarea |
| 5/21/2014 | SH | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-105 | Polygon | 280217.0874 | 3807600.358 | 20 | 5% | 100 | 0 | 0 | M14-T15A | Access Road | | along access road and road improvement area |
| 5/22/2014 | SH | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-106 | Point | 295358.1587 | 3800286.511 | 1 | <1% | 100 | 0 | 0 | M4-T9 | Access Road | | |
| 5/22/2014 | SH | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-107 | Point | 295246.8657 | 3800564.324 | 1 | <1% | 100 | 0 | 0 | M5-T2 | Access Road | | |
| 5/22/2014 | SH | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-108 | Point | 296796.0826 | 3800259.965 | 2 | <1% | 100 | 0 | 0 | 4453213E | Access Road | | upslope from access road |

| Date | Surveyor Initials | Plant Code | Scientific Name | Common Name | Population ID | Feature Type | Easting | Northing | Population Size | Cover Class | % Vegetative | % Flowering | % Fruiting | Nearest Construct | Potential Threat | Other Threat | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/22/2014 | SH | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-109 | Point | 296793.1575 | 3800462.951 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | upslope from access road |
| 5/22/2014 | SH | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-110 | Point | 295492.007 | 3800197.665 | 3 | <1% | 100 | 0 | 0 | access road | Access Road | | downslope slope slope from access road |
| 5/22/2014 | SH | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-111 | Point | 297498.3132 | 3797974.797 | 4 | <1% | 100 | 0 | 0 | access road | Access Road | | |
| 5/22/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-112 | Point | 295266.5745 | 3799638.761 | 1 | <1% | 100 | 0 | 0 | M4-T7 | Access Road | | |
| 5/22/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-113 | Point | 295367.241 | 3799842.42 | 1 | <1% | 100 | 0 | 0 | M4-T8 | Access Road | | upslope of access road |
| 5/22/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-114 | Point | 295371.0414 | 3799863.387 | 1 | <1% | 100 | 0 | 0 | M4-T8 | Access Road | | upslope of access road |
| 5/22/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-115 | Point | 297601.1572 | 3799821.392 | 1 | <1% | 100 | 0 | 0 | 4453211E | Access Road | | upslope of access road |
| 5/22/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-116 | Point | 296535.5347 | 3800176.026 | 6 | 2% | 100 | 0 | 0 | access road | Access Road | | upslope of access road |
| 5/22/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-117 | Point | 296521.341 | 3800130.531 | 3 | <1% | 100 | 0 | 0 | access road | Access Road | | |
| 5/22/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-118 | Point | 296525.5323 | 3800213.349 | 5 | <1% | 100 | 0 | 0 | access road | Access Road | | |
| 5/22/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-119 | Point | 295789.5996 | 3800319.86 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | |
| 5/22/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-120 | Point | 294957.1194 | 3801015.294 | 1 | 2% | 100 | 0 | 0 | M5-ST5 | Access Road | | just upslope of access road |
| 5/22/2014 | ES | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-121 | Point | 295401.2129 | 3800036.793 | 1 | 2% | 100 | 0 | 0 | M4-T8 | Access Road | | on upslope of side access road |
| 5/22/2014 | ES | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-122 | Point | 295426.658 | 3800124.839 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | on upslope of side access road |
| 5/22/2014 | ES | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-123 | Point | 296018.4012 | 3800243.825 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | side of access road |
| 5/22/2014 | SH | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-124 | Polygon | 295668.9188 | 3800251.26 | 100+ | 2% | 100 | 0 | 0 | access road | Access Road | | upslope slope from access road, covering road side |
| 5/22/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-125 | Polygon | 297258.1511 | 3801235.371 | 35 | 5% | 100 | 0 | 0 | access road | Access Road | | upslope of access road |
| 5/22/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-126 | Polygon | 296650.5637 | 3800259.469 | 50 | 2% | 100 | 0 | 0 | 4453213E | Access Road | | upslope of access road, scattered throughout scrub |

| Date | Surveyor Initials | Plant Code | Scientific Name | Common Name | Population ID | Feature Type | Easting | Northing | Population Size | Cover Class | % Vegetative | % Flowering | % Fruiting | Nearest Construct | Potential Threat | Other Threat | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/22/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-127 | Polygon | 296445.3438 | 3800546.09 | 32 | <1% | 100 | 0 | 0 | access road | Access Road | | upslope of access road, scattered throughout scrub |
| 5/22/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-128 | Polygon | 297237.7798 | 3801252.819 | 5 | <1% | 100 | 0 | 0 | access road | Access Road | | scattered downslope of access road |
| 5/22/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-129 | Polygon | 295752.1876 | 3800312.724 | 20 | <1% | 100 | 0 | 0 | access road | Access Road | | upslope of access road |
| 5/22/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-130 | Polygon | 295671.8178 | 3800276.571 | 10 | <1% | 100 | 0 | 0 | access road | Access Road | | downslope of access road |
| 5/22/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-131 | Polygon | 295625.3053 | 3800252.833 | 5 | <1% | 100 | 0 | 0 | access road | Access Road | | downslope of access road |
| 5/22/2014 | ES | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-132 | Polygon | 297033.9317 | 3800096.081 | 75 | 15% | 99 | 1 | 0 | 4453212E | Access Road | | scattered down slope and along access road |
| 5/22/2014 | ES | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-133 | Polygon | 296926.7637 | 3800122.131 | 40 | 5% | 99 | 1 | 0 | 4453213E | Access Road | | scattered up slope and along access road |
| 5/22/2014 | ES | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-134 | Polygon | 296842.1872 | 3800102.297 | 5 | <1% | 100 | 0 | 0 | 4453213E | Access Road | | scattered along access road |
| 5/22/2014 | ES | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-135 | Polygon | 295803.9998 | 3800329 | 30 | 2% | 100 | 0 | 0 | access road | Access Road | | scattered along upslope of access road |
| 5/23/2014 | ES | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-136 | Point | 282276.7902 | 3805605.756 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | downslope from access road |
| 5/23/2014 | ES | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-137 | Point | 282301.2103 | 3805521.281 | 2 | <1% | 100 | 0 | 0 | access road | Access Road | | upslope from access road |
| 5/23/2014 | SH | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-138 | Point | 283337.9725 | 3805163.378 | 2 | <1% | 100 | 0 | 0 | access road | Access Road | | downslope from access road |
| 5/23/2014 | SH | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-139 | Point | 283362.8204 | 3805050.89 | 5 | <1% | 100 | 0 | 0 | access road | Access Road | | downslope from access road |
| 5/23/2014 | ES | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-140 | Point | 281966.4096 | 3805763.64 | 2 | <1% | 0 | 0 | 100 | access road | Access Road | | side of access road |
| 5/23/2014 | ES | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-141 | Point | 282665.3606 | 3805550.838 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | upslope of access road |
| 5/23/2014 | ES | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-142 | Point | 284262.9764 | 3805133.959 | 4 | <1% | 100 | 0 | 0 | 4453245E | Access Road | | upslope of access road |
| 5/23/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-143 | Point | 283514.3375 | 3805067.45 | 2 | <1% | 100 | 0 | 0 | access road | Access Road | | |
| 5/23/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-144 | Point | 283733.0803 | 3805110.878 | 5 | <1% | 100 | 0 | 0 | access road | Access Road | | upslope of access road |

| Date | Surveyor Initials | Plant Code | Scientific Name | Common Name | Population ID | Feature Type | Easting | Northing | Population Size | Cover Class | % Vegetative | % Flowering | % Fruiting | Nearest Construct | Potential Threat | Other Threat | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/23/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-145 | Point | 284060.6648 | 3805315.78 | 5 | <1% | 100 | 0 | 0 | 4453246E | Access Road | | |
| 5/23/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-146 | Point | 284833.4502 | 3805430.131 | 4 | <1% | 100 | 0 | 0 | 4453243E | Access Road | | |
| 5/23/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-147 | Point | 282505.3285 | 3805340.319 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | upslope of access road |
| 5/23/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-148 | Point | 282693.3256 | 3805549.809 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | upslope of access road |
| 5/23/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-149 | Point | 283027.8937 | 3805254.563 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | upslope of access road |
| 5/23/2014 | SH | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-150 | Polygon | 283885.8529 | 3805130.381 | 200+ | <1% | 100 | 0 | 0 | access road | Access Road | | upslope and downslope from access road |
| 5/23/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-151 | Polygon | 282146.6293 | 3805715.818 | 10 | 2% | 100 | 0 | 0 | M3-P2B | Access Road | | |
| 5/23/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-152 | Polygon | 282354.9619 | 3805308.057 | 50 | 2% | 100 | 0 | 0 | 4453248E | Access Road | | along both sides of access road |
| 5/23/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-153 | Polygon | 283642.8936 | 3805158.208 | 15 | 2% | 100 | 0 | 0 | access road | Access Road | | upslope of access road |
| 5/23/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-154 | Polygon | 282936.7781 | 3805387.552 | 50+ | <1% | 100 | 0 | 0 | access road | Access Road | | both sides of access roads |
| 5/23/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-155 | Polygon | 282245.4433 | 3805629.998 | 25 | <1% | 100 | 0 | 0 | M3-P2B | Access Road | | upslope from access road |
| 5/23/2014 | ES | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-156 | Polygon | 284306.0833 | 3805147.782 | 25 | 5% | 100 | 0 | 0 | 4453245E | Access Road | | upslope of access road |
| 5/28/2014 | MB | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-157 | Point | 298841.9521 | 3798138.371 | 1 | 5% | 100 | 0 | 0 | access road | Access Road | | |
| 5/28/2014 | SH | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-158 | Point | 269992.1618 | 3813358.032 | 3 | <1% | 100 | 0 | 0 | access road | Access Road | | |
| 5/28/2014 | SH | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-159 | Point | 298719.2938 | 3800193.119 | 1 | <1% | 0 | 100 | 0 | access road | Access Road | | |
| 5/28/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-160 | Point | 269890.5882 | 3812885.14 | 3 | <1% | 100 | | | access road | Access Road | | upslope of access road |
| 5/28/2014 | MB | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-161 | Polygon | 298619.2493 | 3798660.049 | 40 | 10% | 70 | 30 | 0 | 4453204E | Access Road | | x berberidifolia |
| 5/28/2014 | SH | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-162 | Polygon | 298784.0783 | 3798708.143 | 30 | <1% | 100 | 0 | 0 | 4453204E | Access Road | | upslope of  access road |

| Date | Surveyor Initials | Plant Code | Scientific Name | Common Name | Population ID | Feature Type | Easting | Northing | Population Size | Cover Class | % Vegetative | % Flowering | % Fruiting | Nearest Construct | Potential Threat | Other Threat | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/28/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-163 | Polygon | 298723.9865 | 3798146.443 | 7 | 2% | 100 | 0 | 0 | access road | Access Road | | upslope of access road |
| 5/29/2014 | MB | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-164 | Point | 278008.8382 | 3806931.014 | 1 | 2% | 100 | 0 | 0 | access road | Access Road | | |
| 5/29/2014 | MB | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-165 | Point | 278049.3529 | 3806911.014 | 3 | 2% | 100 | 0 | 0 | access road | Access Road | | |
| 5/29/2014 | MB | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-166 | Point | 277254.8259 | 3806910.507 | 1 | <1% | 100 | 0 | 0 | M6-T7 | Access Road | | |
| 5/29/2014 | MB | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-167 | Point | 275801.4699 | 3807281.201 | 1 | <1% | 100 | 0 | 0 | M7-T5 | Access Road | | |
| 5/29/2014 | MB | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-168 | Point | 275543.2815 | 3807403.264 | 3 | <1% | 100 | 0 | 0 | access road | Access Road | | |
| 5/29/2014 | MB | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-169 | Point | 274713.2844 | 3807718.655 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | |
| 5/29/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-170 | Point | 278583.7653 | 3806570.398 | 5 | <1% | 100 | 0 | 0 | access road | Access Road | | downslope from access road |
| 5/29/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-171 | Point | 278209.7054 | 3806837.712 | 2 | <1% | 100 | 0 | 0 | CONSTR 63 | Access Road | | upslope from access road |
| 5/29/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-172 | Point | 277991.3197 | 3806900.434 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | along access road |
| 5/29/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-173 | Point | 275841.3938 | 3807221.552 | 1 | <1% | | 100 | | M7-T5 | Access Road | | upslope from access road |
| 5/29/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-174 | Point | 278076.053 | 3806894.812 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | |
| 5/29/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-175 | Point | 275223.1875 | 3807465.144 | 7 | 2% | 100 | 0 | 0 | M8-T2 | Access Road | | upslope of access road |
| 5/29/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-176 | Point | 278992.6349 | 3806583.911 | 2 | 5% | 100 | 0 | 0 | CONSTR 61 M5 P4 | Access Road | | upslope of access road |
| 5/29/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-177 | Point | 279057.9598 | 3806601.684 | 1 | 30% | 100 | 0 | 0 | CONSTR 61 M5 P4 | Access Road | | under tower |
| 5/29/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-178 | Point | 279069.5383 | 3806607.262 | 10 | 50% | 100 | 0 | 0 | M5-T4 | Access Road | | north of access road |
| 5/29/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-179 | Point | 278933.422 | 3806602.053 | 1 | 10% | 100 | 0 | 0 | M5-T8 | Access Road | | upslope of access road |
| 5/29/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-180 | Point | 278227.985 | 3806832.391 | 2 | 2% | 100 | 0 | 0 | CONSTR 63 | Access Road | | upslope of access road |

| Date | Surveyor Initials | Plant Code | Scientific Name | Common Name | Population ID | Feature Type | Easting | Northing | Population Size | Cover Class | % Vegetative | % Flowering | % Fruiting | Nearest Construct | Potential Threat | Other Threat | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/29/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-181 | Point | 277642.0779 | 3806765.618 | 3 | 2% | 100 | 0 | 0 | M6-T5 | Access Road | | downslope side of access road |
| 5/29/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-182 | Point | 277394.4541 | 3806747.645 | 4 | 5% | 100 | 0 | 0 | M6-T6 | Access Road | | upslope of access road |
| 5/29/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-183 | Point | 277189.4512 | 3806843.66 | 4 | 5% | 100 | 0 | 0 | M6-T7 | Access Road | | upslope of access road |
| 5/29/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-184 | Point | 275209.9036 | 3807441.582 | 3 | <1% | 100 | 0 | 0 | M8-T2 | Access Road | | upslope of access road |
| 5/29/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-185 | Point | 274200.4645 | 3808027.187 | 1 | 20% | 100 | 0 | 0 | CONSTR 74 M8 P6 | Access Road | | upslope of access road |
| 5/29/2014 | MB | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-186 | Polygon | 277973.168 | 3806853.766 | 30 | <1% | 80 | 20 | 0 | M6-T3 | Access Road | | widely scattered along this side of road |
| 5/29/2014 | MB | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-187 | Polygon | 275887.7154 | 3807157.985 | 5 | <1% | 80 | 20 | 0 | M7-T5 | Access Road | | widely scattered along this side of road |
| 5/29/2014 | MB | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-188 | Polygon | 275803.5942 | 3807296.385 | 5 | <1% | 80 | 20 | 0 | M7-T5 | Access Road | | widely scattered along this side of road |
| 5/29/2014 | MB | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-189 | Polygon | 275492.9091 | 3807418.307 | 5 | <1% | 80 | 20 | 0 | M8-T1 | Access Road | | widely scattered along this side of road |
| 5/29/2014 | MB | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-190 | Polygon | 275457.6723 | 3807433.163 | 100 | 5% | 80 | 20 | 0 | M8-T1 | Access Road | | widely scattered along both sides of road |
| 5/29/2014 | SH | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-191 | Polygon | 278266.5765 | 3806677.091 | 10 | <1% | 100 | 0 | 0 | M6-T1 | Access Road | | akongside from access road |
| 5/29/2014 | SH | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-192 | Polygon | 276712.6736 | 3806867.765 | 100+ | <1% | 100 | 0 | 0 | access road | Access Road | | upslope from access road, inside fence area |
| 5/29/2014 | SH | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-193 | Polygon | 275832.8593 | 3807119.436 | 100+ | <1% | 50 | 30 | 20 | access road | Access Road | | upslope from access road |
| 5/29/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-194 | Polygon | 278551.6109 | 3806543.048 | 75 | 5% | 100 | 0 | 0 | access road | Access Road | | upslope of access road |
| 5/29/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-195 | Polygon | 278371.2887 | 3806621.351 | 3 | <1% | 100 | 0 | 0 | M6-T1 | Access Road | | both sides of access road |
| 5/29/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-196 | Polygon | 278023.8665 | 3806808.481 | 45 | 2% | 100 | 0 | 0 | M6-T2 | Access Road | | upslope of access road, one downslope of access road |
| 5/29/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-197 | Polygon | 277475.8538 | 3806709.159 | 12 | <1% | 100 | 0 | 0 | access road | Access Road | | |
| 5/29/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-198 | Polygon | 276964.0598 | 3806955.526 | 50 | 5% | 100 | 0 | 0 | M6-ST8 | Ground Dist. Area | along access road | |

| Date | Surveyor Initials | Plant Code | Scientific Name | Common Name | Population ID | Feature Type | Easting | Northing | Population Size | Cover Class | % Vegetative | % Flowering | % Fruiting | Nearest Construct | Potential Threat | Other Threat | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/29/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-199 | Polygon | 276648.7163 | 3807083.57 | 25 | 5% | 100 | 0 | 0 | M7-T1 | Ground Dist. Area | under and around tower | |
| 5/29/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-200 | Polygon | 278593.9379 | 3806628.002 | 15 | <1% | 100 | 0 | 0 | access road | Access Road | | upslope of access road |
| 5/29/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-201 | Polygon | 277072.8888 | 3806848.757 | 60+ | <1% | 100 | 0 | 0 | M6-T7 | Access Road | | scattered on both sides of access road |
| 5/29/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-202 | Polygon | 274786.652 | 3808195.804 | 10 | <1% | 100 | 0 | 0 | access road | Access Road | | upslope of access road |
| 5/29/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-203 | Polygon | 276650.2502 | 3807048.981 | 100+ | 10% | 100 | | | M7-ST1 | Ground Dist. Area | under and around tower | along access road and in grading area |
| 5/30/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-204 | Point | 274622.1485 | 3808850.903 | 2 | <1% | 100 | 0 | 0 | M8-ST5 | Ground Dist. Area | under tower | |
| 5/30/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-205 | Point | 277523.8433 | 3808225.933 | 3 | 15% | 100 | 0 | 0 | M6-T3 | Access Road | | |
| 5/30/2014 | SH | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-206 | Point | 279640.5963 | 3807424.559 | 3 | <1% | 100 | | 0 | access road | Access Road | | upslope from access road |
| 5/30/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-207 | Point | 279707.1446 | 3807747.663 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | upslope of access road |
| 5/30/2014 | KM | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-208 | Point | 279707.5858 | 3807689.406 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | downslope of access road |
| 5/30/2014 | MB | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-209 | Polygon | 274608.2226 | 3808848.264 | 20 | 2% | 100 | 0 | 0 | M8-ST5 | Access Road | | |
| 5/30/2014 | SH | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-210 | Polygon | 279714.215 | 3807685.049 | 40 | <1% | 100 | 0 | 0 | access road | Access Road | | upslope from access road |
| 7/15/2014 | MG | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-211 | Point | 281259.4538 | 3806653.338 | 1 | 65% | | 100 | 0 | M13-T5 | Access Road | | |
| 7/15/2014 | MB | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-212 | Point | 274656.61 | 3808871.171 | 1 | 100% | 50 | 50 | 0 | M8-ST5 | Access Road | | |
| 7/15/2014 | MB | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-213 | Point | 274817.4224 | 3808844.076 | 1 | 100% | 0 | 100 | 0 | M8-ST4 | Access Road | | |
| 7/15/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-214 | Point | 281244.6907 | 3806669.73 | 3 | 5% | 0 | 100 | 0 | M13-T5 | Access Road | | |
| 7/15/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-215 | Point | 281272.0562 | 3806689.09 | 1 | <1% | 100 | 0 | 0 | M13-T5 | Ground Dist. Area | | under tower |
| 7/15/2014 | JP | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-216 | Polygon | 281249.6688 | 3806708.445 | 51 | 2% | 50 | 0 | 50 | M13-T5 | Access Road | near tower | |

| Date | Surveyor Initials | Plant Code | Scientific Name | Common Name | Population ID | Feature Type | Easting | Northing | Population Size | Cover Class | % Vegetative | % Flowering | % Fruiting | Nearest Construct | Potential Threat | Other Threat | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/16/2014 | MG | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-217 | Point | 276194.0936 | 3807138.142 | 1 | 20% | 0 | 100 | 0 | M7-T3 | Access Road | | |
| 7/16/2014 | MB | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-218 | Point | 276470.137 | 3807065.62 | 1 | 75% | 0 | 100 | | M7-T2 | Access Road | | |
| 7/16/2014 | MG | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-219 | Polygon | 276370.8004 | 3807043.103 | 200 | 2% | 40 | 60 | 0 | M7-T2 | Access Road | | |
| 7/16/2014 | MB | BAPLP | Baccharis plummerae ssp. plummerae | Plummer's baccharis | BAPLP-220 | Polygon | 276983.2886 | 3807005.785 | 15 | 10% | 0 | 100 | 0 | M6-T6 | Ground Dist. Area | | |
| 5/15/2014 | JP | CACA | Calochortus catalinae | Catalina mariposa lily | CACA-001 | Point | 281233.718 | 3806730.324 | 25 | <1% | 0 | 40 | 60 | M13-T5 | Access Road | | ON CORNER OF ACCESS RD |
| 5/15/2014 | JP | CACA | Calochortus catalinae | Catalina mariposa lily | CACA-002 | Point | 281238.2753 | 3806715.461 | 20 | <1% | 0 | 10 | 90 | M13-T5 | Access Road | | |
| 5/15/2014 | KM | CACA | Calochortus catalinae | Catalina mariposa lily | CACA-003 | Point | 281096.6813 | 3807489.725 | 1 | <1% | 0 | 100 | 0 | access road | Access Road | | |
| 5/15/2014 | JP | CACA | Calochortus catalinae | Catalina mariposa lily | CACA-004 | Polygon | 281134.2985 | 3806129.273 | 60 | <1% | 0 | 20 | 80 | M4-T3 | Ground Dist. Area | | |
| 5/19/2014 | KM | CACA | Calochortus catalinae | Catalina mariposa lily | CACA-005 | Point | 289923.1436 | 3803557.7 | 30 | <1% | 0 | 10 | 90 | access road | Access Road | | |
| 5/19/2014 | KM | CACA | Calochortus catalinae | Catalina mariposa lily | CACA-006 | Point | 291201.1543 | 3801886.436 | 3 | <1% | 0 | 66 | 100 | access road | Access Road | | |
| 5/20/2014 | SH | CACA | Calochortus catalinae | Catalina mariposa lily | CACA-007 | Point | 295238.6119 | 3801383.02 | 4 | <1% | 0 | 100 | 0 | access road | Access Road | | upslope of road |
| 5/20/2014 | ES | CACA | Calochortus catalinae | Catalina mariposa lily | CACA-008 | Point | 294616.1624 | 3802509.993 | 2 | <1% | 0 | 0 | 100 | access road | Access Road | | upslop on access road aproximitly 15ft apart |
| 5/20/2014 | JP | CACA | Calochortus catalinae | Catalina mariposa lily | CACA-009 | Point | 292729.2462 | 3801771.624 | 3 | <1% | 0 | 20 | 80 | access road | Access Road | | upslope of access road |
| 5/20/2014 | JP | CACA | Calochortus catalinae | Catalina mariposa lily | CACA-010 | Point | 294685.8653 | 3802490.604 | 1 | <1% | 0 | 0 | 100 | access road | Access Road | | upslope of access road |
| 5/20/2014 | KM | CACA | Calochortus catalinae | Catalina mariposa lily | CACA-011 | Point | 295924.3361 | 3801720.279 | 5 | <1% | 0 | 0 | 100 | access road | Access Road | | adjacent to access road |
| 5/20/2014 | JP | CACA | Calochortus catalinae | Catalina mariposa lily | CACA-012 | Polygon | 294685.7135 | 3802530.766 | 50 | <1% | 0 | 0 | 100 | access road | Access Road | | upslope of access road, scattered throughout scrub |
| 5/20/2014 | JP | CACA | Calochortus catalinae | Catalina mariposa lily | CACA-013 | Polygon | 294690.8495 | 3802446.17 | 25 | <1% | 0 | 0 | 100 | access road | Access Road | | upslope of access road, scattered throughout scrub |
| 5/22/2014 | JP | CACA | Calochortus catalinae | Catalina mariposa lily | CACA-014 | Point | 297580.4862 | 3799854.668 | 2 | <1% | 0 | 100 | 0 | 4453211E | Access Road | | upslope of access road |
| 5/22/2014 | JP | CACA | Calochortus catalinae | Catalina mariposa lily | CACA-015 | Point | 297523.4178 | 3799522.537 | 10 | <1% | 0 | 0 | 100 | access road | Access Road | | upslope of access road |
| 5/22/2014 | KM | CACA | Calochortus catalinae | Catalina mariposa lily | CACA-016 | Point | 297788.7007 | 3800174.1 | 1 | <1% | 0 | 100 | 0 | access road | Access Road | | on edge of access road |
| 5/22/2014 | KM | CACA | Calochortus catalinae | Catalina mariposa lily | CACA-017 | Point | 297763.798 | 3799638.739 | 12 | <1% | 0 | 0 | 100 | access road | Access Road | | on edge of access road |
| 5/22/2014 | ES | CACA | Calochortus catalinae | Catalina mariposa lily | CACA-018 | Point | 297122.8236 | 3801244.859 | 2 | <1% | 0 | 100 | 0 | access road | Access Road | | upslope of access road |
| 5/22/2014 | ES | CACA | Calochortus catalinae | Catalina mariposa lily | CACA-019 | Point | 297539.9783 | 3800994.786 | 3 | <1% | 0 | 0 | 100 | access road | Access Road | | upslope of access road |
| 5/22/2014 | ES | CACA | Calochortus catalinae | Catalina mariposa lily | CACA-020 | Point | 297691.4767 | 3800729.735 | 3 | <1% | 0 | 0 | 100 | access road | Access Road | | upslope of access road |
| 5/22/2014 | ES | CACA | Calochortus catalinae | Catalina mariposa lily | CACA-021 | Point | 297913.2129 | 3799778.242 | 10 | <1% | 0 | 100 | 0 | access road | Access Road | | upslope of access road |

| Date | Surveyor Initials | Plant Code | Scientific Name | Common Name | Population ID | Feature Type | Easting | Northing | Population Size | Cover Class | % Vegetative | % Flowering | % Fruiting | Nearest Construct | Potential Threat | Other Threat | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/22/2014 | SH | CACA | Calochortus catalinae | Catalina mariposa lily | CACA-022 | Polygon | 297511.2954 | 3799583.917 | 25 | <1% | 0 | 0 | 100 | access road | Access Road | | upslope slope from access road |
| 5/22/2014 | JP | CACA | Calochortus catalinae | Catalina mariposa lily | CACA-023 | Polygon | 297384.4552 | 3801164.744 | 60 | <1% | 0 | 0 | 100 | access road | Access Road | | upslope of access road |
| 5/22/2014 | KM | CACA | Calochortus catalinae | Catalina mariposa lily | CACA-024 | Polygon | 295226.1319 | 3801385.742 | 25 | <1% | 0 | 50 | 50 | access road | Access Road | | just upslope of access road |
| 5/22/2014 | KM | CACA | Calochortus catalinae | Catalina mariposa lily | CACA-025 | Polygon | 297613.6318 | 3799855.979 | 100+ | <1% | 0 | 20 | 80 | 4453211E | Access Road | | scattered upslope of access road |
| 5/22/2014 | KM | CACA | Calochortus catalinae | Catalina mariposa lily | CACA-026 | Polygon | 296328.9727 | 3800411.88 | 25 | <1% | 0 | 0 | 100 | access road | Access Road | | upslope of access road |
| 5/22/2014 | KM | CACA | Calochortus catalinae | Catalina mariposa lily | CACA-027 | Polygon | 296318.6834 | 3800371.308 | 7 | <1% | 0 | 100 | 0 | access road | Access Road | | upslope of access road |
| 5/22/2014 | ES | CACA | Calochortus catalinae | Catalina mariposa lily | CACA-028 | Polygon | 295755.4052 | 3800107.101 | 50 | <1% | 10 | 90 | 0 | access road | Access Road | | scattered along both sides of access road 90% were on upslope |
| 5/22/2014 | ES | CACA | Calochortus catalinae | Catalina mariposa lily | CACA-029 | Polygon | 296657.5506 | 3801263.179 | 15 | <1% | 0 | 0 | 100 | access road | Access Road | | along upslope of access road |
| 5/22/2014 | ES | CACA | Calochortus catalinae | Catalina mariposa lily | CACA-030 | Polygon | 297485.5136 | 3801143.712 | 30 | <1% | 0 | 30 | 70 | access road | Access Road | | along upslope of access road |
| 5/28/2014 | MB | CACA | Calochortus catalinae | Catalina mariposa lily | CACA-031 | Point | 270648.0731 | 3812988.299 | 3 | <1% | 0 | 0 | 100 | M10-T2 | Access Road | | |
| 5/28/2014 | MB | CACA | Calochortus catalinae | Catalina mariposa lily | CACA-032 | Point | 270355.013 | 3813169.186 | 3 | <1% | 0 | 50 | 50 | M12-T4 | Access Road | | |
| 5/28/2014 | MB | CACA | Calochortus catalinae | Catalina mariposa lily | CACA-033 | Point | 270057.2645 | 3812665.193 | 3 | <1% | 0 | 50 | 50 | M21-T5 | Access Road | | |
| 5/28/2014 | JP | CACA | Calochortus catalinae | Catalina mariposa lily | CACA-034 | Point | 270526.5606 | 3813042.561 | 50 | <1% | 0 | 0 | 100 | M10-T3 | Ground Dist. Area | access road | below/around tower, both sides of access road |
| 5/28/2014 | JP | CACA | Calochortus catalinae | Catalina mariposa lily | CACA-035 | Point | 270066.45 | 3812658.902 | 4 | <1% | 0 | 20 | 80 | M21-T5 | Access Road | | upslope of access road |
| 5/28/2014 | KM | CACA | Calochortus catalinae | Catalina mariposa lily | CACA-036 | Point | 269832.5503 | 3813268.136 | 1 | <1% | 0 | 0 | 100 | access road | Access Road | | just upslope of access road |
| 5/28/2014 | KM | CACA | Calochortus catalinae | Catalina mariposa lily | CACA-037 | Point | 298368.573 | 3800194.558 | 20 | <1% | 0 | 0 | 100 | access road | Access Road | | upslope of access road |
| 5/28/2014 | KM | CACA | Calochortus catalinae | Catalina mariposa lily | CACA-038 | Point | 298675.8683 | 3800443.815 | 2 | <1% | 0 | 0 | 100 | access road | Access Road | | upslope of access road |
| 5/28/2014 | KM | CACA | Calochortus catalinae | Catalina mariposa lily | CACA-039 | Point | 298722.4337 | 3800011.025 | 15 | <1% | 0 | 0 | 100 | access road | Access Road | | upslope of access road |
| 5/28/2014 | SH | CACA | Calochortus catalinae | Catalina mariposa lily | CACA-040 | Polygon | 270269.8925 | 3812473.826 | 200+ | <1% | 50 | 30 | 20 | M21-T4 | Access Road | | upslope of access road, some old fruits |
| 5/28/2014 | SH | CACA | Calochortus catalinae | Catalina mariposa lily | CACA-041 | Polygon | 298707.1511 | 3800225.674 | 3 | <1% | 0 | 0 | 100 | access road | Access Road | | upslope of access road |
| 5/28/2014 | KM | CACA | Calochortus catalinae | Catalina mariposa lily | CACA-042 | Polygon | 270202.5726 | 3813264.767 | 15 | <1% | 0 | 0 | 100 | M12-T6 | Access Road | | |
| 5/28/2014 | KM | CACA | Calochortus catalinae | Catalina mariposa lily | CACA-043 | Polygon | 270202.5865 | 3813240.328 | 30+ | <1% | 0 | 5 | 95 | 1208734E | Access Road | | |
| 5/28/2014 | KM | CACA | Calochortus catalinae | Catalina mariposa lily | CACA-044 | Polygon | 270098.7525 | 3812606.025 | 12 | <1% | 0 | 10 | 90 | M21-T5 | Access Road | | just east of access road |
| 5/28/2014 | KM | CACA | Calochortus catalinae | Catalina mariposa lily | CACA-045 | Polygon | 270239.5231 | 3812544.301 | 15+ | <1% | 0 | 10 | 90 | M21-T4 | Access Road | | scattered east of access road |
| 5/28/2014 | KM | CACA | Calochortus catalinae | Catalina mariposa lily | CACA-046 | Polygon | 270294.0072 | 3812480.144 | 50+ | <1% | 0 | 0 | 100 | M21-T4 | Access Road | | scattered downslope of access road |
| 5/28/2014 | KM | CACA | Calochortus catalinae | Catalina mariposa lily | CACA-047 | Polygon | 298331.6875 | 3800247.464 | 70 | <1% | 0 | 0 | 100 | access road | Access Road | | upslope of access road |
| 5/15/2014 | JP | JUCA | Juglans californica | southern California black walnut | JUCA-001 | Point | 278985.4785 | 3806542.907 | 2 | 20% | 100 | 0 | 0 | M5-T8 | Access Road | | |

| Date | Surveyor Initials | Plant Code | Scientific Name | Common Name | Population ID | Feature Type | Easting | Northing | Population Size | Cover Class | % Vegetative | % Flowering | % Fruiting | Nearest Construct | Potential Threat | Other Threat | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/15/2014 | JP | JUCA | Juglans californica | southern California black walnut | JUCA-002 | Point | 278939.4428 | 3806564.559 | 3 | 15% | 100 | | | M5-T8 | Access Road | | |
| 5/15/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-003 | Point | 278993.8609 | 3806532.414 | 3 | <1% | 100 | 0 | 0 | CONSTR 61 M5 P4 | Access Road | | upslope of road |
| 5/15/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-004 | Point | 278969.5579 | 3806544.422 | 1 | <1% | 100 | 0 | 0 | M5-T8 | Access Road | | upslope of road |
| 5/15/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-005 | Point | 278962.9919 | 3806548.917 | 2 | <1% | 100 | 0 | 0 | M5-T8 | Access Road | | upslope of road |
| 5/15/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-006 | Point | 278937.2757 | 3806561.562 | 4 | <1% | 100 | 0 | 0 | M5-T8 | Access Road | | upslope of road |
| 5/15/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-007 | Point | 278897.8725 | 3806579.038 | 2 | <1% | 100 | 0 | 0 | M5-T8 | Access Road | | upslope of road |
| 5/15/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-008 | Point | 278926.3361 | 3806574.878 | 1 | 5% | 100 | 0 | 0 | M5-T8 | Access Road | | downslope of road |
| 5/15/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-009 | Point | 278896.2168 | 3806585.292 | 1 | 5% | 100 | 0 | 0 | M5-T8 | Access Road | | downslope of road |
| 5/15/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-010 | Point | 278872.7892 | 3806588.689 | 1 | 45% | 100 | 0 | 0 | M5-T8 | Ground Dist. Area | | downslope of road, upslope of 61 |
| 5/15/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-011 | Point | 278803.666 | 3806582.739 | 4 | 5% | 100 | 0 | 0 | M5-T8 | Ground Dist. Area | | upslope of access road |
| 5/15/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-012 | Point | 278774.1906 | 3806587.174 | 4 | 65% | 100 | 0 | 0 | M5-T8 | Ground Dist. Area | | upslope of access road |
| 5/15/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-013 | Point | 278748.7487 | 3806625.63 | 8 | 50% | 100 | 0 | 0 | access road | Ground Dist. Area | | upslope of access road |
| 5/15/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-014 | Point | 278740.8132 | 3806643.411 | 3 | 15% | 100 | 0 | 0 | access road | Ground Dist. Area | | upslope of access road |
| 5/15/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-015 | Point | 278733.1055 | 3806669.459 | 1 | 5% | 100 | 0 | 0 | access road | Ground Dist. Area | | upslope of access road |
| 5/15/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-016 | Point | 278729.5435 | 3806690.437 | 1 | 15% | 100 | 0 | 0 | access road | Ground Dist. Area | | upslope of access road |
| 5/15/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-017 | Polygon | 281128.1204 | 3807247.754 | 30 | 5% | 100 | 0 | 0 | CONSTR 82 | Access Road | | |
| 5/16/2014 | JP | JUCA | Juglans californica | southern California black walnut | JUCA-018 | Point | 273679.4388 | 3808398.834 | 14 | 25% | 50 | 0 | 50 | 4425346E | Access Road | | both sides of access rd |
| 5/16/2014 | JP | JUCA | Juglans californica | southern California black walnut | JUCA-019 | Point | 273652.2557 | 3808393.133 | 1 | <1% | 100 | 0 | 0 | 4425346E | Access Road | | side of access rd |

| Date | Surveyor Initials | Plant Code | Scientific Name | Common Name | Population ID | Feature Type | Easting | Northing | Population Size | Cover Class | % Vegetative | % Flowering | % Fruiting | Nearest Construct | Potential Threat | Other Threat | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/16/2014 | JP | JUCA | Juglans californica | southern California black walnut | JUCA-020 | Point | 273638.8587 | 3808386.193 | 3 | 5% | 0 | 0 | 100 | 4423856E | Access Road | | both sides of access rd |
| 5/16/2014 | JP | JUCA | Juglans californica | southern California black walnut | JUCA-021 | Polygon | 273611.4526 | 3808369.095 | 12 | 35% | 50 | 0 | 50 | 4423856E | Access Road | | both sides of access rd |
| 5/19/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-022 | Point | 288623.0799 | 3804680.046 | 1 | 90% | 0 | 0 | 20 | access road | Access Road | | |
| 5/19/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-023 | Point | 288916.2295 | 3804567.742 | 1 | 10% | 0 | 0 | 100 | access road | Access Road | | |
| 5/19/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-024 | Point | 289052.7406 | 3804293.307 | 1 | 80% | 100 | 0 | 0 | access road | Access Road | | |
| 5/19/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-025 | Point | 289426.5267 | 3804820.49 | 1 | 80% | 0 | 0 | 100 | access road | Access Road | | 30 ft from row |
| 5/19/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-026 | Point | 291675.9971 | 3804214.629 | 1 | 20% | 100 | 0 | 0 | access road | Access Road | | 30 ft from row |
| 5/19/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-027 | Point | 291731.7691 | 3804201.742 | 1 | 25% | 0 | | 100 | access road | Access Road | | 30 ft from row |
| 5/19/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-028 | Point | 291937.7571 | 3803970.726 | 1 | 100% | 0 | 0 | 100 | access road | Access Road | | 60 ft from row |
| 5/19/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-029 | Point | 291472.4938 | 3803761.441 | 1 | 35% | 0 | 0 | 100 | access road | Access Road | | 20 ft from row |
| 5/19/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-030 | Point | 291720.5274 | 3803741.286 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | |
| 5/19/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-031 | Point | 289069.2567 | 3802815.53 | 4 | 90% | 100 | 0 | 0 | access road | Access Road | | |
| 5/19/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-032 | Point | 289768.6385 | 3801487.031 | 1 | 85% | 100 | 0 | 0 | access road | Access Road | | |
| 5/19/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-033 | Point | 287762.0135 | 3804741.953 | 1 | <1% | 100 | 0 | 0 | 4453237E | Access Road | | |
| 5/19/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-034 | Point | 287756.3487 | 3804646.041 | 2 | <1% | 100 | 0 | 0 | 4453237E | Access Road | | |
| 5/19/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-035 | Point | 287824.3742 | 3804569.414 | 1 | <1% | 80 | 0 | 20 | 4453236E | Linear ROW | | |
| 5/19/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-036 | Point | 288917.4505 | 3804567.112 | 1 | <1% | 80 | 0 | 20 | access road | Access Road | | |
| 5/19/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-037 | Point | 289051.447 | 3804293.291 | 1 | 5% | 95 | 0 | 5 | access road | Access Road | | |

| Date | Surveyor Initials | Plant Code | Scientific Name | Common Name | Population ID | Feature Type | Easting | Northing | Population Size | Cover Class | % Vegetative | % Flowering | % Fruiting | Nearest Construct | Potential Threat | Other Threat | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/19/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-038 | Point | 289083.3016 | 3804186.948 | 2 | 5% | 100 | 0 | 0 | access road | Access Road | | |
| 5/19/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-039 | Point | 291830.1804 | 3804190.687 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | |
| 5/19/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-040 | Point | 291922.6101 | 3804042.012 | 3 | 75% | 100 | 0 | 0 | access road | Access Road | | |
| 5/19/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-041 | Point | 291930.57 | 3804012.284 | 1 | 5% | 100 | 0 | 0 | access road | Access Road | | |
| 5/19/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-042 | Point | 291999.3907 | 3803828.207 | 1 | 15% | 100 | 0 | 0 | access road | Access Road | | |
| 5/19/2014 | JP | JUCA | Juglans californica | southern California black walnut | JUCA-043 | Point | 289226.6258 | 3803255.792 | 1 | 10% | 85 | 0 | 100 | access road | Access Road | | |
| 5/19/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-044 | Point | 289863.0522 | 3801498.549 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | |
| 5/19/2014 | JP | JUCA | Juglans californica | southern California black walnut | JUCA-045 | Point | 287768.6693 | 3804796.178 | 1 | 75% | 0 | 0 | 100 | CONSTR 144 | Access Road | | |
| 5/19/2014 | JP | JUCA | Juglans californica | southern California black walnut | JUCA-046 | Point | 287773.2859 | 3804778.357 | 2 | 75% | 0 | 0 | 100 | CONSTR 144 | Access Road | | |
| 5/19/2014 | JP | JUCA | Juglans californica | southern California black walnut | JUCA-047 | Point | 291911.1192 | 3803965.337 | 2 | 10% | 100 | 0 | 0 | access road | Access Road | | in drainage |
| 5/19/2014 | JP | JUCA | Juglans californica | southern California black walnut | JUCA-048 | Point | 291982.3243 | 3803857.877 | 2 | 10% | 100 | 0 | 0 | access road | Access Road | | along access road |
| 5/19/2014 | JP | JUCA | Juglans californica | southern California black walnut | JUCA-049 | Point | 292022.3773 | 3803807.631 | 3 | 5% | 100 | 0 | 0 | access road | Access Road | | upslope of access road |
| 5/19/2014 | JP | JUCA | Juglans californica | southern California black walnut | JUCA-050 | Point | 292089.7716 | 3803484.16 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | along access road |
| 5/19/2014 | JP | JUCA | Juglans californica | southern California black walnut | JUCA-051 | Point | 289990.4643 | 3801512.756 | 3 | 95% | 100 | 0 | 0 | access road | Access Road | | in drainage |
| 5/19/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-052 | Point | 288628.7712 | 3804660.619 | 4 | 60% | 100 | 0 | 0 | access road | Access Road | | |
| 5/19/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-053 | Point | 288834.9347 | 3804634.751 | 1 | 60% | 0 | 100 | 0 | access road | Access Road | | |
| 5/19/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-054 | Point | 288905.1695 | 3804570.104 | 1 | 60% | 0 | 100 | 0 | access road | Access Road | | |
| 5/19/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-055 | Point | 289039.3577 | 3804388.291 | 2 | 50% | 100 | 0 | 0 | access road | Access Road | | |

| Date | Surveyor Initials | Plant Code | Scientific Name | Common Name | Population ID | Feature Type | Easting | Northing | Population Size | Cover Class | % Vegetative | % Flowering | % Fruiting | Nearest Construct | Potential Threat | Other Threat | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/19/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-056 | Point | 289035.9967 | 3804422.823 | 2 | 70% | 100 | 0 | 0 | access road | Access Road | | |
| 5/19/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-057 | Point | 291637.1306 | 3804207.124 | 1 | 10% | 100 | 0 | 0 | access road | Access Road | | |
| 5/19/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-058 | Point | 291651.4576 | 3804200.555 | 1 | 10% | 100 | 0 | 0 | access road | Access Road | | |
| 5/19/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-059 | Point | 291688.797 | 3804190.795 | 1 | 45% | 100 | 0 | 0 | access road | Access Road | | |
| 5/19/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-060 | Point | 291743.8688 | 3804197.307 | 4 | 30% | 50 | 0 | 50 | access road | Access Road | | |
| 5/19/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-061 | Point | 291904.6821 | 3804026.177 | 1 | 50% | 0 | 0 | 100 | access road | Access Road | | |
| 5/19/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-062 | Point | 291937.6587 | 3803988.974 | 2 | 70% | 0 | 0 | 100 | access road | Access Road | | |
| 5/19/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-063 | Point | 291931.8841 | 3803944.084 | 1 | 25% | 100 | 0 | 0 | access road | Access Road | | |
| 5/19/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-064 | Point | 291928.6664 | 3803923.489 | 1 | 25% | 0 | 0 | 100 | access road | Access Road | | |
| 5/19/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-065 | Point | 292010.0178 | 3803820.219 | 2 | 10% | 100 | 0 | 0 | access road | Access Road | | |
| 5/19/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-066 | Point | 292033.7132 | 3803793.717 | 1 | 2% | 100 | 0 | 0 | access road | Access Road | | |
| 5/19/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-067 | Point | 292076.3185 | 3803491.034 | 1 | 2% | 100 | 0 | 0 | access road | Access Road | | |
| 5/19/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-068 | Point | 289707.0825 | 3801483.962 | 3 | 2% | 66 | 0 | 33 | access road | Access Road | | |
| 5/19/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-069 | Point | 290121.6625 | 3801513.017 | 1 | 5% | 100 | 0 | 0 | access road | Access Road | | plant 20ft south of point |
| 5/19/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-070 | Polygon | 288566.0331 | 3804627.127 | 25 | 20% | 0 | 0 | 100 | access road | Access Road | | |
| 5/19/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-071 | Polygon | 288875.4258 | 3804621.266 | 12 | 45% | 25 | 0 | 50 | access road | Access Road | | |
| 5/19/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-072 | Polygon | 289012.922 | 3804475.156 | 40 | 55% | 0 | 20 | 80 | access road | Access Road | | |
| 5/19/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-073 | Polygon | 291907.2375 | 3804074.995 | 3 | 35% | 20 | 0 | 80 | access road | Access Road | | |

| Date | Surveyor Initials | Plant Code | Scientific Name | Common Name | Population ID | Feature Type | Easting | Northing | Population Size | Cover Class | % Vegetative | % Flowering | % Fruiting | Nearest Construct | Potential Threat | Other Threat | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/19/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-074 | Polygon | 292059.2171 | 3803698.265 | 190 | 55% | 40 | 0 | 60 | access road | Access Road | | |
| 5/19/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-075 | Polygon | 289795.3573 | 3801492.747 | 4 | 25% | 75 | 0 | 25 | access road | Access Road | | |
| 5/19/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-076 | Polygon | 288952.5626 | 3804522.29 | 12 | 60% | 90 | 0 | 10 | access road | Access Road | | |
| 5/19/2014 | JP | JUCA | Juglans californica | southern California black walnut | JUCA-077 | Polygon | 287768.438 | 3804867.725 | 13 | 85% | 10 | 0 | 90 | access road | Access Road | | alongside accessible rd |
| 5/19/2014 | JP | JUCA | Juglans californica | southern California black walnut | JUCA-078 | Polygon | 287804.5409 | 3804692.013 | 35 | 85% | 10 | 0 | 90 | 4453237E | Access Road | in buffer | |
| 5/19/2014 | JP | JUCA | Juglans californica | southern California black walnut | JUCA-079 | Polygon | 288942.6737 | 3804570.492 | 4 | 60% | 10 | 0 | 90 | access road | Access Road | edge of buffer | |
| 5/19/2014 | JP | JUCA | Juglans californica | southern California black walnut | JUCA-080 | Polygon | 291880.3582 | 3804087.953 | 5 | 35% | 100 | 0 | 0 | access road | Access Road | upslope of access road | |
| 5/19/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-081 | Polygon | 287754.2872 | 3804614.587 | 25 | 75% | 30 | 0 | 70 | 4453237E | Access Road | | jugcal woodland |
| 5/19/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-082 | Polygon | 287824.8626 | 3804647.066 | 50 | 75% | 30 | 0 | 70 | 4453237E | Access Road | | queagr-jugcal woodland |
| 5/19/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-083 | Polygon | 287860.7678 | 3804666.609 | 50 | 50% | 30 | 0 | 70 | 4453236E | Access Road | | queagr-jugcal woodland |
| 5/19/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-084 | Polygon | 288574.4268 | 3804597.604 | 50+ | 60% | 30 | 0 | 70 | access road | Access Road | | jugcal woodland |
| 5/19/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-085 | Polygon | 288918.3021 | 3804523.668 | 10 | 30% | 20 | 0 | 80 | access road | Access Road | | |
| 5/19/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-086 | Polygon | 288986.1643 | 3804456.621 | 30 | 30% | 30 | 0 | 70 | access road | Access Road | | |
| 5/19/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-087 | Polygon | 289030.2562 | 3804326.723 | 3 | 10% | 0 | 0 | 100 | access road | Access Road | | |
| 5/19/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-088 | Polygon | 289057.0174 | 3804332.316 | 5 | 30% | 100 | 0 | 0 | access road | Access Road | | |
| 5/19/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-089 | Polygon | 289759.8595 | 3801454.377 | 15 | 45% | 50 | 0 | 50 | access road | Access Road | | |
| 5/19/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-090 | Polygon | 289851.2801 | 3801473.928 | 35 | 25% | 20 | 0 | 80 | access road | Access Road | | |
| 5/19/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-091 | Polygon | 290151.2457 | 3801489.689 | 4 | 15% | 27 | 0 | 75 | access road | Access Road | | |

| Date | Surveyor Initials | Plant Code | Scientific Name | Common Name | Population ID | Feature Type | Easting | Northing | Population Size | Cover Class | % Vegetative | % Flowering | % Fruiting | Nearest Construct | Potential Threat | Other Threat | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/19/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-092 | Polygon | 287789.5059 | 3804764.691 | 6 | 75% | 90 | 0 | 10 | 4453237E | Access Road | | |
| 5/19/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-093 | Polygon | 290509.2751 | 3801537.228 | 11 | 50% | 90 | 0 | 10 | access road | Access Road | | |
| 5/20/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-094 | Point | 295132.1805 | 3802277.373 | 1 | <1% | 0 | 0 | 100 | access road | Access Road | | 50ft downslope slope from row |
| 5/20/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-095 | Point | 295208.2135 | 3802204.647 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | |
| 5/20/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-096 | Point | 295269.3794 | 3802178.904 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | 25ft from row |
| 5/20/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-097 | Point | 295511.7829 | 3802172.645 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | |
| 5/20/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-098 | Point | 295535.0443 | 3802179.335 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | 25ft from access road |
| 5/20/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-099 | Point | 295871.1492 | 3802306.607 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | |
| 5/20/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-100 | Point | 275814.0559 | 3808335.18 | 1 | <1% | 0 | 0 | 100 | access road | Access Road | | |
| 5/20/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-101 | Point | 295087.5711 | 3802299.069 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | upslop on access road |
| 5/20/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-102 | Point | 295904.0576 | 3802435.121 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | on access road |
| 5/20/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-103 | Point | 295979.6667 | 3802378.139 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | on down slope of access road |
| 5/20/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-104 | Point | 296079.7867 | 3802245.52 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | on upslope of access road |
| 5/20/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-105 | Point | 296024.5531 | 3802249.932 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | on upslope of access road |
| 5/20/2014 | JP | JUCA | Juglans californica | southern California black walnut | JUCA-106 | Point | 295995.0005 | 3802206.57 | 4 | 5% | 100 | 0 | | access road | Access Road | | downslope of access road |
| 5/20/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-107 | Polygon | 295417.5784 | 3802174.125 | 5 | 45% | 80 | 0 | 20 | access road | Access Road | | upslope from road |
| 5/20/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-108 | Polygon | 295639.0073 | 3802206.977 | 7 | 30% | 80 | 0 | 20 | access road | Access Road | | 5-40ft downslope slope from road |
| 5/20/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-109 | Polygon | 295683.7188 | 3802222.711 | 5 | 25% | 100 | 0 | 0 | access road | Access Road | | 5-40ft downslope slope from road |

| Date | Surveyor Initials | Plant Code | Scientific Name | Common Name | Population ID | Feature Type | Easting | Northing | Population Size | Cover Class | % Vegetative | % Flowering | % Fruiting | Nearest Construct | Potential Threat | Other Threat | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/20/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-110 | Polygon | 295832.9107 | 3802287.042 | 75 | 45% | 20 | 0 | 80 | access road | Access Road | | very steep ravine, many saplings; 5-40ft downslope slope from road |
| 5/20/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-111 | Polygon | 295895.4788 | 3802300.561 | 4 | 60% | 100 | 0 | 0 | access road | Access Road | | |
| 5/20/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-112 | Polygon | 295868.8218 | 3802344.298 | 6 | 60% | 80 | 0 | 20 | access road | Access Road | | |
| 5/20/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-113 | Polygon | 295205.4037 | 3802228.425 | 15 | 10% | 0 | 0 | 100 | access road | Access Road | | scattered down slopmof access rd |
| 5/20/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-114 | Polygon | 295948.7753 | 3802416.628 | 9 | 20% | 10 | 0 | 90 | access road | Access Road | | scattered down slopm of access rd |
| 5/20/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-115 | Polygon | 296074.5699 | 3802289.837 | 35 | 25% | 10 | 0 | 90 | access road | Access Road | | scattered down slopm of access rd |
| 5/20/2014 | JP | JUCA | Juglans californica | southern California black walnut | JUCA-116 | Polygon | 296099.8341 | 3802277.297 | 30 | 25% | 90 | 0 | 10 | access road | Access Road | | upslope of access road |
| 5/20/2014 | JP | JUCA | Juglans californica | southern California black walnut | JUCA-117 | Polygon | 296012.147 | 3802248.778 | 12 | 10% | 90 | 0 | 10 | access road | Access Road | | downslope of access road |
| 5/20/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-118 | Polygon | 295673.9086 | 3802189.865 | 20 | <1% | 50 | 0 | 50 | access road | Access Road | | scattered upslope of access road |
| 5/20/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-119 | Polygon | 295822.1363 | 3802246.158 | 20 | 2% | 50 | 0 | 50 | access road | Access Road | | scattered upslope of access road |
| 5/20/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-120 | Polygon | 295893.6785 | 3802239.125 | 10 | 15% | 100 | 0 | | access road | Access Road | | scattered upslope of access road |
| 5/20/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-121 | Polygon | 295899.1239 | 3802266.793 | 12 | 15% | 100 | 0 | 0 | access road | Access Road | | scattered upslope of access road |
| 5/21/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-122 | Point | 276478.3886 | 3808443.228 | 2 | 100% | 0 | 0 | 100 | CONSTR 96 | Access Road | | at entrance to row |
| 5/21/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-123 | Point | 276490.2546 | 3808467.852 | 3 | 100% | 20 | | 80 | CONSTR 96 | Access Road | | along row |
| 5/21/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-124 | Point | 276518.9944 | 3808473.191 | 2 | 100% | 20 | 0 | 80 | CONSTR 96 | Access Road | | along row |
| 5/21/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-125 | Point | 280177.7979 | 3807588.803 | 1 | 80% | 100 | 0 | 0 | M14-T15A | Access Road | | |
| 5/21/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-126 | Point | 288431.7539 | 3804127.174 | 3 | 100% | 80 | 0 | 20 | 4453233E | Access Road | | |
| 5/21/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-127 | Point | 288422.688 | 3804108.866 | 3 | 100% | 80 | 0 | 20 | 4453233E | Access Road | | downslope from access road ; 20ft from access road |

| Date | Surveyor Initials | Plant Code | Scientific Name | Common Name | Population ID | Feature Type | Easting | Northing | Population Size | Cover Class | % Vegetative | % Flowering | % Fruiting | Nearest Construct | Potential Threat | Other Threat | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/21/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-128 | Point | 288477.3055 | 3804061.741 | 1 | 100% | 0 | 0 | 100 | 4453233E | Access Road | | |
| 5/21/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-129 | Point | 288559.6613 | 3803948.8 | 1 | 100% | 0 | 0 | 100 | access road | Access Road | | |
| 5/21/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-130 | Point | 288517.9911 | 3803840.966 | 6 | 100% | 100 | 0 | 0 | M9-T7 | Access Road | | inside courtyard area of property |
| 5/21/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-131 | Point | 274315.1167 | 3808989.615 | 2 | 50% | 90 | 0 | 10 | M8-T6 | Access Road | | |
| 5/21/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-132 | Point | 274791.5731 | 3808784.944 | 6 | 25% | 100 | 0 | 0 | M8-ST4 | Access Road | | upslope of access road |
| 5/21/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-133 | Point | 274825.3809 | 3808787.606 | 5 | 25% | 90 | 0 | 10 | M8-ST4 | Access Road | | down slope of access road |
| 5/21/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-134 | Point | 274959.5008 | 3808873.285 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | upslope of access road |
| 5/21/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-135 | Point | 274965.9788 | 3808856.758 | 6 | 2% | 50 | 0 | 50 | M8-ST3 | Access Road | | upslope and down slope of access road |
| 5/21/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-136 | Point | 274985.0651 | 3808921.808 | 1 | <1% | 0 | 0 | 100 | CONST 101 | Access Road | | down slope of access road |
| 5/21/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-137 | Point | 276211.6925 | 3808508.609 | 6 | 65% | 0 | 0 | 100 | CONSTR 97 | Access Road | | upslope of access road |
| 5/21/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-138 | Point | 276063.4635 | 3808535.544 | 1 | 90% | 0 | 0 | 100 | M17-T2 | Access Road | | upslope of access road |
| 5/21/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-139 | Point | 276062.0223 | 3808508.632 | 1 | 25% | 0 | 0 | 100 | M17-T2 | Access Road | | upslope of access road |
| 5/21/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-140 | Point | 288270.3814 | 3803838.931 | 12 | 30% | 0 | 0 | 100 | access road | Access Road | | upslope of access road in and along riprian area |
| 5/21/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-141 | Point | 288276.9374 | 3803775.991 | 3 | 30% | 0 | 0 | 100 | access road | Access Road | | upslope of access road |
| 5/21/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-142 | Point | 288134.3327 | 3804232.331 | 1 | 30% | 0 | 0 | 100 | 4453234E | Access Road | | upslope of access road |
| 5/21/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-143 | Point | 288176.8259 | 3804127.169 | 4 | 80% | 0 | 0 | 100 | M10-ST1 | Access Road | | down slope of access road |
| 5/21/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-144 | Point | 288229.5001 | 3804082.438 | 1 | 25% | 0 | 0 | 100 | M10-ST1 | Access Road | | down slope of access road |
| 5/21/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-145 | Point | 288513.1652 | 3804217.623 | 5 | 35% | 40 | 0 | 60 | 4453233E | Access Road | | both sides of access road |

| Date | Surveyor Initials | Plant Code | Scientific Name | Common Name | Population ID | Feature Type | Easting | Northing | Population Size | Cover Class | % Vegetative | % Flowering | % Fruiting | Nearest Construct | Potential Threat | Other Threat | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/21/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-146 | Point | 288540.6936 | 3804191.482 | 3 | 35% | 70 | 0 | 30 | 4453233E | Access Road | | both sides of access road |
| 5/21/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-147 | Point | 288496.2548 | 3804181.076 | 1 | 35% | 0 | 0 | 100 | 4453233E | Access Road | | upslope of access road |
| 5/21/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-148 | Point | 288458.6419 | 3804168.372 | 1 | 35% | 0 | 0 | 100 | 4453233E | Access Road | | upslope of access road |
| 5/21/2014 | JP | JUCA | Juglans californica | southern California black walnut | JUCA-149 | Point | 275726.0807 | 3808541.36 | 1 | <1% | 0 | 0 | 100 | M7-T3 | Access Road | | upslope of access road |
| 5/21/2014 | JP | JUCA | Juglans californica | southern California black walnut | JUCA-150 | Point | 275959.3394 | 3808478.074 | 1 | 10% | 0 | 0 | 100 | M17-T2 | Access Road | | at entrance of access road |
| 5/21/2014 | JP | JUCA | Juglans californica | southern California black walnut | JUCA-151 | Point | 276550.9101 | 3808454.787 | 1 | 50% | 0 | 0 | 100 | CONSTR 96 | Access Road | | along access road |
| 5/21/2014 | JP | JUCA | Juglans californica | southern California black walnut | JUCA-152 | Point | 277134.3652 | 3808432.179 | 1 | 5% | 100 | 0 | 0 | CONSTR 93 | Ground Dist. Area | guard structure | downslope of hwy 150 |
| 5/21/2014 | JP | JUCA | Juglans californica | southern California black walnut | JUCA-153 | Point | 288272.0427 | 3803692.421 | 1 | <1% | 0 | 0 | 100 | access road | Access Road | | |
| 5/21/2014 | JP | JUCA | Juglans californica | southern California black walnut | JUCA-154 | Point | 288149.3125 | 3803825.18 | 1 | <1% | 0 | 0 | 100 | access road | Access Road | | |
| 5/21/2014 | JP | JUCA | Juglans californica | southern California black walnut | JUCA-155 | Point | 288411.2724 | 3804168.182 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | |
| 5/21/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-156 | Point | 274987.8693 | 3808802.816 | 1 | 5% | 100 | 0 | 0 | M8-ST3 | Access Road | | upslope of access road |
| 5/21/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-157 | Point | 277392.3993 | 3808324.743 | 1 | <1% | 100 | 0 | 0 | CONSTR 93 | Access Road | | upslope of access road |
| 5/21/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-158 | Point | 288547.2743 | 3804110.667 | 3 | 2% | 100 | 0 | 0 | 4453233E | Access Road | | small plant on access road |
| 5/21/2014 | JP | JUCA | Juglans californica | southern California black walnut | JUCA-159 | Polygon | 276411.5108 | 3808501.381 | 6 | 45% | 0 | 0 | 100 | CONSTR 96 | Ground Dist. Area | | along row and construct |
| 5/21/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-160 | Polygon | 277168.4501 | 3808423.219 | 25 | 80% | 20 | 0 | 100 | CONSTR 93 | Ground Dist. Area | guard structure | downslope slope from highway 150; many saplings |
| 5/21/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-161 | Polygon | 279902.0229 | 3807397.399 | 10 | 90% | 20 | 0 | 100 | CONSTR 86 | Access Road | | downslope slope from access road ; many saplings |
| 5/21/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-162 | Polygon | 288249.618 | 3803821.772 | 125 | 25% | 20 | 0 | 80 | access road | Access Road | | upslope and downslope along access road |
| 5/21/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-163 | Polygon | 288351.0554 | 3804232.021 | 38 | 25% | 60 | 0 | 40 | 4453234E | Access Road | | upslope along access road |

| Date | Surveyor Initials | Plant Code | Scientific Name | Common Name | Population ID | Feature Type | Easting | Northing | Population Size | Cover Class | % Vegetative | % Flowering | % Fruiting | Nearest Construct | Potential Threat | Other Threat | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/21/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-164 | Polygon | 288562.2797 | 3803956.238 | 7 | 35% | 30 | 0 | 70 | 4453233E | Access Road | | upslope along access road |
| 5/21/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-165 | Polygon | 288499.1544 | 3803826.623 | 12 | 35% | 30 | 0 | 70 | M9-T7 | Access Road | | downslope slope along access road |
| 5/21/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-166 | Polygon | 274913.0698 | 3808826.397 | 24 | 15% | 10 | 0 | 90 | M8-ST4 | Access Road | | along and as an understorie on the down slope of the road |
| 5/21/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-167 | Polygon | 274994.7421 | 3808778.883 | 14 | 30% | 10 | 0 | 90 | M8-ST3 | Access Road | | upslope of access road. looks planted |
| 5/21/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-168 | Polygon | 275242.0191 | 3808631.444 | 37 | 30% | 10 | 0 | 90 | M8-ST2 | Access Road | | down slope of hwy 150 |
| 5/21/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-169 | Polygon | 275335.476 | 3808573.339 | 31 | 45% | 10 | 0 | 90 | M17-T5 | Access Road | | down slope of access road |
| 5/21/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-170 | Polygon | 288304.3483 | 3804136.182 | 16 | 15% | 25 | 0 | 75 | 4453234E | Access Road | access road | downe slope of access road |
| 5/21/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-171 | Polygon | 288407.9928 | 3803778.729 | 80 | 75% | 25 | 0 | 75 | M9-T7 | Access Road | | both sides of access road |
| 5/21/2014 | JP | JUCA | Juglans californica | southern California black walnut | JUCA-172 | Polygon | 277115.0521 | 3808426.437 | 5 | 10% | 60 | 0 | 40 | CONSTR 94 | Ground Dist. Area | guard structure | downslope of hwy 150 |
| 5/21/2014 | JP | JUCA | Juglans californica | southern California black walnut | JUCA-173 | Polygon | 288395.0464 | 3804226.672 | 20 | 70% | 50 | 0 | 50 | 4453234E | Access Road | | |
| 5/21/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-174 | Polygon | 275257.9036 | 3808666.627 | 10 | 10% | 100 | 0 | 0 | M8-ST2 | Access Road | | adjacent and upslope of access road |
| 5/21/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-175 | Polygon | 276092.1424 | 3808488.951 | 15 | 10% | 50 | 0 | 50 | CONSTR 97 | Access Road | | downslope of access road |
| 5/21/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-176 | Polygon | 288261.1179 | 3804103.764 | 7 | 15% | 50 | 0 | 50 | access road | Access Road | | sparsely scattered upslope of access road |
| 5/21/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-177 | Polygon | 276120.719 | 3808544.553 | 13 | 25% | 10 | 0 | 90 | M17-T1 | Access Road | | both sides of access road |
| 5/22/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-178 | Point | 297673.069 | 3799952.285 | 2 | <1% | 0 | 100 | | 4453211E | Access Road | | upslope and downslope from access road |
| 5/22/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-179 | Point | 297646.8749 | 3799910.357 | 1 | 5% | 0 | 0 | 100 | 4453211E | Access Road | | |
| 5/22/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-180 | Point | 297653.8096 | 3798401.535 | 1 | 45% | 100 | 0 | 0 | access road | Access Road | | 20ft upslope from access road |
| 5/22/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-181 | Point | 297741.3951 | 3799277.621 | 1 | 10% | 100 | 0 | 0 | access road | Access Road | | 50ft from access road |

| Date | Surveyor Initials | Plant Code | Scientific Name | Common Name | Population ID | Feature Type | Easting | Northing | Population Size | Cover Class | % Vegetative | % Flowering | % Fruiting | Nearest Construct | Potential Threat | Other Threat | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/22/2014 | JP | JUCA | Juglans californica | southern California black walnut | JUCA-182 | Point | 297654.2426 | 3799161.347 | 2 | 5% | 50 | 0 | 50 | access road | Access Road | | both sides of access road |
| 5/22/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-183 | Point | 297701.5298 | 3799995.865 | 2 | <1% | 100 | 0 | 0 | 4453211E | Access Road | | upslope of access road |
| 5/23/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-184 | Point | 281643.8479 | 3806043.845 | 1 | 100% | 100 | 0 | 0 | 4479636E | Access Road | | |
| 5/23/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-185 | Point | 282156.9118 | 3805732.65 | 3 | 35% | 100 | 0 | 0 | M3-P2B | Access Road | | downslope from access road slope |
| 5/23/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-186 | Point | 282240.2429 | 3805772.9 | 1 | 5% | 100 | 0 | 0 | M3-P2B | Ground Dist. Area | | |
| 5/23/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-187 | Point | 285595.7456 | 3805368.308 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | 10ft access road |
| 5/23/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-188 | Point | 281611.53 | 3805854.154 | 1 | <1% | 100 | 0 | 0 | 4479636E | Access Road | | upslope of access road |
| 5/23/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-189 | Point | 281908.1014 | 3805775.954 | 2 | 5% | 0 | 0 | 100 | 4453250E | Access Road | | both sides of of access road |
| 5/23/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-190 | Point | 282075.6566 | 3805699.953 | 1 | <1% | 0 | 100 | 0 | access road | Access Road | | side of access road |
| 5/23/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-191 | Point | 282586.7617 | 3805512.827 | 1 | 60% | 0 | 0 | 100 | access road | Access Road | | down slope of access road |
| 5/23/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-192 | Point | 282565.0411 | 3805560.113 | 1 | <1% | 0 | 0 | 100 | M3-P2A | Access Road | | down slope of access road |
| 5/23/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-193 | Point | 282530.3814 | 3805685.916 | 10 | 70% | 0 | 0 | 100 | M3-P2A | Access Road | | around tower |
| 5/23/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-194 | Point | 282594.7683 | 3805564.472 | 1 | 2% | 0 | 0 | 100 | M3-P2A | Access Road | | along access road |
| 5/23/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-195 | Point | 282622.6733 | 3805562.803 | 4 | 5% | 0 | 0 | 100 | M3-P2A | Access Road | | 15ft and beyond down slope of access road |
| 5/23/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-196 | Point | 282687.4009 | 3805553.453 | 6 | 2% | 0 | 0 | 100 | access road | Access Road | | down slope of access road |
| 5/23/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-197 | Point | 282834.6533 | 3805571.446 | 2 | <1% | 0 | 0 | 100 | 4453248E | Access Road | | up slope of access road |
| 5/23/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-198 | Point | 282877.205 | 3805540.082 | 2 | <1% | 0 | 0 | 100 | 4453248E | Access Road | | down slope of access road |
| 5/23/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-199 | Point | 282902.3509 | 3805532.071 | 4 | <1% | 0 | 0 | 100 | 4453248E | Access Road | | down slope of access road |

| Date | Surveyor Initials | Plant Code | Scientific Name | Common Name | Population ID | Feature Type | Easting | Northing | Population Size | Cover Class | % Vegetative | % Flowering | % Fruiting | Nearest Construct | Potential Threat | Other Threat | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/23/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-200 | Point | 282911.9386 | 3805489.783 | 4 | <1% | 0 | 0 | 100 | 4453248E | Access Road | | down slope of access road |
| 5/23/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-201 | Point | 285700.2087 | 3805204.584 | 1 | <1% | 0 | 100 | 0 | 4453241E | Access Road | | ground disturbance area |
| 5/23/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-202 | Point | 285566.6486 | 3805392.774 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | ground disturbance area |
| 5/23/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-203 | Point | 285676.5717 | 3805378.468 | 7 | 35% | 100 | 0 | 0 | access road | Access Road | | access road |
| 5/23/2014 | JP | JUCA | Juglans californica | southern California black walnut | JUCA-204 | Point | 283921.3056 | 3805146.457 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | |
| 5/23/2014 | JP | JUCA | Juglans californica | southern California black walnut | JUCA-205 | Point | 283955.2193 | 3805157.749 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | |
| 5/23/2014 | JP | JUCA | Juglans californica | southern California black walnut | JUCA-206 | Point | 284878.3599 | 3805437.078 | 2 | 2% | 50 | 0 | 50 | 4453243E | Access Road | | |
| 5/23/2014 | JP | JUCA | Juglans californica | southern California black walnut | JUCA-207 | Point | 285673.1711 | 3805203.878 | 1 | 5% | 100 | 0 | 0 | 4453241E | Ground Dist. Area | | |
| 5/23/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-208 | Point | 281709.4856 | 3805976.626 | 10 | 2% | 0 | 0 | 100 | 4479636E | Access Road | | scattered downslope of access road |
| 5/23/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-209 | Point | 281746.8733 | 3805829.058 | 1 | 5% | 0 | 0 | 100 | 4453250E | Access Road | | upslope of access road |
| 5/23/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-210 | Point | 281852.21 | 3805764.686 | 1 | <1% | 100 | 0 | 0 | 4453250E | Access Road | | upslope of access road |
| 5/23/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-211 | Point | 281887.5026 | 3805768.656 | 2 | <1% | 100 | 0 | 0 | 4453250E | Access Road | | upslope of access road |
| 5/23/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-212 | Point | 284580.586 | 3805467.076 | 2 | 10% | 0 | 0 | 100 | 4453244E | Access Road | | downslope of access road |
| 5/23/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-213 | Point | 285447.6077 | 3805364.849 | 5 | 10% | 50 | 0 | 50 | 4453242E | Access Road | | downslope of access road |
| 5/23/2014 | JP | JUCA | Juglans californica | southern California black walnut | JUCA-214 | Polygon | 283288.7763 | 3805312.075 | 100+ | 30% | 60 | 0 | 40 | access road | Access Road | | upslope and downslope from access road |
| 5/23/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-215 | Polygon | 283368.0403 | 3805052.572 | 20 | 30% | 60 | 0 | 40 | access road | Access Road | | upslope and downslope from access road |
| 5/23/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-216 | Polygon | 283484.0531 | 3805064.825 | 35 | 30% | 60 | 0 | 40 | access road | Access Road | | upslope and downslope from access road |
| 5/23/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-217 | Polygon | 283608.3409 | 3805271.906 | 50 | 10% | 60 | 40 | 0 | 4453247E | Access Road | | upslope and downslope from access road |

| Date | Surveyor Initials | Plant Code | Scientific Name | Common Name | Population ID | Feature Type | Easting | Northing | Population Size | Cover Class | % Vegetative | % Flowering | % Fruiting | Nearest Construct | Potential Threat | Other Threat | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/23/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-218 | Polygon | 283718.4787 | 3805117.425 | 50+ | 20% | 60 | 0 | 60 | access road | Access Road | | upslope and downslope from access road |
| 5/23/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-219 | Polygon | 284032.5069 | 3805263.507 | 40 | 15% | 100 | 0 | 80 | 4453246E | Access Road | | upslope and downslope from access road |
| 5/23/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-220 | Polygon | 284754.3167 | 3805414.3 | 50 | 25% | 20 | 0 | 80 | 4453244E | Access Road | | upslope and downslope from access road |
| 5/23/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-221 | Polygon | 285813.4592 | 3805271.543 | 30 | 45% | 80 | 0 | 20 | 4453241E | Access Road | guard structure | both sides of road |
| 5/23/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-222 | Polygon | 281560.8877 | 3806068.845 | 20 | 5% | 0 | 0 | 100 | 4479636E | Access Road | | down slope of access road |
| 5/23/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-223 | Polygon | 282436.5198 | 3805307.374 | 13 | 15% | 10 | 0 | 90 | 4453248E | Access Road | | both sides of access road |
| 5/23/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-224 | Polygon | 282513.0037 | 3805356.901 | 21 | 5% | 10 | 0 | 90 | 4453248E | Access Road | | scattered on both sides of access road |
| 5/23/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-225 | Polygon | 282626.2238 | 3805419.871 | 50+ | 35% | 10 | 0 | 90 | 4453248E | Access Road | | scattered on both sides of access road |
| 5/23/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-226 | Polygon | 282562.6514 | 3805610.431 | 10 | 10% | 10 | 0 | 90 | M3-P2A | Access Road | | access road to tower |
| 5/23/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-227 | Polygon | 282804.8129 | 3805526.841 | 14 | 10% | 10 | 0 | 90 | 4453248E | Access Road | | both sides of access road |
| 5/23/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-228 | Polygon | 282968.8566 | 3805381.251 | 45 | 30% | 10 | 0 | 90 | 4453248E | Access Road | | both sides of access road |
| 5/23/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-229 | Polygon | 283107.8057 | 3805289.13 | 60 | 30% | 10 | 0 | 90 | access road | Access Road | | both sides of access road |
| 5/23/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-230 | Polygon | 283196.9977 | 3805410.49 | 45 | 45% | 10 | 0 | 90 | access road | Access Road | | both sides of access road |
| 5/23/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-231 | Polygon | 284103.3042 | 3805375.853 | 20 | 20% | 10 | 0 | 90 | 4453246E | Access Road | | around loop road for tower and down slope of access road |
| 5/23/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-232 | Polygon | 284257.135 | 3805383.513 | 24 | 20% | 10 | 0 | 90 | 4453245E | Access Road | | around loop road for tower and down slope of access road |
| 5/23/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-233 | Polygon | 285624.2204 | 3805388.154 | 15 | 20% | 10 | 0 | 90 | access road | Access Road | | scattered along both sides of access road |
| 5/23/2014 | JP | JUCA | Juglans californica | southern California black walnut | JUCA-234 | Polygon | 282103.5005 | 3805640.628 | 9 | 10% | 100 | 0 | | access road | Access Road | | |
| 5/23/2014 | JP | JUCA | Juglans californica | southern California black walnut | JUCA-235 | Polygon | 282115.7543 | 3805680.099 | 3 | 10% | 50 | 0 | 50 | M3-P2B | Access Road | | |

| Date | Surveyor Initials | Plant Code | Scientific Name | Common Name | Population ID | Feature Type | Easting | Northing | Population Size | Cover Class | % Vegetative | % Flowering | % Fruiting | Nearest Construct | Potential Threat | Other Threat | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/23/2014 | JP | JUCA | Juglans californica | southern California black walnut | JUCA-236 | Polygon | 282238.2803 | 3805698.23 | 11 | 15% | 50 | 0 | 50 | M3-P2B | Access Road | | |
| 5/23/2014 | JP | JUCA | Juglans californica | southern California black walnut | JUCA-237 | Polygon | 282356.8357 | 3805315.515 | 18 | 30% | 50 | 0 | 50 | 4453248E | Access Road | | along both sides of access road |
| 5/23/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-238 | Polygon | 281528.159 | 3806040.789 | 3 | 5% | 33 | 0 | 66 | CONSTR 77 | Access Road | | between access roads |
| 5/23/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-239 | Polygon | 281954.0453 | 3805773.556 | 17 | 5% | 80 | 0 | 20 | 4453250E | Access Road | | both sides of access roads |
| 5/23/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-240 | Polygon | 282068.1616 | 3805744.337 | 40 | 5% | 80 | 0 | 20 | M3-P2B | Access Road | | both sides of access roads |
| 5/23/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-241 | Polygon | 282104.2573 | 3805683.613 | 5 | 2% | 80 | 0 | 20 | M3-P2B | Access Road | | both sides of access roads |
| 5/23/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-242 | Polygon | 284305.6079 | 3805245.479 | 300+ | 15% | 50 | 0 | 50 | 4453245E | Access Road | | both sides of access roads |
| 5/23/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-243 | Polygon | 284441.3635 | 3805224.164 | 60+ | 5% | 100 | 0 | 0 | 4453245E | Access Road | | both sides of access roads, but mostly upslope |
| 5/23/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-244 | Polygon | 284708.2115 | 3805367.889 | 150+ | 2% | 50 | 0 | 50 | 4453243E | Access Road | | scattered on both sides of access roads, but more upslope |
| 5/23/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-245 | Polygon | 285763.3189 | 3805370.371 | 10 | <1% | 50 | 0 | 50 | access road | Access Road | | scattered on both sides of access roads, but more upslope |
| 5/23/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-246 | Polygon | 281806.5488 | 3805790.097 | 8 | 5% | 0 | 0 | 100 | 4453250E | Access Road | | down slope of access road two on upslope |
| 5/23/2014 | JP | JUCA | Juglans californica | southern California black walnut | JUCA-247 | Polygon | 282307.3109 | 3805525.027 | 85 | 5% | 50 | 0 | 50 | M3-P2B | Access Road | | along both sides of access road |
| 5/29/2014 | MB | JUCA | Juglans californica | southern California black walnut | JUCA-248 | Point | 278777.9045 | 3806873.13 | 1 | 2% | 100 | 0 | 0 | access road | Access Road | | |
| 5/29/2014 | MB | JUCA | Juglans californica | southern California black walnut | JUCA-249 | Point | 278632.4392 | 3806636.9 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | |
| 5/29/2014 | MB | JUCA | Juglans californica | southern California black walnut | JUCA-250 | Point | 276573.6751 | 3806899.929 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | climbing up fence |
| 5/29/2014 | JP | JUCA | Juglans californica | southern California black walnut | JUCA-251 | Point | 278745.8429 | 3806930.829 | 4 | 50% | 0 | 50 | 50 | access road | Access Road | | |
| 5/29/2014 | JP | JUCA | Juglans californica | southern California black walnut | JUCA-252 | Point | 278670.4478 | 3806681.63 | 2 | 25% | 0 | 100 | 0 | access road | Access Road | | |
| 5/29/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-253 | Point | 278574.1886 | 3806565.702 | 1 | 2% | 100 | 0 | 0 | access road | Access Road | | 20ft upslope of access road |

| Date | Surveyor Initials | Plant Code | Scientific Name | Common Name | Population ID | Feature Type | Easting | Northing | Population Size | Cover Class | % Vegetative | % Flowering | % Fruiting | Nearest Construct | Potential Threat | Other Threat | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/29/2014 | MB | JUCA | Juglans californica | southern California black walnut | JUCA-254 | Polygon | 278677.0311 | 3806742.376 | 10 | 5% | 100 | 0 | 0 | access road | Ground Dist. Area | | |
| 5/29/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-255 | Polygon | 278888.9788 | 3806632.454 | 100+ | 15% | 50 | 0 | 50 | M5-T4 | Access Road | | intermixed english walnut |
| 5/29/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-256 | Polygon | 278580.2184 | 3806535.851 | 10 | 2% | 50 | 0 | 50 | access road | Access Road | | downslope from access road |
| 5/29/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-257 | Polygon | 274656.3454 | 3808738.284 | 50 | 15% | 50 | 0 | 50 | M8-ST5 | Access Road | | on both sides of access road |
| 5/29/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-258 | Polygon | 278719.6281 | 3806703.209 | 1 | 70% | 0 | 100 | 0 | access road | Access Road | | south side of access road |
| 5/29/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-259 | Polygon | 274631.3625 | 3808551.406 | 37 | 2% | 80 | 0 | 20 | access road | Access Road | | scattered on both sides of access road |
| 5/30/2014 | MB | JUCA | Juglans californica | southern California black walnut | JUCA-260 | Point | 274632.7097 | 3808796.009 | 1 | 10% | 0 | 100 | 0 | M8-ST5 | Access Road | | |
| 5/30/2014 | MB | JUCA | Juglans californica | southern California black walnut | JUCA-261 | Point | 274648.312 | 3808798.451 | 2 | 10% | 0 | 100 | 0 | M8-ST5 | Access Road | | both sides of access road |
| 5/30/2014 | MB | JUCA | Juglans californica | southern California black walnut | JUCA-262 | Point | 274670.7088 | 3808838.326 | 1 | 10% | 100 | 0 | 0 | M8-ST5 | Access Road | | sapling |
| 5/30/2014 | JP | JUCA | Juglans californica | southern California black walnut | JUCA-263 | Point | 274671.5205 | 3808828.851 | 3 | 25% | 50 | 0 | 50 | M8-ST5 | Access Road | | both sides of road |
| 5/30/2014 | JP | JUCA | Juglans californica | southern California black walnut | JUCA-264 | Point | 286119.165 | 3805483.63 | 1 | 10% | 100 | 0 | 0 | 4453240E | Ground Dist. Area | | |
| 5/30/2014 | JP | JUCA | Juglans californica | southern California black walnut | JUCA-265 | Point | 286144.099 | 3805512.202 | 1 | <1% | 100 | 0 | 0 | 4453240E | Ground Dist. Area | | downslope of access road and landing zone |
| 5/30/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-266 | Point | 274110.525 | 3809445.16 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | seedling |
| 5/30/2014 | SH | JUCA | Juglans californica | southern California black walnut | JUCA-267 | Point | 286974.4092 | 3805281.056 | 4 | 25% | 50 | 0 | 50 | 4453239E | Access Road | | |
| 5/30/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-268 | Point | 279628.3071 | 3807430.768 | 1 | 50% | 0 | 0 | 100 | access road | Access Road | | upslope of access road |
| 5/30/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-269 | Point | 286369.8841 | 3805735.263 | 2 | 20% | 100 | 0 | 0 | access road | Access Road | | downslope of access road |
| 5/30/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-270 | Point | 286350.1038 | 3805716.144 | 2 | 20% | 100 | 0 | 0 | access road | Access Road | | upslope of access road |
| 5/30/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-271 | Point | 286379.419 | 3805441.83 | 2 | 2% | 100 | 0 | 0 | access road | Access Road | | on access road |

| Date | Surveyor Initials | Plant Code | Scientific Name | Common Name | Population ID | Feature Type | Easting | Northing | Population Size | Cover Class | % Vegetative | % Flowering | % Fruiting | Nearest Construct | Potential Threat | Other Threat | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/30/2014 | JP | JUCA | Juglans californica | southern California black walnut | JUCA-272 | Polygon | 286132.5992 | 3805467.306 | 7 | 35% | 100 | 0 | 0 | 4453240E | Ground Dist. Area | | downslope and around tower |
| 5/30/2014 | JP | JUCA | Juglans californica | southern California black walnut | JUCA-273 | Polygon | 286121.1866 | 3805422.722 | 8 | 50% | 20 | 50 | 30 | 4453240E | Access Road | | both sides of access road |
| 5/30/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-274 | Polygon | 286940.8907 | 3805238.625 | 20 | 5% | 20 | 0 | 80 | 4453239E | Access Road | | downslope of access road |
| 5/30/2014 | KM | JUCA | Juglans californica | southern California black walnut | JUCA-275 | Polygon | 286587.221 | 3806031.578 | 150+ | 60% | 70 | 0 | 30 | access road | Access Road | | walnut woodland both sides of access road |
| 7/14/2014 | MG | JUCA | Juglans californica | southern California black walnut | JUCA-276 | Point | 273289.6852 | 3810548.407 | 1 | 65% | 0 | 0 | 100 | M4-ST5 | Access Road | | msy need to be trimmed for rd. |
| 7/15/2014 | MB | JUCA | Juglans californica | southern California black walnut | JUCA-277 | Point | 277260.7255 | 3808393.793 | 1 | 100% | 100 | 0 | 0 | CONSTR 93 | Ground Dist. Area | | |
| 7/15/2014 | JP | JUCA | Juglans californica | southern California black walnut | JUCA-278 | Point | 276184.6923 | 3808511.661 | 2 | 25% | 100 | 0 | 0 | CONSTR 97 | Access Road | | upslope of access road |
| 7/15/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-279 | Point | 275169.909 | 3808728.942 | 1 | <1% | 0 | 0 | 100 | M8-ST2 | Access Road | | |
| 7/15/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-280 | Point | 275144.6821 | 3808739.306 | 7 | <1% | 50 | 0 | 50 | M8-ST2 | Access Road | | |
| 7/15/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-281 | Point | 275446.3508 | 3808478.322 | 4 | <1% | 10 | 0 | 90 | M8-T1 | Access Road | | |
| 7/15/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-282 | Point | 277338.1129 | 3808590.52 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | |
| 7/15/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-283 | Polygon | 275223.4572 | 3808701.047 | 5 | 2% | 20 | 0 | 80 | M8-ST2 | Access Road | | |
| 7/15/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-284 | Polygon | 275148.016 | 3808738.388 | 6 | 2% | 20 | 0 | 80 | M8-ST2 | Access Road | | |
| 7/15/2014 | ES | JUCA | Juglans californica | southern California black walnut | JUCA-285 | Polygon | 275423.2469 | 3808513.179 | 8 | 20% | 20 | 0 | 80 | M8-T1 | Access Road | | |
| 7/16/2014 | MB | JUCA | Juglans californica | southern California black walnut | JUCA-286 | Point | 276462.5578 | 3806979.513 | 1 | 75% | 100 | 0 | 0 | M7-T2 | Access Road | | |
| 7/16/2014 | MB | JUCA | Juglans californica | southern California black walnut | JUCA-287 | Point | 276470.7396 | 3806968.649 | 1 | 75% | 100 | 0 | 0 | M7-T2 | Access Road | | |
| 5/28/2014 | MB | LIHUO | Lilium humboldtii ssp. ocellatum | ocellated Humboldt lily | LIHUO-001 | Point | 269719.6248 | 3813167.051 | 2 | <1% | 100 | 0 | 0 | access road | Access Road | | |
| 5/28/2014 | MB | LIHUO | Lilium humboldtii ssp. ocellatum | ocellated Humboldt lily | LIHUO-002 | Point | 269737.6016 | 3813171.866 | 5 | <1% | 100 | 0 | 0 | access road | Access Road | | |
| 5/28/2014 | MB | LIHUO | Lilium humboldtii ssp. ocellatum | ocellated Humboldt lily | LIHUO-003 | Point | 269686.1433 | 3813180.285 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | |

| Date | Surveyor Initials | Plant Code | Scientific Name | Common Name | Population ID | Feature Type | Easting | Northing | Population Size | Cover Class | % Vegetative | % Flowering | % Fruiting | Nearest Construct | Potential Threat | Other Threat | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/20/2014 | SH | LOSUS | Lonicera subspicata var. subspicata | Santa Barbara honeysuckle | LOSUS-001 | Point | 275894.9528 | 3808403.471 | 2 | 35% | 50 | 50 | 0 | access road | Access Road | | in restoration area |
| 5/20/2014 | SH | LOSUS | Lonicera subspicata var. subspicata | Santa Barbara honeysuckle | LOSUS-002 | Point | 275907.4645 | 3808402.429 | 2 | 35% | 100 | 0 | 0 | access road | Access Road | | in restoration area |
| 5/20/2014 | SH | LOSUS | Lonicera subspicata var. subspicata | Santa Barbara honeysuckle | LOSUS-003 | Point | 275976.4652 | 3808378.863 | 1 | 25% | 0 | 100 | 0 | access road | Access Road | | in restoration area |
| 5/20/2014 | SH | LOSUS | Lonicera subspicata var. subspicata | Santa Barbara honeysuckle | LOSUS-004 | Point | 275995.5368 | 3808373.679 | 2 | 35% | 100 | 0 | 0 | M17-T2 | Access Road | | in restoration area |
| 5/20/2014 | SH | LOSUS | Lonicera subspicata var. subspicata | Santa Barbara honeysuckle | LOSUS-005 | Point | 276012.4961 | 3808370.473 | 1 | 50% | 100 | 0 | 0 | M17-T2 | Access Road | | in restoration area |
| 5/20/2014 | ES | LOSUS | Lonicera subspicata var. subspicata | Santa Barbara honeysuckle | LOSUS-006 | Point | 275878.7882 | 3808423.764 | 3 | <1% | 75 | 25 | 0 | access road | Other | laydown area | in riparian coridor |
| 5/20/2014 | ES | LOSUS | Lonicera subspicata var. subspicata | Santa Barbara honeysuckle | LOSUS-007 | Point | 275912.0003 | 3808417.479 | 1 | <1% | 100 | 0 | 0 | access road | Other | laydown area | in riparian coridor |
| 5/20/2014 | ES | LOSUS | Lonicera subspicata var. subspicata | Santa Barbara honeysuckle | LOSUS-008 | Point | 276002.4644 | 3808393.294 | 1 | <1% | 100 | 0 | 0 | M17-T2 | Other | laydown area | in riparian coridor |
| 5/20/2014 | ES | LOSUS | Lonicera subspicata var. subspicata | Santa Barbara honeysuckle | LOSUS-009 | Point | 276022.947 | 3808388.914 | 1 | <1% | 100 | 0 | 0 | M17-T2 | Other | laydown area | in riparian coridor |
| 5/20/2014 | KM | LOSUS | Lonicera subspicata var. subspicata | Santa Barbara honeysuckle | LOSUS-010 | Point | 276035.6867 | 3808368.156 | 2 | 5% | 100 | 0 | 0 | M17-T2 | Access Road | | downslope of access road |
| 5/28/2014 | SH | LOSUS | Lonicera subspicata var. subspicata | Santa Barbara honeysuckle | LOSUS-011 | Point | 270168.8775 | 3813283.86 | 10 | 10% | 100 | 0 | 0 | 1208734E | Access Road | | |
| 5/28/2014 | SH | LOSUS | Lonicera subspicata var. subspicata | Santa Barbara honeysuckle | LOSUS-012 | Point | 270208.9885 | 3813218.304 | 6 | 5% | 0 | 90 | 10 | CONSTR 139 | Ground Dist. Area | | |
| 5/28/2014 | SH | LOSUS | Lonicera subspicata var. subspicata | Santa Barbara honeysuckle | LOSUS-013 | Point | 270150.5895 | 3813216.755 | 3 | 2% | 0 | 90 | 10 | 1208734E | Access Road | | |
| 5/28/2014 | SH | LOSUS | Lonicera subspicata var. subspicata | Santa Barbara honeysuckle | LOSUS-014 | Point | 269791.3433 | 3813471.121 | 3 | <1% | 100 | 0 | 0 | access road | Access Road | | upslope and downslope from access road |
| 5/28/2014 | SH | LOSUS | Lonicera subspicata var. subspicata | Santa Barbara honeysuckle | LOSUS-015 | Point | 269724.8346 | 3813415.575 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | upslope  from access road |
| 5/28/2014 | SH | LOSUS | Lonicera subspicata var. subspicata | Santa Barbara honeysuckle | LOSUS-016 | Point | 269641.7884 | 3813341.568 | 10 | 5% | 100 | 0 | 0 | access road | Access Road | | in extended buffer downslope slope from access road |
| 5/28/2014 | SH | LOSUS | Lonicera subspicata var. subspicata | Santa Barbara honeysuckle | LOSUS-017 | Point | 269670.7888 | 3813311.789 | 3 | <1% | 100 | 0 | 0 | access road | Access Road | | in extended buffer downslope slope from access road |
| 5/28/2014 | SH | LOSUS | Lonicera subspicata var. subspicata | Santa Barbara honeysuckle | LOSUS-018 | Point | 269811.5771 | 3813281.933 | 3 | <1% | 50 | 50 | 0 | access road | Access Road | | downslope  from access road |

| Date | Surveyor Initials | Plant Code | Scientific Name | Common Name | Population ID | Feature Type | Easting | Northing | Population Size | Cover Class | % Vegetative | % Flowering | % Fruiting | Nearest Construct | Potential Threat | Other Threat | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/28/2014 | SH | LOSUS | Lonicera subspicata var. subspicata | Santa Barbara honeysuckle | LOSUS-019 | Point | 269780.2318 | 3813181.923 | 5 | <1% | 100 | 0 | 0 | access road | Access Road | | uppslope from access road |
| 5/28/2014 | SH | LOSUS | Lonicera subspicata var. subspicata | Santa Barbara honeysuckle | LOSUS-020 | Point | 269752.0103 | 3813182.878 | 10 | <1% | 100 | 0 | 0 | access road | Access Road | | upslope and downslope from access road |
| 5/28/2014 | JP | LOSUS | Lonicera subspicata var. subspicata | Santa Barbara honeysuckle | LOSUS-021 | Point | 270656.8241 | 3812979.992 | 2 | 2% | 100 | 0 | 0 | M10-T2 | Access Road | | |
| 5/28/2014 | JP | LOSUS | Lonicera subspicata var. subspicata | Santa Barbara honeysuckle | LOSUS-022 | Point | 270491.3391 | 3813097.536 | 4 | 10% | 100 | 0 | 0 | M10-T3 | Access Road | | |
| 5/28/2014 | KM | LOSUS | Lonicera subspicata var. subspicata | Santa Barbara honeysuckle | LOSUS-023 | Point | 269988.2681 | 3813353.006 | 1 | 2% | 0 | 100 | 0 | access road | Access Road | | 20ft downslope of access road |
| 5/28/2014 | KM | LOSUS | Lonicera subspicata var. subspicata | Santa Barbara honeysuckle | LOSUS-024 | Point | 269950.8495 | 3813392.232 | 1 | 2% | 0 | 100 | 0 | access road | Access Road | | 20ft downslope of access road |
| 5/28/2014 | KM | LOSUS | Lonicera subspicata var. subspicata | Santa Barbara honeysuckle | LOSUS-025 | Point | 269899.9542 | 3813468.389 | 1 | 2% | 100 | 0 | 0 | access road | Access Road | | 5ft downslope of access road |
| 5/28/2014 | KM | LOSUS | Lonicera subspicata var. subspicata | Santa Barbara honeysuckle | LOSUS-026 | Point | 269805.191 | 3813472.42 | 5 | 5% | 100 | 0 | 0 | access road | Access Road | | 10ft downslope of access road |
| 5/28/2014 | KM | LOSUS | Lonicera subspicata var. subspicata | Santa Barbara honeysuckle | LOSUS-027 | Point | 269675.6106 | 3813323.127 | 2 | 5% | 100 | 0 | 0 | access road | Access Road | | immediately adjacent to disturbed area |
| 5/28/2014 | KM | LOSUS | Lonicera subspicata var. subspicata | Santa Barbara honeysuckle | LOSUS-028 | Point | 269725.6677 | 3813178.847 | 1 | 2% | 100 | 0 | 0 | access road | Access Road | | just downslope of access road |
| 5/28/2014 | SH | LOSUS | Lonicera subspicata var. subspicata | Santa Barbara honeysuckle | LOSUS-029 | Polygon | 270168.6251 | 3813219.403 | 15 | 10% | 100 | 0 | 0 | 1208734E | Access Road | | |
| 5/28/2014 | SH | LOSUS | Lonicera subspicata var. subspicata | Santa Barbara honeysuckle | LOSUS-030 | Polygon | 270216.7526 | 3813191.139 | 50+ | 10% | 50 | 50 | 0 | CONSTR 139 | Ground Dist. Area | | on both sides of road, also along access road |
| 5/28/2014 | SH | LOSUS | Lonicera subspicata var. subspicata | Santa Barbara honeysuckle | LOSUS-031 | Polygon | 270061.7737 | 3813330.614 | 25+ | <1% | 50 | 50 | 0 | 1208734E | Access Road | | upslope of access road |
| 5/28/2014 | SH | LOSUS | Lonicera subspicata var. subspicata | Santa Barbara honeysuckle | LOSUS-032 | Polygon | 269947.0163 | 3813425.326 | 10 | <1% | 100 | 0 | 0 | access road | Access Road | | upslope of access road |
| 5/28/2014 | SH | LOSUS | Lonicera subspicata var. subspicata | Santa Barbara honeysuckle | LOSUS-033 | Polygon | 269825.7398 | 3813511.573 | 5 | <1% | 40 | 60 | 0 | access road | Access Road | | upslope of access road |
| 5/28/2014 | SH | LOSUS | Lonicera subspicata var. subspicata | Santa Barbara honeysuckle | LOSUS-034 | Polygon | 269708.6949 | 3813328.605 | 5 | <1% | 40 | 60 | 0 | access road | Access Road | | upslope of access road |
| 5/28/2014 | SH | LOSUS | Lonicera subspicata var. subspicata | Santa Barbara honeysuckle | LOSUS-035 | Polygon | 269806.9501 | 3813271.649 | 30 | 2% | 70 | 30 | 0 | access road | Access Road | | upslope of access road |
| 5/28/2014 | SH | LOSUS | Lonicera subspicata var. subspicata | Santa Barbara honeysuckle | LOSUS-036 | Polygon | 269867.2693 | 3813199.526 | 5 | <1% | 70 | 30 | 0 | access road | Access Road | | upslope of access road |

| Date | Surveyor Initials | Plant Code | Scientific Name | Common Name | Population ID | Feature Type | Easting | Northing | Population Size | Cover Class | % Vegetative | % Flowering | % Fruiting | Nearest Construct | Potential Threat | Other Threat | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/28/2014 | JP | LOSUS | Lonicera subspicata var. subspicata | Santa Barbara honeysuckle | LOSUS-037 | Polygon | 270708.8621 | 3812956.366 | 6 | 5% | 100 | 0 | 0 | M10-T2 | Access Road | near ground disturbance areas | both sides of access road |
| 5/28/2014 | JP | LOSUS | Lonicera subspicata var. subspicata | Santa Barbara honeysuckle | LOSUS-038 | Polygon | 270579.2483 | 3813015.498 | 60 | 5% | 100 | 0 | 0 | M10-T3 | Access Road | near ground disturbance areas | both sides of access road |
| 5/28/2014 | JP | LOSUS | Lonicera subspicata var. subspicata | Santa Barbara honeysuckle | LOSUS-039 | Polygon | 270341.9388 | 3813167.743 | 85 | 10% | 95 | 5 | 0 | M12-T5 | Access Road | also in ground disturbance areas | both sides of access road |
| 5/28/2014 | JP | LOSUS | Lonicera subspicata var. subspicata | Santa Barbara honeysuckle | LOSUS-040 | Polygon | 269701.9287 | 3813152.142 | 30 | 5% | 95 | 5 | 0 | access road | Access Road | | confirm, mixed with L. interrupta |
| 5/28/2014 | JP | LOSUS | Lonicera subspicata var. subspicata | Santa Barbara honeysuckle | LOSUS-041 | Polygon | 269869.9094 | 3812974.359 | 10 | 5% | 90 | 10 | 0 | access road | Access Road | | upslope of access road |
| 5/28/2014 | JP | LOSUS | Lonicera subspicata var. subspicata | Santa Barbara honeysuckle | LOSUS-042 | Polygon | 269863.3123 | 3812933.815 | 25 | 5% | 100 | 0 | 0 | access road | Access Road | | upslope of access road |
| 5/28/2014 | KM | LOSUS | Lonicera subspicata var. subspicata | Santa Barbara honeysuckle | LOSUS-043 | Polygon | 270201.3264 | 3813292.207 | 20 | 5% | 90 | 10 | 0 | M12-T6 | Access Road | | |
| 5/28/2014 | KM | LOSUS | Lonicera subspicata var. subspicata | Santa Barbara honeysuckle | LOSUS-044 | Polygon | 270256.8217 | 3813255.313 | 20 | 5% | 90 | 10 | 0 | 1208732E | Access Road | | |
| 5/28/2014 | KM | LOSUS | Lonicera subspicata var. subspicata | Santa Barbara honeysuckle | LOSUS-045 | Polygon | 270195.175 | 3813205.099 | 10 | 5% | 30 | 70 | 0 | CONSTR 139 | Access Road | | |
| 5/28/2014 | KM | LOSUS | Lonicera subspicata var. subspicata | Santa Barbara honeysuckle | LOSUS-046 | Polygon | 270051.1091 | 3813319.784 | 15 | 5% | 30 | 70 | 0 | 1208734E | Access Road | | |
| 7/14/2014 | MB | LOSUS | Lonicera subspicata var. subspicata | Santa Barbara honeysuckle | LOSUS-047 | Polygon | 270183.4985 | 3813177.58 | 15 | 5% | 0 | 100 | 0 | CONSTR 125 | Ground Dist. Area | | |
| 5/15/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-001 | Point | 279796.932 | 3806456.303 | 1 | 5% | 100 | 0 | 0 | M5-ST3 | Access Road | | |
| 5/15/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-002 | Point | 279624.0946 | 3806468.32 | 1 | <1% | 100 | 0 | 0 | M5-ST5 | Access Road | | |
| 5/15/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-003 | Point | 279496.4386 | 3806529.492 | 5 | 5% | 90 | 10 | 0 | M5-T2 | Ground Dist. Area | | UPSLOPE OF TOWER ACCESS RD 20 FT |
| 5/15/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-004 | Point | 279397.8389 | 3806493.733 | 1 | <1% | 100 | 0 | 0 | M5-ST6 | Access Road | | UPSLOPE OF ACCESS RD |
| 5/15/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-005 | Point | 279109.8005 | 3806516.497 | 1 | <1% | 100 | 0 | 0 | M5-T4 | Access Road | | DOWNSLOPE OF ACCESS RD |
| 5/15/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-006 | Point | 279028.6401 | 3806525.482 | 3 | 2% | 100 | 0 | 0 | CONSTR 61 M5 P4 | Access Road | | DOWNSLOPE OF ACCESS RD |
| 5/15/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-007 | Point | 278996.7987 | 3806537.457 | 1 | <1% | 100 | 0 | 0 | CONSTR 61 M5 P4 | Access Road | | ALONG ACCESS RD |
| 5/15/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-008 | Point | 278948.8254 | 3806560.979 | 3 | <1% | 90 | 10 | 0 | M5-T8 | Access Road | | ALONG ACCESS RD |
| 5/15/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-009 | Point | 281186.7617 | 3807114.976 | 1 | 5% | 100 | 0 | 0 | access road | Access Road | | |
| 5/15/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-010 | Point | 281189.3483 | 3807129.459 | 1 | 5% | 100 | 0 | 0 | access road | Access Road | | |

| Date | Surveyor Initials | Plant Code | Scientific Name | Common Name | Population ID | Feature Type | Easting | Northing | Population Size | Cover Class | % Vegetative | % Flowering | % Fruiting | Nearest Construct | Potential Threat | Other Threat | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/15/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-011 | Point | 281230.2113 | 3807040.49 | 1 | 5% | 100 | 0 | 0 | M13-T6 | Access Road | | |
| 5/15/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-012 | Point | 281155.9943 | 3806963.264 | 1 | 5% | 0 | 100 | 0 | CONSTR 81 | Access Road | | |
| 5/15/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-013 | Point | 281273.9759 | 3806717.073 | 1 | 2% | 0 | 100 | 0 | M13-T5 | Access Road | | |
| 5/15/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-014 | Point | 281373.5236 | 3806662.91 | 1 | 5% | 100 | 0 | 0 | M13-T4 | Access Road | | |
| 5/15/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-015 | Point | 279823.898 | 3806454.759 | 3 | 2% | 0 | 100 | 0 | M5-ST3 | Access Road | | |
| 5/15/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-016 | Point | 279816.4307 | 3806455.34 | 1 | 2% | 0 | 100 | 0 | M5-ST3 | Access Road | | |
| 5/15/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-017 | Point | 279625.7223 | 3806462.345 | 2 | 5% | 0 | 100 | 0 | M5-ST5 | Access Road | | |
| 5/15/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-018 | Point | 279527.9265 | 3806478.322 | 2 | 5% | 0 | 100 | 0 | M5-ST5 | Access Road | | |
| 5/15/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-019 | Point | 279475.2684 | 3806487.53 | 3 | 10% | 0 | 100 | 0 | M5-ST5 | Access Road | | |
| 5/15/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-020 | Point | 279496.3193 | 3806483.274 | 2 | 5% | 0 | 100 | 0 | M5-ST5 | Access Road | | |
| 5/15/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-021 | Point | 279252.7874 | 3806520.212 | 1 | 15% | 100 | 0 | 0 | M5-ST7 | Access Road | | upslope edge of road |
| 5/15/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-022 | Point | 279207.8464 | 3806512.472 | 1 | <1% | 100 | 0 | 0 | M5-ST7 | Access Road | | upslope of road |
| 5/15/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-023 | Point | 279142.5473 | 3806505.995 | 7 | 15% | 75 | 25 | 0 | M5-ST7 | Access Road | | upslope of road |
| 5/15/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-024 | Point | 279108.4755 | 3806511.844 | 3 | 15% | 100 | 0 | 0 | M5-T4 | Access Road | | upslope of road |
| 5/15/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-025 | Point | 279070.0133 | 3806516.001 | 5 | 10% | 100 | 0 | 0 | M5-T4 | Access Road | | upslope of road |
| 5/15/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-026 | Point | 279008.0901 | 3806528.259 | 1 | <1% | 100 | 0 | 0 | CONSTR 61 M5 P4 | Access Road | | upslope of road |
| 5/15/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-027 | Point | 278986.0556 | 3806536.539 | 8 | 5% | 50 | 50 | 0 | M5-T8 | Access Road | | upslope of road |
| 5/15/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-028 | Point | 278973.2705 | 3806542.877 | 5 | 5% | 100 | 0 | 0 | M5-T8 | Access Road | | upslope of road |
| 5/15/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-029 | Point | 278959.4668 | 3806549.768 | 1 | <1% | 100 | 0 | 0 | M5-T8 | Access Road | | upslope of road |
| 5/15/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-030 | Point | 278951.7892 | 3806553.911 | 1 | <1% | 100 | 0 | 0 | M5-T8 | Access Road | | upslope of road |
| 5/15/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-031 | Point | 278943.8639 | 3806557.367 | 3 | <1% | 0 | 100 | 0 | M5-T8 | Access Road | | upslope of road |
| 5/15/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-032 | Point | 278936.8863 | 3806561.925 | 8 | <1% | 100 | 0 | 0 | M5-T8 | Access Road | | upslope of road |
| 5/15/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-033 | Point | 278882.8622 | 3806587.299 | 2 | <1% | 100 | 0 | 0 | M5-T8 | Access Road | | downslope of road |
| 5/15/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-034 | Point | 278753.6246 | 3806604.541 | 4 | 30% | 100 | 0 | 0 | access road | Ground Dist. Area | | upslope of access road |
| 5/15/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-035 | Polygon | 281175.5 | 3806957.02 | 30 | 25% | 90 | 10 | 0 | CONSTR 81 | Ground Dist. Area | under tower | |
| 5/15/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-036 | Polygon | 279483.0575 | 3806536.947 | 25 | 5% | 100 | 0 | 0 | M5-T2 | Ground Dist. Area | | DOWNSLOPE OF TOWER 5 FT |
| 5/15/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-037 | Polygon | 279504.0821 | 3806531.859 | 5 | 2% | 90 | 10 | 0 | M5-T2 | Ground Dist. Area | | ON SLOPES AROUND TOWER |

| Date | Surveyor Initials | Plant Code | Scientific Name | Common Name | Population ID | Feature Type | Easting | Northing | Population Size | Cover Class | % Vegetative | % Flowering | % Fruiting | Nearest Construct | Potential Threat | Other Threat | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/15/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-038 | Polygon | 279305.62 | 3806519.837 | 30 | <1% | 50 | 50 | 0 | M5-ST6 | Access Road | | upslope of access road |
| 5/15/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-039 | Polygon | 279056.2823 | 3806514.012 | 25 | 10% | 100 | 0 | 0 | CONSTR 61 M5 P4 | Access Road | | upslope of access road |
| 5/15/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-040 | Polygon | 279032.759 | 3806518.67 | 4 | <1% | 50 | 50 | 0 | CONSTR 61 M5 P4 | Access Road | | upslope of access road |
| 5/15/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-041 | Polygon | 278914.6126 | 3806566.932 | 30 | 15% | 100 | 0 | 0 | M5-T8 | Access Road | | upslope of access road |
| 5/15/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-042 | Polygon | 278920.9687 | 3806579.377 | 100+ | 15% | 90 | 10 | 0 | M5-T8 | Ground Dist. Area | | between upper access road and 61 |
| 5/15/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-043 | Polygon | 278859.8415 | 3806578.931 | 50+ | 25% | 95 | 5 | 0 | M5-T8 | Ground Dist. Area | | upslope of access road |
| 5/15/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-044 | Polygon | 278801.9454 | 3806580.271 | 15 | 35% | 75 | 25 | 0 | M5-T8 | Ground Dist. Area | | upslope of access road |
| 5/19/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-045 | Point | 290461.1396 | 3801536.704 | 2 | <1% | 100 | 0 | 0 | access road | Access Road | | 25 ft downslope from row |
| 5/19/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-046 | Point | 290463.3269 | 3801530.298 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | 15 ft downslope from row |
| 5/19/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-047 | Point | 290494.2399 | 3801523.773 | 2 | 2% | 100 | 0 | 0 | access road | Access Road | | 15-25 ft downslope from row |
| 5/19/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-048 | Point | 290714.8197 | 3801670.571 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | 30ft from row |
| 5/19/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-049 | Point | 290713.7411 | 3801628.696 | 2 | 2% | 0 | 100 | 0 | access road | Access Road | | |
| 5/19/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-050 | Point | 291831.3154 | 3801621.525 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | 40ft from row |
| 5/19/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-051 | Point | 291757.8483 | 3801646.163 | 2 | 2% | 100 | 0 | 0 | access road | Access Road | | 20-40ft from row, plant 2 to northeast |
| 5/19/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-052 | Point | 291637.1086 | 3801659.149 | 1 | 2% | 100 | 0 | 0 | access road | Access Road | | 30ft from row |
| 5/19/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-053 | Point | 291463.3767 | 3803772.12 | 1 | 2% | 85 | 15 | 0 | access road | Access Road | | |
| 5/19/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-054 | Point | 290426.0072 | 3801533.289 | 2 | <1% | 100 | 0 | 0 | access road | Access Road | | upslope o road cut |
| 5/19/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-055 | Point | 290459.2566 | 3801559.711 | 7 | <1% | 100 | 0 | 0 | access road | Access Road | | upslope o road cut |
| 5/19/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-056 | Point | 290489.9534 | 3801528.499 | 2 | <1% | 100 | 0 | 0 | access road | Access Road | | upslope o road cut |
| 5/19/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-057 | Point | 290536.2386 | 3801553.789 | 3 | 2% | 100 | 0 | 0 | access road | Access Road | | upslope o road cut |
| 5/19/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-058 | Point | 290569.8555 | 3801586.529 | 7 | 10% | 90 | 10 | 0 | access road | Access Road | | upslope o road cut |
| 5/19/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-059 | Point | 290587.9012 | 3801607.319 | 3 | 2% | 100 | 0 | 0 | access road | Access Road | | upslope o road cut |
| 5/19/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-060 | Point | 290707.0404 | 3801671.317 | 3 | 2% | 100 | 0 | 0 | access road | Access Road | | upslope o road cut |
| 5/19/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-061 | Point | 291273.6193 | 3804043.652 | 1 | 2% | 0 | 100 | 0 | access road | Access Road | | upslope of access road |
| 5/19/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-062 | Point | 291442.1353 | 3803778.659 | 1 | <1% | 0 | 100 | 0 | access road | Access Road | | upslope of access road |
| 5/19/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-063 | Point | 289981.8236 | 3801511.43 | 2 | 10% | 0 | 100 | 0 | access road | Access Road | | upslope of access road |
| 5/19/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-064 | Point | 290006.6332 | 3801545.156 | 3 | 10% | 0 | 100 | 0 | access road | Access Road | | upslope of access road |

| Date | Surveyor Initials | Plant Code | Scientific Name | Common Name | Population ID | Feature Type | Easting | Northing | Population Size | Cover Class | % Vegetative | % Flowering | % Fruiting | Nearest Construct | Potential Threat | Other Threat | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/19/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-065 | Point | 290091.948 | 3801562.516 | 2 | 15% | 0 | 100 | 0 | access road | Access Road | | upslope of access road |
| 5/19/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-066 | Point | 290283.3196 | 3801521.462 | 1 | <1% | 0 | 100 | 0 | access road | Access Road | | upslope of access road |
| 5/19/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-067 | Point | 290386.2105 | 3801526.036 | 1 | <1% | 0 | 100 | 0 | access road | Access Road | | upslope of access road 50 ft |
| 5/19/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-068 | Point | 290955.2608 | 3801808.615 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | downslope of access road 20 ft |
| 5/19/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-069 | Point | 291275.6987 | 3801888.818 | 2 | <1% | 100 | 0 | 0 | access road | Access Road | | upslope of access road |
| 5/19/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-070 | Point | 291290.9757 | 3801884.931 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | upslope of access road |
| 5/19/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-071 | Point | 291519.2639 | 3803738.86 | 1 | 10% | 0 | 100 | 0 | access road | Access Road | | |
| 5/19/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-072 | Point | 291539.1297 | 3803733.987 | 1 | 10% | 100 | 0 | 0 | access road | Access Road | | |
| 5/19/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-073 | Point | 291692.8703 | 3803741.13 | 1 | 10% | 100 | 0 | 0 | access road | Access Road | | |
| 5/19/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-074 | Point | 291702.8704 | 3803738.339 | 1 | 10% | 100 | 0 | 0 | access road | Access Road | | |
| 5/19/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-075 | Point | 291738.6408 | 3803733.212 | 1 | 10% | 100 | 0 | 0 | access road | Access Road | | |
| 5/19/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-076 | Point | 291531.9193 | 3803585.07 | 1 | 10% | 100 | 0 | 0 | access road | Access Road | | |
| 5/19/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-077 | Point | 290232.8627 | 3801518.875 | 5 | 20% | 40 | 60 | 0 | access road | Access Road | | |
| 5/19/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-078 | Point | 290254.5301 | 3801514.762 | 2 | 20% | 0 | 100 | 0 | access road | Access Road | | plant 20ft upslope of point |
| 5/19/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-079 | Point | 290373.6936 | 3801522.109 | 1 | 30% | 0 | 100 | 0 | access road | Access Road | | plant 10ft downslope of point |
| 5/19/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-080 | Point | 291328.9337 | 3801891.877 | 5 | 10% | 0 | 100 | 0 | access road | Access Road | | upslope of access road |
| 5/19/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-081 | Point | 291409.804 | 3801866.771 | 2 | 15% | 50 | 50 | 0 | access road | Access Road | | upslope of access road |
| 5/19/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-082 | Polygon | 290469.0509 | 3801519.594 | 6 | 15% | 25 | 75 | 0 | access road | Access Road | | off access road |
| 5/19/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-083 | Polygon | 290603.7876 | 3801613.074 | 18 | 45% | 25 | 75 | 0 | access road | Access Road | | off access road |
| 5/19/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-084 | Polygon | 290154.9072 | 3801522.48 | 10 | 5% | 50 | 50 | 0 | access road | Access Road | upslope of access road | |
| 5/19/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-085 | Polygon | 290184.0188 | 3801522.269 | 8 | 5% | 50 | 50 | 0 | access road | Access Road | upslope of access road | scattered throughout scrb |
| 5/19/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-086 | Polygon | 290332.0194 | 3801531.942 | 4 | 5% | 50 | 50 | 0 | access road | Access Road | upslope of access road | scattered throughout scrub |
| 5/19/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-087 | Polygon | 291363.4219 | 3801887.759 | 13 | 2% | 50 | 50 | 0 | access road | Access Road | upslope of access road | scattered throughout scrub |
| 5/19/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-088 | Polygon | 290650.7518 | 3801662.43 | 35 | 45% | 90 | 0 | 10 | access road | Access Road | | |
| 5/20/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-089 | Point | 292360.8134 | 3801425.592 | 3 | 20% | 100 | 0 | 0 | access road | Access Road | | 30ft downslope from row |
| 5/20/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-090 | Point | 292390.2539 | 3801408.051 | 2 | 15% | 100 | 0 | 0 | access road | Access Road | | 20ft downslope from row |
| 5/20/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-091 | Point | 292463.5067 | 3801533.123 | 3 | 20% | 100 | 0 | 0 | access road | Access Road | | 30-50ft downslope from row |

| Date | Surveyor Initials | Plant Code | Scientific Name | Common Name | Population ID | Feature Type | Easting | Northing | Population Size | Cover Class | % Vegetative | % Flowering | % Fruiting | Nearest Construct | Potential Threat | Other Threat | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/20/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-092 | Point | 292728.0481 | 3801624.126 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | 20ft downslope from row |
| 5/20/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-093 | Point | 293842.9421 | 3801301.014 | 3 | 35% | 100 | 0 | 0 | M6-T2 | Access Road | | 35-50ft downslope from row |
| 5/20/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-094 | Point | 293890.7157 | 3801310.54 | 6 | 75% | 100 | 0 | 0 | M6-T2 | Access Road | | 50-80ft downslope from row |
| 5/20/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-095 | Point | 294144.2816 | 3801419.495 | 1 | <1% | 0 | 100 | 0 | 4453218E | Access Road | | 50ft downslope from row |
| 5/20/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-096 | Point | 293417.6567 | 3802260.23 | 1 | <1% | 0 | 100 | 0 | access road | Access Road | | 30ft downslope from row |
| 5/20/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-097 | Point | 294611.8872 | 3802476.385 | 1 | <1% | 0 | 100 | 0 | access road | Access Road | | 5ft upslope from row |
| 5/20/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-098 | Point | 295467.9325 | 3802165.442 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | |
| 5/20/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-099 | Point | 295851.9112 | 3802417.425 | 1 | <1% | 0 | 100 | 0 | access road | Access Road | | 20ft from access road |
| 5/20/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-100 | Point | 295868.479 | 3802339.181 | 1 | <1% | 0 | 100 | 0 | access road | Access Road | | |
| 5/20/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-101 | Point | 275581.8045 | 3807548.225 | 4 | 35% | 0 | 100 | 0 | access road | Access Road | | |
| 5/20/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-102 | Point | 292747.6689 | 3801773.563 | 3 | 5% | 0 | 100 | 0 | access road | Access Road | | upslop on access road |
| 5/20/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-103 | Point | 293585.6525 | 3801410.894 | 2 | <1% | 0 | 100 | 0 | access road | Access Road | | upslop on access road |
| 5/20/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-104 | Point | 294747.8095 | 3802412.917 | 1 | <1% | 0 | 100 | 0 | access road | Access Road | | upslop on access road |
| 5/20/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-105 | Point | 276026.7929 | 3808389.549 | 1 | <1% | 100 | 0 | 0 | M17-T2 | Other | laydown area | in riparian coridor |
| 5/20/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-106 | Point | 293622.2845 | 3801403.66 | 1 | <1% | 0 | 100 | 0 | access road | Access Road | | upslope of access road |
| 5/20/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-107 | Point | 293696.9124 | 3801334.864 | 4 | 2% | 0 | 100 | 0 | access road | Access Road | | upslope of access road |
| 5/20/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-108 | Point | 294185.7239 | 3801476.315 | 1 | <1% | 0 | 100 | 0 | 4453218E | Linear ROW | | under tower |
| 5/20/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-109 | Point | 294173.2103 | 3801464.141 | 1 | <1% | 0 | 100 | 0 | 4453218E | Access Road | | along access road below tower |
| 5/20/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-110 | Point | 293845.3792 | 3801668.831 | 1 | <1% | 100 | 0 | 0 | 4453219E | Ground Dist. Area | | downslope of disturbance area |
| 5/20/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-111 | Point | 293883.1227 | 3801881.096 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | upslope of access road |
| 5/20/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-112 | Point | 294509.2185 | 3802418.215 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | upslope of access road |
| 5/20/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-113 | Point | 294642.0482 | 3802541.652 | 1 | <1% | 0 | 100 | 0 | access road | Access Road | | upslope of access road |
| 5/20/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-114 | Point | 292298.6444 | 3801435.48 | 2 | 10% | 100 | 0 | 0 | access road | Access Road | | just upslope of access road |
| 5/20/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-115 | Point | 292921.8108 | 3802047.895 | 1 | 10% | 0 | 100 | 0 | M7-T1 | Access Road | | 20ft upslope of access road; plants abundant to south and east across drainage from road |
| 5/20/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-116 | Point | 293250.9656 | 3801780.123 | 1 | 10% | 0 | 100 | 0 | M6-T5 | Access Road | | upslope of access road |
| 5/20/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-117 | Polygon | 292145.8402 | 3801499.343 | 3 | <1% | 70 | 30 | 0 | access road | Access Road | | 20-40ft downslope from road |
| 5/20/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-118 | Polygon | 292484.369 | 3801543.801 | 6 | 15% | 70 | 30 | 0 | access road | Access Road | | 20-40ft downslope from road |

| Date | Surveyor Initials | Plant Code | Scientific Name | Common Name | Population ID | Feature Type | Easting | Northing | Population Size | Cover Class | % Vegetative | % Flowering | % Fruiting | Nearest Construct | Potential Threat | Other Threat | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/20/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-119 | Polygon | 293769.2032 | 3801293.419 | 5 | 10% | 70 | 30 | 0 | access road | Access Road | | 20-60ft downslope from road |
| 5/20/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-120 | Polygon | 293910.1743 | 3801342.661 | 6 | 10% | 70 | 30 | 0 | M6-T2 | Access Road | | 30-80ft downslope from road |
| 5/20/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-121 | Polygon | 292722.1107 | 3802181.49 | 60 | 15% | 50 | 50 | 0 | M7-T2 | Access Road | | across drainage scsttered shrubs |
| 5/20/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-122 | Polygon | 293263.0899 | 3801745.911 | 9 | 10% | 10 | 80 | 0 | access road | Access Road | | across drainage scsttered shrubs |
| 5/20/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-123 | Polygon | 293379.6821 | 3801710.943 | 35 | 5% | 20 | 80 | 0 | access road | Access Road | | upslope of access road, scattered throughout scrub |
| 5/20/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-124 | Polygon | 293504.7475 | 3801541.101 | 25 | 5% | 20 | 80 | 0 | access road | Access Road | | upslope of access road, scattered throughout scrub |
| 5/20/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-125 | Polygon | 294484.6616 | 3802308.309 | 30 | 10% | 20 | 80 | 0 | access road | Access Road | | upslope of access road, scattered throughout scrub |
| 5/20/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-126 | Polygon | 294549.6031 | 3802420.806 | 20 | 5% | 20 | 80 | 0 | access road | Access Road | | upslope of access road, scattered throughout scrub |
| 5/20/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-127 | Polygon | 292138.4782 | 3801484.692 | 15 | <1% | 50 | 50 | 0 | access road | Access Road | | sparsely scattered upslope of access road |
| 5/20/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-128 | Polygon | 292222.7813 | 3801451.161 | 12 | <1% | 50 | 50 | 0 | access road | Access Road | | sparsely scattered upslope of access road |
| 5/20/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-129 | Polygon | 292358.2752 | 3801403.198 | 50+ | <1% | 50 | 50 | 0 | access road | Access Road | | sparsely scattered upslope of access road |
| 5/20/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-130 | Polygon | 292484.3139 | 3801492.473 | 50+ | <1% | 50 | 50 | 0 | access road | Access Road | | sparsely scattered upslope of access road |
| 5/20/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-131 | Polygon | 292637.5687 | 3801560.965 | 30+ | <1% | 50 | 50 | 0 | access road | Access Road | | sparsely scattered upslope of access road |
| 5/20/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-132 | Polygon | 292737.5397 | 3801605.452 | 10 | <1% | 50 | 50 | 0 | access road | Access Road | | sparsely scattered upslope of access road |
| 5/20/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-133 | Polygon | 293713.671 | 3801303.63 | 10 | 2% | 50 | 50 | 10 | access road | Access Road | | sparsely scattered upslope of access road |
| 5/20/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-134 | Polygon | 293860.4924 | 3801284.877 | 20 | <1% | 50 | 50 | 0 | M6-T2 | Access Road | | sparsely scattered upslope of access road |
| 5/20/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-135 | Polygon | 293950.2174 | 3801344.534 | 10 | <1% | 50 | 50 | 0 | M6-T2 | Access Road | | sparsely scattered upslope of access road |
| 5/20/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-136 | Polygon | 294045.3734 | 3801412.734 | 4 | 20% | 0 | 100 | 0 | M6-T2 | Access Road | | sparsely scattered upslope of access road |
| 5/20/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-137 | Polygon | 294093.2708 | 3801382.013 | 50+ | 20% | 30 | 70 | 0 | 4453218E | Access Road | | sparsely scattered upslope of access road |
| 5/20/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-138 | Polygon | 293495.6112 | 3802052.802 | 5 | <1% | 0 | 100 | 0 | S4423830E, N4423829E | Access Road | | sparsely scattered upslope of access road |
| 5/20/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-139 | Polygon | 293529.4238 | 3802112.114 | 5 | <1% | 0 | 100 | 0 | S4423830E, N4423829E | Access Road | | sparsely scattered upslope of access road |
| 5/20/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-140 | Polygon | 293426.6521 | 3802314.283 | 3 | <1% | 0 | 100 | 0 | access road | Access Road | | sparsely scattered upslope of access road |
| 5/20/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-141 | Polygon | 294707.617 | 3802413.466 | 20 | <1% | 0 | 100 | 0 | access road | Access Road | | sparsely scattered upslope of access road |
| 5/20/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-142 | Polygon | 295814.8319 | 3802259.529 | 6 | <1% | 50 | 50 | 0 | access road | Access Road | | scattered upslope of access road |
| 5/20/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-143 | Polygon | 295895.587 | 3802303.223 | 5 | <1% | 50 | 50 | 0 | access road | Access Road | | scattered upslope of access road |
| 5/22/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-144 | Point | 295358.3577 | 3800290.89 | 1 | 2% | 100 | 0 | 0 | M4-T9 | Access Road | | |
| 5/22/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-145 | Point | 295284.0946 | 3800492.19 | 1 | <1% | 0 | 100 | 0 | M5-T2 | Access Road | | |

| Date | Surveyor Initials | Plant Code | Scientific Name | Common Name | Population ID | Feature Type | Easting | Northing | Population Size | Cover Class | % Vegetative | % Flowering | % Fruiting | Nearest Construct | Potential Threat | Other Threat | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/22/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-146 | Point | 295276.9106 | 3800502.129 | 1 | <1% | 0 | 100 | 0 | M5-T2 | Access Road | | 20ft upslope from access road |
| 5/22/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-147 | Point | 295245.4973 | 3800569.162 | 1 | 5% | 0 | 100 | 0 | M5-T2 | Access Road | | 20ft upslope from access road |
| 5/22/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-148 | Point | 295208.6947 | 3800723.132 | 2 | 5% | 0 | 100 | 0 | M5-T3 | Access Road | | |
| 5/22/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-149 | Point | 295080.0662 | 3800898.699 | 1 | 2% | 0 | 100 | 0 | M5-T4 | Access Road | | |
| 5/22/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-150 | Point | 297260.7993 | 3801247.711 | 1 | <1% | 0 | 100 | 0 | access road | Access Road | | 20ft downslope from access road |
| 5/22/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-151 | Point | 297728.7977 | 3800214.275 | 1 | <1% | 0 | 100 | 0 | access road | Access Road | | 30ft downslope from access road |
| 5/22/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-152 | Point | 297461.162 | 3799677.471 | 1 | <1% | 0 | 100 | 0 | access road | Access Road | | upslope from access road |
| 5/22/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-153 | Point | 297424.6111 | 3799700.338 | 3 | 2% | 0 | 100 | 0 | access road | Access Road | | upslope from access road |
| 5/22/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-154 | Point | 296855.5564 | 3799989.289 | 1 | <1% | 0 | 100 | 0 | access road | Access Road | | |
| 5/22/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-155 | Point | 296286.6501 | 3800327.129 | 1 | <1% | 0 | 100 | 0 | access road | Access Road | | 30ft downslope slope from access road |
| 5/22/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-156 | Point | 295779.9849 | 3800358.039 | 3 | <1% | 0 | 100 | 0 | access road | Access Road | | upslope slope from access road |
| 5/22/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-157 | Point | 295589.5469 | 3800223.013 | 1 | <1% | 0 | 100 | 0 | access road | Access Road | | upslope slope from access road |
| 5/22/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-158 | Point | 297604.344 | 3798855.74 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | |
| 5/22/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-159 | Point | 297614.3826 | 3799052.895 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | 25ft from access road |
| 5/22/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-160 | Point | 297732.4091 | 3799380.996 | 4 | <1% | 0 | 100 | 0 | access road | Access Road | | along access road |
| 5/22/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-161 | Point | 298376.2229 | 3800087.883 | 3 | <1% | 0 | 100 | 0 | access road | Access Road | | along access road |
| 5/22/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-162 | Point | 295316.7126 | 3800413.982 | 2 | 2% | 0 | 100 | 0 | M5-T1 | Access Road | | downslope of access road |
| 5/22/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-163 | Point | 296868.1261 | 3801243.743 | 2 | 5% | 0 | 100 | 0 | access road | Access Road | | upslope of access road |
| 5/22/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-164 | Point | 297007.8915 | 3801247.303 | 1 | 2% | 0 | 100 | 0 | access road | Access Road | | upslope of access road |
| 5/22/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-165 | Point | 297605.5032 | 3800839.631 | 4 | 2% | 100 | 0 | 0 | access road | Access Road | | upslope of access road |
| 5/22/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-166 | Point | 297676.9381 | 3800740.682 | 1 | 2% | 0 | 100 | 0 | access road | Access Road | | upslope of access road |
| 5/22/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-167 | Point | 297706.9058 | 3800696.376 | 1 | 2% | 0 | 100 | 0 | access road | Access Road | | upslope of access road |
| 5/22/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-168 | Point | 297607.1881 | 3799821.67 | 1 | 2% | 0 | 100 | 0 | 4453211E | Access Road | | upslope of access road |
| 5/22/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-169 | Point | 297598.9382 | 3799825.041 | 1 | <1% | 100 | 0 | 0 | 4453211E | Access Road | | upslope of access road |
| 5/22/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-170 | Point | 296456.0103 | 3800441.209 | 1 | <1% | 0 | 100 | 0 | access road | Access Road | | |
| 5/22/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-171 | Point | 295978.2587 | 3800248.98 | 1 | <1% | 0 | 100 | 0 | access road | Access Road | | |
| 5/22/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-172 | Point | 295935.5673 | 3800254.109 | 1 | <1% | 0 | 100 | 0 | access road | Access Road | | |

| Date | Surveyor Initials | Plant Code | Scientific Name | Common Name | Population ID | Feature Type | Easting | Northing | Population Size | Cover Class | % Vegetative | % Flowering | % Fruiting | Nearest Construct | Potential Threat | Other Threat | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/22/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-173 | Point | 295024.5042 | 3800958.379 | 1 | 2% | 100 | 0 | 0 | M5-T4 | Access Road | | downslope of access road |
| 5/22/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-174 | Point | 295005.3522 | 3800975.112 | 1 | 2% | 100 | 0 | 0 | M5-T4 | Access Road | | 20ft ne of access road |
| 5/22/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-175 | Point | 297030.6832 | 3801248.813 | 4 | <1% | 100 | 0 | 0 | access road | Access Road | | scattered downslope of access road |
| 5/22/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-176 | Point | 296872.9456 | 3799961.721 | 2 | <1% | 0 | 100 | 0 | access road | Access Road | | upslope of access road |
| 5/22/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-177 | Point | 296347.5454 | 3800438.633 | 3 | 25% | 0 | 100 | 0 | access road | Access Road | | upslope of access road |
| 5/22/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-178 | Point | 296344.1777 | 3800421.941 | 1 | 10% | 0 | 100 | 0 | access road | Access Road | | upslope of access road |
| 5/22/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-179 | Point | 296257.284 | 3800334.46 | 1 | 10% | 100 | 0 | 0 | access road | Access Road | | upslope of access road |
| 5/22/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-180 | Point | 295684.6654 | 3800273.171 | 1 | 10% | 100 | 0 | 0 | access road | Access Road | | on edge of access road |
| 5/22/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-181 | Point | 295299.5771 | 3800449.081 | 4 | <1% | 50 | 50 | 0 | M5-T1 | Access Road | | on upslope of side access road |
| 5/22/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-182 | Point | 296924.9415 | 3801259.302 | 10 | 2% | 50 | 50 | 0 | access road | Access Road | | down slope of access road about 50ft off the road |
| 5/22/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-183 | Point | 296967.7935 | 3801284.42 | 5 | 2% | 50 | 50 | 0 | access road | Access Road | | down slope of access road about 50ft off the road |
| 5/22/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-184 | Point | 297237.0167 | 3801239.31 | 2 | <1% | 0 | 100 | 0 | access road | Access Road | | upslope of access road |
| 5/22/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-185 | Point | 297281.2815 | 3801230.8 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | upslope of access road |
| 5/22/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-186 | Point | 296867.0895 | 3800177.938 | 5 | 2% | 0 | 100 | 0 | 4453213E | Access Road | | scattered upslope of access road |
| 5/22/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-187 | Point | 295829.098 | 3800130.157 | 3 | <1% | 0 | 100 | 0 | access road | Access Road | | side of access road |
| 5/22/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-188 | Point | 295812.6291 | 3800217.83 | 1 | <1% | 0 | 100 | 0 | access road | Access Road | | side of access road |
| 5/22/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-189 | Polygon | 295016.5199 | 3800944.518 | 7 | <1% | 0 | 100 | 0 | M5-T4 | Access Road | | upslope from access road 5-40ft |
| 5/22/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-190 | Polygon | 294948.2825 | 3801015.124 | 5 | <1% | 0 | 100 | 0 | M5-ST5 | Access Road | | upslope from access road |
| 5/22/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-191 | Polygon | 297594.5948 | 3800556.518 | 15 | 2% | 0 | 100 | 0 | access road | Access Road | | downslope slope from access road |
| 5/22/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-192 | Polygon | 297753.5581 | 3800097.375 | 17 | <1% | 0 | 100 | 0 | access road | Access Road | | downslope slope from access road |
| 5/22/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-193 | Polygon | 297694.485 | 3799962.515 | 18 | <1% | 0 | 100 | 0 | 4453211E | Access Road | | downslope slope from access road |
| 5/22/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-194 | Polygon | 297646.2312 | 3799874.673 | 19 | 2% | 0 | 100 | 0 | 4453211E | Access Road | | downslope slope from access road |
| 5/22/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-195 | Polygon | 296875.9368 | 3799958.104 | 9 | 5% | 100 | 0 | 0 | access road | Access Road | | upslope slope from access road |
| 5/22/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-196 | Polygon | 296739.1673 | 3800351.826 | 100+ | 2% | 20 | 80 | 0 | 4453213E | Access Road | | covering slope down from access road |
| 5/22/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-197 | Polygon | 296744.1869 | 3800277.061 | 200+ | 5% | 20 | 80 | 0 | 4453213E | Access Road | | covering slope from access road |
| 5/22/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-198 | Polygon | 296377.2597 | 3800710.991 | 8 | 2% | 20 | 80 | 0 | access road | Access Road | | upslope from access road |
| 5/22/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-199 | Polygon | 296387.9085 | 3800569.167 | 40 | 2% | 20 | 80 | 0 | access road | Access Road | | downslope slope from access road, 40-100ft |

| Date | Surveyor Initials | Plant Code | Scientific Name | Common Name | Population ID | Feature Type | Easting | Northing | Population Size | Cover Class | % Vegetative | % Flowering | % Fruiting | Nearest Construct | Potential Threat | Other Threat | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/22/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-200 | Polygon | 296354.4262 | 3800400.324 | 50+ | 2% | 20 | 80 | 0 | access road | Access Road | | downslope slope from access road, 40-100ft |
| 5/22/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-201 | Polygon | 297784.3201 | 3799633.926 | 10 | <1% | 20 | 80 | 0 | access road | Access Road | | between access road side |
| 5/22/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-202 | Polygon | 297625.0948 | 3800801.194 | 12 | 5% | 20 | 80 | 0 | access road | Access Road | | upslope of access road |
| 5/22/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-203 | Polygon | 297590.6712 | 3799738.911 | 15 | 5% | 20 | 80 | 0 | access road | Access Road | | |
| 5/22/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-204 | Polygon | 297588.0199 | 3799559.183 | 20 | 5% | 20 | 80 | 0 | access road | Access Road | | downslope of access road, scattered throughout scrub |
| 5/22/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-205 | Polygon | 297062.9448 | 3800089.712 | 10 | 2% | 20 | 80 | 0 | 4453212E | Access Road | | along access road, scattered throughout scrub |
| 5/22/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-206 | Polygon | 296924.3512 | 3800129.305 | 1 | 2% | 20 | 80 | 0 | 4453213E | Access Road | | upslope of access road, scattered throughout scrub |
| 5/22/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-207 | Polygon | 297414.8228 | 3801179.526 | 25 | <1% | 50 | 50 | 0 | access road | Access Road | | scattered downslope of access road |
| 5/22/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-208 | Polygon | 297565.8189 | 3801026.627 | 50 | <1% | 50 | 50 | 0 | access road | Access Road | | scattered downslope of access road |
| 5/22/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-209 | Polygon | 297560.7773 | 3800927.064 | 15 | <1% | 50 | 50 | 0 | access road | Access Road | | scattered upslope of access road |
| 5/22/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-210 | Polygon | 297602.4268 | 3800430.33 | 100+ | <1% | 50 | 50 | 0 | access road | Access Road | | scattered upslope of access road |
| 5/22/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-211 | Polygon | 297667.8797 | 3800225.257 | 15 | <1% | 50 | 50 | 0 | access road | Access Road | | scattered upslope of access road |
| 5/22/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-212 | Polygon | 297720.8252 | 3800089.744 | 20 | <1% | 50 | 50 | 0 | 4453211E | Access Road | | scattered upslope of access road |
| 5/22/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-213 | Polygon | 297645.3977 | 3799941.015 | 40 | <1% | 50 | 50 | 0 | 4453211E | Access Road | | scattered upslope of access road |
| 5/22/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-214 | Polygon | 297447.4099 | 3799713.015 | 15 | <1% | 50 | 50 | 0 | access road | Access Road | | scattered downslope of access road |
| 5/22/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-215 | Polygon | 297139.8008 | 3799843.077 | 100+ | <1% | 50 | 50 | 0 | access road | Access Road | | scattered downslope of access road |
| 5/22/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-216 | Polygon | 296788.5669 | 3800254.959 | 10 | <1% | 50 | 50 | 0 | 4453213E | Access Road | | scattered between of access roads |
| 5/22/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-217 | Polygon | 296794.9059 | 3800397.742 | 15 | <1% | 50 | 50 | 0 | access road | Access Road | | scattered between access roads |
| 5/22/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-218 | Polygon | 296370.0129 | 3800614.603 | 5 | <1% | 50 | 50 | 0 | access road | Access Road | | upslope of access road |
| 5/22/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-219 | Polygon | 297766.1049 | 3799588.369 | 10 | <1% | 50 | 50 | 0 | access road | Access Road | | upslope of access road |
| 5/22/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-220 | Polygon | 297554.9413 | 3799783.109 | 30 | 20% | 20 | 80 | 0 | access road | Access Road | | upslope of access road |
| 5/22/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-221 | Polygon | 297562.9175 | 3799679.935 | 16 | 10% | 20 | 80 | 0 | access road | Access Road | | upslope of access road |
| 5/22/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-222 | Polygon | 297563.6361 | 3799632.435 | 6 | 10% | 20 | 80 | 0 | access road | Access Road | | upslope of access road |
| 5/22/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-223 | Polygon | 297563.0962 | 3799572.469 | 10 | 10% | 20 | 80 | 0 | access road | Access Road | | upslope of access road |
| 5/22/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-224 | Polygon | 296628.442 | 3800215.725 | +200 | 30% | 10 | 90 | 0 | 4453213E | Access Road | | all throughtout slope above and a little below access road |
| 5/22/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-225 | Polygon | 296522.5689 | 3800123.61 | 25 | 30% | 10 | 90 | 0 | access road | Access Road | | all throughtout slope above and a little below access road |
| 5/22/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-226 | Polygon | 296510.8211 | 3800357.188 | 25 | 10% | 10 | 90 | 0 | access road | Access Road | | scattered along both sides of access road |

| Date | Surveyor Initials | Plant Code | Scientific Name | Common Name | Population ID | Feature Type | Easting | Northing | Population Size | Cover Class | % Vegetative | % Flowering | % Fruiting | Nearest Construct | Potential Threat | Other Threat | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/22/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-227 | Polygon | 296439.3164 | 3800566.666 | 50 | 15% | 10 | 90 | 0 | access road | Access Road | | scattered along both sides of access road 90% were on upslope |
| 5/23/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-228 | Point | 282204.2958 | 3805743.438 | 2 | 2% | 0 | 100 | 0 | M3-P2B | Access Road | | upslope slope from access road |
| 5/23/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-229 | Point | 282199.6807 | 3805746.717 | 1 | <1% | 0 | 100 | 0 | M3-P2B | Access Road | | downslope slope slope from access road |
| 5/23/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-230 | Point | 282278.2791 | 3805601.979 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | downslope from access road |
| 5/23/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-231 | Point | 282272.5754 | 3805595.543 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | upslope from access road |
| 5/23/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-232 | Point | 283615.4648 | 3805282.823 | 2 | 2% | 0 | 100 | 80 | 4453247E | Access Road | | at access road |
| 5/23/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-233 | Point | 283619.5217 | 3805328.351 | 5 | 2% | 100 | 0 | 80 | 4453247E | Access Road | | at access road and tower |
| 5/23/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-234 | Point | 284893.4065 | 3805447.793 | 1 | 10% | 100 | 100 | 0 | 4453243E | Access Road | | downslope from access road |
| 5/23/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-235 | Point | 284849.5454 | 3805439.557 | 1 | <1% | 100 | 0 | 0 | 4453243E | Access Road | | next to access road |
| 5/23/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-236 | Point | 285584.9029 | 3805378.103 | 2 | <1% | 50 | 50 | 0 | access road | Access Road | | next to access road |
| 5/23/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-237 | Point | 285814.9895 | 3805238.627 | 2 | <1% | 0 | 100 | 0 | 4453241E | Access Road | | |
| 5/23/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-238 | Point | 281496.0603 | 3806072.709 | 6 | <1% | 0 | 100 | 0 | CONSTR 77 | Access Road | | above acess rd |
| 5/23/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-239 | Point | 281529.0727 | 3806019.989 | 12 | <1% | 0 | 100 | 0 | M13-T2 | Access Road | | along access road. plants have been impacted by road maintenance |
| 5/23/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-240 | Point | 281645.9271 | 3805812.718 | 12 | 15% | 0 | 100 | 0 | access road | Access Road | | both sides of access road |
| 5/23/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-241 | Point | 281676.7846 | 3805821.084 | 5 | 5% | 0 | 100 | 0 | access road | Access Road | | down slope side of access road |
| 5/23/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-242 | Point | 281699.6531 | 3805831.106 | 1 | <1% | 0 | 100 | 0 | access road | Access Road | | down slope side of access road |
| 5/23/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-243 | Point | 281782.1466 | 3805795.42 | 1 | <1% | 0 | 100 | 0 | 4453250E | Access Road | | down slope side of access road |
| 5/23/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-244 | Point | 281834.2678 | 3805769.365 | 2 | <1% | 50 | 50 | 0 | 4453250E | Access Road | | down slope side of access road |
| 5/23/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-245 | Point | 281966.9681 | 3805764.338 | 1 | <1% | 0 | 100 | 0 | access road | Access Road | | side of access road |
| 5/23/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-246 | Point | 282025.8102 | 3805752.627 | 1 | <1% | 0 | 100 | 0 | access road | Access Road | | side of access road |
| 5/23/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-247 | Point | 282095.6369 | 3805719.441 | 4 | <1% | 0 | 100 | 0 | access road | Access Road | | side of access road |
| 5/23/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-248 | Point | 283150.3328 | 3805345.992 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | side of access road |
| 5/23/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-249 | Point | 284173.2719 | 3805318.212 | 2 | <1% | 100 | 0 | 0 | 4453246E | Access Road | | upslope of access road |
| 5/23/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-250 | Point | 284221.8531 | 3805330.671 | 1 | <1% | 100 | 0 | 0 | 4453245E | Access Road | | upslope of access road |
| 5/23/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-251 | Point | 284300.3136 | 3805338.14 | 1 | <1% | 0 | 100 | 0 | 4453245E | Access Road | | upslope of access road |
| 5/23/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-252 | Point | 284281.5245 | 3805245.349 | 1 | <1% | 0 | 100 | 0 | 4453245E | Access Road | | upslope of access road |
| 5/23/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-253 | Point | 284257.7227 | 3805188.088 | 1 | <1% | 0 | 100 | 0 | 4453245E | Access Road | | upslope of access road |

| Date | Surveyor Initials | Plant Code | Scientific Name | Common Name | Population ID | Feature Type | Easting | Northing | Population Size | Cover Class | % Vegetative | % Flowering | % Fruiting | Nearest Construct | Potential Threat | Other Threat | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/23/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-254 | Point | 284546.2034 | 3805340.704 | 1 | <1% | 100 | 0 | 0 | 4453244E | Access Road | | upslope of access road |
| 5/23/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-255 | Point | 284635.2331 | 3805324.302 | 3 | <1% | 100 | 0 | 0 | 4453244E | Access Road | | upslope of access road |
| 5/23/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-256 | Point | 284665.7455 | 3805390.824 | 2 | <1% | 50 | 50 | 0 | 4453244E | Access Road | | upslope of access road |
| 5/23/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-257 | Point | 284760.7282 | 3805359.091 | 1 | <1% | 50 | 50 | 0 | 4453244E | Access Road | | upslope of access road |
| 5/23/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-258 | Point | 284907.5814 | 3805382.594 | 1 | <1% | 50 | 50 | 0 | 4453243E | Access Road | | upslope of access road near tower |
| 5/23/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-259 | Point | 284923.227 | 3805397.695 | 1 | <1% | 0 | 100 | 0 | 4453243E | Access Road | | under tower |
| 5/23/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-260 | Point | 284917.1482 | 3805448.769 | 1 | <1% | 0 | 100 | 0 | 4453243E | Access Road | | under tower |
| 5/23/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-261 | Point | 282245.0334 | 3805647.463 | 1 | <1% | 100 | 0 | 0 | M3-P2B | Access Road | | downslope of access road |
| 5/23/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-262 | Point | 283978.3772 | 3805185.192 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | |
| 5/23/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-263 | Point | 284051.307 | 3805294.507 | 1 | <1% | 100 | 0 | 0 | 4453246E | Access Road | | |
| 5/23/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-264 | Point | 284067.2207 | 3805320.389 | 1 | <1% | 100 | 0 | 0 | 4453246E | Access Road | | |
| 5/23/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-265 | Point | 284766.8326 | 3805420.005 | 10 | 2% | 100 | 0 | 0 | 4453244E | Access Road | | |
| 5/23/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-266 | Point | 281631.0459 | 3806056.816 | 1 | 2% | 100 | 0 | 0 | 4479636E | Access Road | | upslope of access road |
| 5/23/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-267 | Point | 281674.2865 | 3806008.841 | 10 | 2% | 50 | 50 | 0 | 4479636E | Access Road | | scattered downslope of access road |
| 5/23/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-268 | Point | 281684.5903 | 3805835.163 | 6 | 5% | 50 | 50 | 0 | access road | Access Road | | scattered upslope of access road |
| 5/23/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-269 | Point | 281807.2311 | 3805785.929 | 4 | 5% | 0 | 100 | 0 | 4453250E | Access Road | | downslope of access road |
| 5/23/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-270 | Point | 281845.9254 | 3805767.361 | 2 | 5% | 100 | 0 | 0 | 4453250E | Access Road | | upslope of access road |
| 5/23/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-271 | Point | 281909.3196 | 3805781.199 | 1 | <1% | 100 | 0 | 0 | 4453250E | Access Road | | upslope of access road |
| 5/23/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-272 | Point | 282667.4408 | 3805548.347 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | upslope of access road |
| 5/23/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-273 | Point | 282828.295 | 3805526.25 | 2 | <1% | 100 | 0 | 0 | 4453248E | Access Road | | upslope of access road |
| 5/23/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-274 | Point | 282997.1736 | 3805380.028 | 2 | <1% | 100 | 0 | 0 | access road | Access Road | | upslope of access road |
| 5/23/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-275 | Point | 282999.7868 | 3805322.659 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | upslope of access road |
| 5/23/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-276 | Point | 284132.7954 | 3805337.214 | 2 | <1% | 100 | 0 | 0 | 4453246E | Access Road | | upslope of access road |
| 5/23/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-277 | Point | 284583.7683 | 3805329.853 | 1 | <1% | 0 | 100 | 0 | 4453244E | Access Road | | downslope of access road |
| 5/23/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-278 | Point | 284787.2163 | 3805374.294 | 3 | 5% | 0 | 100 | 0 | 4453243E | Access Road | | downslope of access road |
| 5/23/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-279 | Polygon | 282125.7367 | 3805670.191 | 3 | <1% | 70 | 30 | 0 | M3-P2B | Access Road | | upslope from access road |
| 5/23/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-280 | Polygon | 282222.8931 | 3805722.818 | 4 | <1% | 70 | 30 | 0 | M3-P2B | Access Road | | upslope from access road |

| Date | Surveyor Initials | Plant Code | Scientific Name | Common Name | Population ID | Feature Type | Easting | Northing | Population Size | Cover Class | % Vegetative | % Flowering | % Fruiting | Nearest Construct | Potential Threat | Other Threat | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/23/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-281 | Polygon | 282280.81 | 3805531.455 | 3 | <1% | 100 | 0 | 0 | 4453248E | Access Road | | upslope from access road |
| 5/23/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-282 | Polygon | 282339.3552 | 3805514.311 | 25 | <1% | 80 | 20 | 0 | 4453248E | Access Road | | upslope from access road |
| 5/23/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-283 | Polygon | 282360.7558 | 3805453.539 | 15 | <1% | 20 | 80 | 0 | 4453248E | Access Road | | upslope from access road |
| 5/23/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-284 | Polygon | 282367.287 | 3805327.326 | 100+ | <1% | 80 | 20 | 0 | 4453248E | Access Road | | upslope and downslope from access road |
| 5/23/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-285 | Polygon | 283608.6228 | 3805243.79 | 5 | <1% | 60 | 40 | 0 | 4453247E | Access Road | | upslope from access road |
| 5/23/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-286 | Polygon | 284321.0708 | 3805169.327 | 15 | 2% | 100 | 0 | 0 | 4453245E | Access Road | | upslope of access road. one on other sides of access road |
| 5/23/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-287 | Polygon | 284724.6189 | 3805365.252 | 24 | <1% | 80 | 20 | 0 | 4453244E | Access Road | | scattered along both sides of access road |
| 5/23/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-288 | Polygon | 283273.5889 | 3805306.633 | 150 | 25% | 20 | 80 | 0 | access road | Access Road | | upslope of access road |
| 5/23/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-289 | Polygon | 283386.2183 | 3805086.511 | 300 | 25% | 20 | 80 | 0 | access road | Access Road | | both sides of access road, mostly upslope |
| 5/23/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-290 | Polygon | 283647.7109 | 3805143.178 | 150 | 10% | 20 | 80 | 0 | access road | Access Road | | upslope of access road |
| 5/23/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-291 | Polygon | 283827.1499 | 3805101.448 | 70 | 10% | 20 | 80 | 0 | access road | Access Road | | both sides of access road, mostly upslope |
| 5/23/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-292 | Polygon | 282459.3745 | 3805315.533 | 100+ | <1% | 50 | 50 | 0 | 4453248E | Access Road | | both sides of access roads |
| 5/23/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-293 | Polygon | 282589.4722 | 3805380.489 | 100+ | <1% | 50 | 50 | 0 | 4453248E | Access Road | | both sides of access roads |
| 5/23/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-294 | Polygon | 283010.4722 | 3805257.065 | 20 | 2% | 50 | 50 | 0 | access road | Access Road | | upslope of access roads |
| 5/23/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-295 | Polygon | 283084.089 | 3805246.696 | 20 | <1% | 50 | 50 | 0 | access road | Access Road | | upslope of access roads |
| 5/23/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-296 | Polygon | 283205.7656 | 3805390.909 | 30 | <1% | 50 | 50 | 0 | access road | Access Road | | upslope of access roads |
| 5/23/2014 | ES | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-297 | Polygon | 284424.1461 | 3805216.246 | 35 | <1% | 80 | 20 | 0 | 4453245E | Access Road | | scattered along both sides of access road |
| 5/28/2014 | MB | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-298 | Point | 269869.9588 | 3812980.804 | 1 | <1% | 50 | 50 | 0 | access road | Access Road | | |
| 5/28/2014 | MB | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-299 | Point | 298590.2891 | 3799927.294 | 1 | 5% | 100 | 0 | 0 | access road | Access Road | | |
| 5/28/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-300 | Point | 298395.9916 | 3800342.908 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | downslope from access road |
| 5/28/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-301 | Point | 298811.7785 | 3800303.244 | 1 | <1% | 0 | 100 | 0 | access road | Access Road | | |
| 5/28/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-302 | Point | 298743.4826 | 3800176.302 | 2 | <1% | 100 | 0 | 0 | access road | Access Road | | upslope from access road and along road |
| 5/28/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-303 | Point | 269700.0133 | 3813160.168 | 1 | <1% | 0 | 100 | 0 | access road | Access Road | | upslope of access road |
| 5/28/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-304 | Point | 298627.6759 | 3798728.495 | 2 | 2% | 0 | 100 | 0 | 4453204E | Access Road | | upslope of access road |
| 5/28/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-305 | Point | 298645.8161 | 3800525.492 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | upslope of access road |
| 5/28/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-306 | Point | 298716.0374 | 3800216.283 | 1 | <1% | 100 | 0 | 0 | access road | Access Road | | 30ft downslope of access road |
| 5/28/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-307 | Polygon | 298645.3386 | 3800001.508 | 8 | 2% | 20 | 80 | 0 | access road | Access Road | | both sides of access road |

| Date | Surveyor Initials | Plant Code | Scientific Name | Common Name | Population ID | Feature Type | Easting | Northing | Population Size | Cover Class | % Vegetative | % Flowering | % Fruiting | Nearest Construct | Potential Threat | Other Threat | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/28/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-308 | Polygon | 298506.8464 | 3799811.508 | 10 | 2% | 20 | 80 | 0 | access road | Access Road | | downslope of access road |
| 5/28/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-309 | Polygon | 298382.7337 | 3798253.809 | 2 | <1% | 0 | 100 | 0 | access road | Access Road | | upslope of access road |
| 5/29/2014 | MB | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-310 | Point | 275584.2086 | 3807548.189 | 1 | <1% | 0 | 100 | 0 | access road | Access Road | | |
| 5/29/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-311 | Point | 278631.0802 | 3806636.009 | 3 | <1% | 100 | 0 | 0 | access road | Access Road | | |
| 5/29/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-312 | Point | 278631.7955 | 3806622.712 | 15 | 5% | 100 | 0 | 0 | access road | Access Road | | on slope to drainage |
| 5/29/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-313 | Point | 277968.4944 | 3806810.219 | 3 | <1% | 0 | 100 | 0 | M6-T3 | Access Road | | upslope from access road |
| 5/29/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-314 | Point | 277271.8374 | 3806920.6 | 2 | <1% | 100 | | 0 | CONSTR 66 M6 P5 | Ground Dist. Area | | |
| 5/29/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-315 | Point | 277262.1904 | 3806880.559 | 5 | <1% | 50 | 50 | 0 | M6-T7 | Access Road | | |
| 5/29/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-316 | Point | 277189.9646 | 3806843.774 | 5 | <1% | 50 | 50 | 0 | M6-T7 | Access Road | | upslope from access road, on both sides of gate |
| 5/29/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-317 | Point | 277010.9514 | 3806872.836 | 5 | <1% | 50 | 50 | 0 | M6-ST8 | Access Road | | downslope slope from access road, |
| 5/29/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-318 | Point | 276934.7659 | 3806882.212 | 1 | <1% | 0 | 100 | 0 | M6-ST8 | Access Road | | climbing up fence |
| 5/29/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-319 | Point | 275887.4619 | 3807149.752 | 1 | <1% | 100 | 0 | 0 | M7-T5 | Access Road | | upslope from access road |
| 5/29/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-320 | Point | 275505.9383 | 3807420.227 | 3 | <1% | 0 | 100 | 0 | M8-T1 | Access Road | | upslope from access road |
| 5/29/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-321 | Point | 278688.7644 | 3806988.473 | 1 | <1% | 0 | 100 | 0 | access road | Access Road | | |
| 5/29/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-322 | Point | 278673.7922 | 3806698.248 | 2 | <1% | 0 | 100 | 0 | access road | Access Road | | |
| 5/29/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-323 | Point | 276647.726 | 3807080.431 | 3 | <1% | 0 | 100 | 0 | M7-T1 | Ground Dist. Area | | |
| 5/29/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-324 | Point | 278860.6838 | 3806609.127 | 1 | 5% | 100 | 0 | 0 | M5-T8 | Access Road | vegetation clearing area | recently mowed |
| 5/29/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-325 | Point | 278928.4916 | 3806602.605 | 1 | 10% | 100 | 0 | 0 | M5-T8 | Access Road | | upslope of access road |
| 5/29/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-326 | Point | 278045.6464 | 3806898.959 | 3 | 2% | 100 | 0 | 0 | access road | Access Road | | upslope of access road |
| 5/29/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-327 | Point | 277467.3156 | 3806718.596 | 2 | 5% | 0 | 100 | 0 | access road | Access Road | | upslope of access road |
| 5/29/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-328 | Point | 277037.6203 | 3806859.753 | 1 | <1% | 0 | 100 | 0 | M6-ST8 | Access Road | | upslope of access road |
| 5/29/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-329 | Point | 275159.4734 | 3807597.771 | 5 | 20% | 100 | 0 | 0 | access road | Access Road | | upslope of access road |
| 5/29/2014 | MB | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-330 | Polygon | 278573.0787 | 3806555.62 | 25 | <1% | 80 | 20 | 0 | access road | Access Road | | |
| 5/29/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-331 | Polygon | 277974.0858 | 3806881.6 | 10 | <1% | 0 | 100 | 0 | M6-T3 | Access Road | | upslope from access road |
| 5/29/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-332 | Polygon | 278034.0455 | 3806940.33 | 20 | <1% | 20 | 80 | 0 | access road | Access Road | | downslope slope from access road |
| 5/29/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-333 | Polygon | 277122.8756 | 3806828.653 | 100+ | <1% | 20 | 80 | 0 | M6-T7 | Access Road | | upslope slope from access road |
| 5/29/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-334 | Polygon | 277129.7729 | 3806844.921 | 20 | <1% | 20 | 80 | 0 | M6-T7 | Access Road | | downslope slope slope from access road |

| Date | Surveyor Initials | Plant Code | Scientific Name | Common Name | Population ID | Feature Type | Easting | Northing | Population Size | Cover Class | % Vegetative | % Flowering | % Fruiting | Nearest Construct | Potential Threat | Other Threat | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/29/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-335 | Polygon | 276741.1578 | 3806858.153 | 50 | <1% | 50 | 50 | 0 | access road | Access Road | | upslope from access road, inside fence area |
| 5/29/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-336 | Polygon | 277639.0485 | 3806756.245 | 25 | 5% | 0 | 100 | 0 | M6-T5 | Access Road | under tower | both sides of access road |
| 5/29/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-337 | Polygon | 279045.4204 | 3806585.959 | 30+ | 5% | 30 | 70 | 0 | M5-T4 | Access Road | | both sides of access road |
| 5/29/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-338 | Polygon | 278020.2423 | 3806794.079 | 30+ | <1% | 60 | 40 | 0 | M6-T2 | Access Road | | scattered upslope of access road |
| 5/29/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-339 | Polygon | 276652.0014 | 3807043.687 | 70+ | 2% | 80 | 20 | 0 | M7-ST1 | Access Road | | upslope of access road |
| 5/30/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-340 | Point | 286117.3734 | 3805470.985 | 3 | <1% | 0 | 100 | 0 | 4453240E | Ground Dist. Area | | |
| 5/30/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-341 | Point | 286379.4621 | 3805471.741 | 5 | <1% | 0 | 100 | 0 | access road | Access Road | | |
| 5/30/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-342 | Point | 286344.7558 | 3805507.39 | 10 | <1% | 100 | 0 | 0 | access road | Access Road | | downslope from access road |
| 5/30/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-343 | Point | 279741.4058 | 3807729.164 | 2 | 2% | 0 | 100 | 0 | access road | Access Road | | upslope of access road |
| 5/30/2014 | KM | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-344 | Point | 286302.0508 | 3805525.139 | 1 | 2% | 100 | 0 | 0 | access road | Access Road | | downslope of access road |
| 5/30/2014 | JP | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-345 | Polygon | 286126.4491 | 3805427.72 | 60 | 30% | 0 | 100 | 0 | 4453240E | Access Road | | |
| 5/30/2014 | SH | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-346 | Polygon | 286509.4663 | 3806073.499 | 15 | <1% | 50 | 50 | 0 | access road | Access Road | | upslope from access road |
| 7/16/2014 | MB | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-347 | Point | 276982.0787 | 3807002.323 | 2 | 90% | 0 | 0 | 100 | M6-T6 | Ground Dist. Area | | |
| 7/16/2014 | MB | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-348 | Point | 276296.321 | 3807086.297 | 2 | 90% | 0 | 0 | 100 | access road | Access Road | | |
| 7/16/2014 | MB | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-349 | Point | 276346.7718 | 3807071.031 | 5 | 90% | 80 | 20 | 0 | access road | Access Road | | |
| 7/16/2014 | MB | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-350 | Point | 276443.0858 | 3806995.599 | 10 | 75% | 80 | 20 | 0 | M7-T2 | Access Road | | |
| 7/16/2014 | MB | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-351 | Polygon | 276200.6274 | 3807136.087 | 10 | 10% | 100 | 0 | 0 | M7-T3 | Access Road | | |
| 7/17/2014 | MG | POCOF | Polygala cornuta var. fishiae | Fish's milkwort | POCOF-352 | Point | 298361.1399 | 3800141.436 | 2 | <1% | 100 | 0 | 0 | access road | Access Road | | side of road |
| 5/28/2014 | MB | QUDU | Quercus dumosa | Nuttall's scrub oak | QUDU-001 | Point | 270741.4124 | 3812952.767 | 8 | 30% | 60 | 20 | 20 | M12-T2 | Access Road | | possible hybrid w/Q. berberidifolia |
| 5/28/2014 | MB | QUDU | Quercus dumosa | Nuttall's scrub oak | QUDU-002 | Point | 270717.7329 | 3812970.919 | 1 | 70% | 60 | 20 | 20 | M12-T2 | Ground Dist. Area | | possible hybrid w/Q. berberidifolia |
| 5/28/2014 | MB | QUDU | Quercus dumosa | Nuttall's scrub oak | QUDU-003 | Point | 270621.657 | 3813003.359 | 1 | 2% | 60 | 20 | 20 | M10-T3 | Access Road | | possible hybrid w/Q. berberidifolia |
| 5/28/2014 | MB | QUDU | Quercus dumosa | Nuttall's scrub oak | QUDU-004 | Point | 270522.0507 | 3813030.829 | 1 | 15% | 0 | 20 | 80 | M10-T3 | Access Road | | possible hybrid w/Q. berberidifolia |
| 5/28/2014 | MB | QUDU | Quercus dumosa | Nuttall's scrub oak | QUDU-005 | Point | 270532.7085 | 3813082.894 | 15 | 20% | 0 | 20 | 80 | M10-T3 | Access Road | | possible hybrid w/Q. berberidifolia |
| 5/28/2014 | MB | QUDU | Quercus dumosa | Nuttall's scrub oak | QUDU-006 | Point | 270519.238 | 3813069.979 | 1 | 15% | 80 | 0 | 20 | M10-T3 | Access Road | | possible hybrid w/Q. berberidifolia |
| 5/28/2014 | MB | QUDU | Quercus dumosa | Nuttall's scrub oak | QUDU-007 | Point | 270484.1016 | 3813101.23 | 3 | 15% | 80 | 0 | 20 | M10-T3 | Access Road | | possible hybrid w/Q. berberidifolia |
| 5/28/2014 | MB | QUDU | Quercus dumosa | Nuttall's scrub oak | QUDU-008 | Point | 270444.9342 | 3813122.012 | 6 | 10% | 80 | 0 | 20 | M12-T4 | Access Road | | possible hybrid w/Q. berberidifolia |
| 5/28/2014 | MB | QUDU | Quercus dumosa | Nuttall's scrub oak | QUDU-009 | Point | 270438.0948 | 3813135.49 | 5 | 10% | 80 | 0 | 20 | M12-T4 | Ground Dist. Area | | possible hybrid w/Q. berberidifolia |

| Date | Surveyor Initials | Plant Code | Scientific Name | Common Name | Population ID | Feature Type | Easting | Northing | Population Size | Cover Class | % Vegetative | % Flowering | % Fruiting | Nearest Construct | Potential Threat | Other Threat | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/28/2014 | MB | QUDU | Quercus dumosa | Nuttall's scrub oak | QUDU-010 | Point | 270416.1557 | 3813135.713 | 2 | 10% | 80 | 0 | 20 | M12-T4 | Ground Dist. Area | | possible hybrid w/Q. berberidifolia |
| 5/28/2014 | MB | QUDU | Quercus dumosa | Nuttall's scrub oak | QUDU-011 | Point | 270400.273 | 3813121.612 | 1 | 70% | 80 | 0 | 20 | M12-T4 | Ground Dist. Area | | possible hybrid w/Q. berberidifolia |
| 5/28/2014 | MB | QUDU | Quercus dumosa | Nuttall's scrub oak | QUDU-012 | Point | 270357.9115 | 3813170.874 | 3 | 30% | 50 | 0 | 50 | M12-T4 | Access Road | | possible hybrid w/Q. berberidifolia |
| 5/28/2014 | MB | QUDU | Quercus dumosa | Nuttall's scrub oak | QUDU-013 | Point | 270304.2991 | 3813193.862 | 1 | 30% | 100 | 0 | 0 | M12-T5 | Access Road | | possible hybrid w/Q. berberidifolia |
| 5/28/2014 | MB | QUDU | Quercus dumosa | Nuttall's scrub oak | QUDU-014 | Point | 270269.6857 | 3813202.476 | 1 | 50% | 0 | 50 | 50 | M12-T5 | Access Road | | possible hybrid w/Q. berberidifolia |
| 5/28/2014 | MB | QUDU | Quercus dumosa | Nuttall's scrub oak | QUDU-015 | Point | 270243.497 | 3813221.781 | 3 | 20% | 0 | 50 | 50 | CONSTR 139 | Access Road | | possible hybrid w/Q. berberidifolia |
| 5/28/2014 | MB | QUDU | Quercus dumosa | Nuttall's scrub oak | QUDU-016 | Point | 269695.4406 | 3812354.085 | 1 | 10% | 100 | 0 | 0 | CONSTR 129 | Access Road | | possible hybrid w/Q. berberidifolia |
| 5/28/2014 | MB | QUDU | Quercus dumosa | Nuttall's scrub oak | QUDU-017 | Point | 269535.5679 | 3812060.691 | 2 | 10% | 100 | 0 | 0 | CONSTR 130 | Ground Dist. Area | | possible hybrid w/Q. berberidifolia |
| 5/28/2014 | MB | QUDU | Quercus dumosa | Nuttall's scrub oak | QUDU-018 | Point | 269513.445 | 3812073.825 | 3 | 10% | 100 | 0 | 0 | CONSTR 130 | Ground Dist. Area | | possible hybrid w/Q. berberidifolia |
| 5/28/2014 | SH | QUDU | Quercus dumosa | Nuttall's scrub oak | QUDU-019 | Point | 270263.2062 | 3812427.027 | 2 | 5% | 100 | 0 | 0 | M21-T4 | Access Road | | upslope and downslope from access road; possible hybrid w/Q. berberidifolia |
| 5/28/2014 | JP | QUDU | Quercus dumosa | Nuttall's scrub oak | QUDU-020 | Point | 270911.7808 | 3812937.042 | 5 | 25% | 80 | 20 | 0 | M12-T1 | Access Road | | possible hybrid w/Q. berberidifolia |
| 5/28/2014 | KM | QUDU | Quercus dumosa | Nuttall's scrub oak | QUDU-021 | Point | 269210.001 | 3811775.398 | 3 | 70% | 100 | 0 | 0 | CONSTR 131 | Access Road | | west side of access road; possible hybrid w/Q. berberidifolia |
| 5/28/2014 | MB | QUDU | Quercus dumosa | Nuttall's scrub oak | QUDU-022 | Polygon | 270676.057 | 3812964.106 | 40 | 20% | 60 | 20 | 20 | M10-T2 | Ground Dist. Area | | possible hybrid w/Q. berberidifolia |
| 5/28/2014 | SH | QUDU | Quercus dumosa | Nuttall's scrub oak | QUDU-023 | Polygon | 270183.025 | 3813242.701 | 35 | 10% | 100 | 0 | 0 | 1208734E | Ground Dist. Area | | possible hybrid w/Q. berberidifolia |
| 5/28/2014 | KM | QUDU | Quercus dumosa | Nuttall's scrub oak | QUDU-024 | Polygon | 270235.914 | 3813266.267 | 50+ | 15% | 50 | 0 | 50 | M12-T6 | Access Road | | possible hybrid w/Q. berberidifolia |
| 5/28/2014 | KM | QUDU | Quercus dumosa | Nuttall's scrub oak | QUDU-025 | Polygon | 270216.156 | 3813192.677 | 15 | 5% | 50 | 0 | 50 | CONSTR 139 | Access Road | | possible hybrid w/Q. berberidifolia |
| 5/28/2014 | KM | QUDU | Quercus dumosa | Nuttall's scrub oak | QUDU-026 | Polygon | 269812.1346 | 3813277.361 | 30+ | 10% | 90 | 0 | 10 | access road | Access Road | | possible hybrid w/Q. berberidifolia |
| 5/28/2014 | KM | QUDU | Quercus dumosa | Nuttall's scrub oak | QUDU-027 | Polygon | 270264.9347 | 3812515.622 | 30+ | <1% | 100 | 0 | 0 | M21-T4 | Access Road | | possible hybrid w/Q. berberidifolia |
| 7/14/2014 | MB | QUDU | Quercus dumosa | Nuttall's scrub oak | QUDU-028 | Polygon | 272374.0673 | 3811740.054 | 30 | 30% | 80 | 0 | 20 | M11-T3 | Ground Dist. Area | | possible hybrid w/Q. berberidifolia |
| 7/14/2014 | MB | QUDU | Quercus dumosa | Nuttall's scrub oak | QUDU-029 | Polygon | 272278.4998 | 3811756.515 | 100s | 30% | 80 | 0 | 20 | M11-T3 | Ground Dist. Area | | possible hybrid w/Q. berberidifolia |
| 7/15/2014 | JP | QUDU | Quercus dumosa | Nuttall's scrub oak | QUDU-030 | Point | 269891.74 | 3812694.106 | 1 | <1% | 100 | 0 | 0 | CONSTR 127 | Ground Dist. Area | | possible x w/Q. berbidifolia |
| 7/15/2014 | JP | QUDU | Quercus dumosa | Nuttall's scrub oak | QUDU-031 | Polygon | 269891.1256 | 3812715.06 | 7 | 50% | 50 | 0 | 50 | CONSTR 127 | Ground Dist. Area | | possible x w/Q. berbidifolia |
| 5/15/2014 | KM | SAHO | Sanicula hoffmannii | Hoffman's sanicle | SAHO-001 | Point | 279069.3505 | 3806515.892 | 40 | 10% | 100 | 0 | 0 | M5-T4 | Access Road | | confirm id, upslope of road |
| 5/15/2014 | KM | SAHO | Sanicula hoffmannii | Hoffman's sanicle | SAHO-002 | Point | 278911.8829 | 3806574.758 | 9 | <1% | 100 | 0 | 0 | M5-T8 | Access Road | | confirm id, upslope of road |
| 5/15/2014 | KM | SAHO | Sanicula hoffmannii | Hoffman's sanicle | SAHO-003 | Point | 278829.0059 | 3806583.239 | 40 | 10% | 100 | 0 | 0 | M5-T8 | Ground Dist. Area | | confirm id, edge of road |
| 5/15/2014 | KM | SAHO | Sanicula hoffmannii | Hoffman's sanicle | SAHO-004 | Polygon | 278788.3913 | 3806581.627 | 50+ | 35% | 100 | 0 | 0 | M5-T8 | Ground Dist. Area | | confirm id, upslope of access road |
| 5/23/2014 | KM | SAHO | Sanicula hoffmannii | Hoffman's sanicle | SAHO-005 | Point | 283027.8937 | 3805254.563 | 30 | 5% | 100 | 0 | 0 | access road | Access Road | | on edge and upslope of access road |

| Date | Surveyor Initials | Plant Code | Scientific Name | Common Name | Population ID | Feature Type | Easting | Northing | Population Size | Cover Class | % Vegetative | % Flowering | % Fruiting | Nearest Construct | Potential Threat | Other Threat | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/23/2014 | KM | SAHO | Sanicula hoffmannii | Hoffman's sanicle | SAHO-006 | Point | 285594.5013 | 3805370.348 | 5 | <1% | 100 | 0 | 0 | access road | Access Road | | on and adjacent to access road |
| 5/28/2014 | SH | SAHO | Sanicula hoffmannii | Hoffman's sanicle | SAHO-007 | Point | 269737.3882 | 3813328.191 | 30 | <1% | 100 | 0 | 0 | access road | Access Road | | upslope from access road and along road edge |
| 5/28/2014 | JP | SAHO | Sanicula hoffmannii | Hoffman's sanicle | SAHO-008 | Point | 269689.1886 | 3813178.507 | 10 | <1% | 100 | 0 | 0 | access road | Access Road | | in and along top of drainage |
| 5/28/2014 | KM | SAHO | Sanicula hoffmannii | Hoffman's sanicle | SAHO-009 | Point | 269700.0483 | 3813331.656 | 10+ | 5% | 0 | 0 | 100 | access road | Access Road | | on upslope side of access road, more may be present and dried out |
| 5/28/2014 | KM | SAHO | Sanicula hoffmannii | Hoffman's sanicle | SAHO-010 | Point | 269236.1781 | 3811730.946 | 8 | <1% | 90 | 0 | 10 | CONSTR 131 | Access Road | | west side of access road |
| 5/28/2014 | SH | SAHO | Sanicula hoffmannii | Hoffman's sanicle | SAHO-011 | Polygon | 269813.5913 | 3813273.231 | 100+ | <1% | 70 | 0 | 30 | access road | Access Road | | upslope of and along access road |
| 5/28/2014 | KM | SAHO | Sanicula hoffmannii | Hoffman's sanicle | SAHO-012 | Polygon | 270251.7777 | 3812536.4 | 50+ | <1% | 100 | 0 | 0 | M21-T4 | Access Road | | scattered east of access road |
| 5/28/2014 | KM | SAHO | Sanicula hoffmannii | Hoffman's sanicle | SAHO-013 | Polygon | 270293.5638 | 3812473.512 | 100+ | <1% | 100 | 0 | 0 | M21-T4 | Access Road | | scattered downslope of access road |

# 2014 SOUTHWESTERN WILLOW FLYCATCHER SURVEY
# SOUTHERN CALIFORNIA EDISON
# SANTA BARBARA COUNTY RELIABILITY PROJECT

**September 2014**

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Appendix B: SWFL Survey Forms

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## Introduction

Garcia and Associates (GANDA) conducted protocol surveys for Southwestern willow flycatcher (SWFL; *Empidonax traillii extimus*) along the Ventura River for the Southern California Edison (SCE), Santa Barbara County Reliability Project (SBCRP; Project) located in Santa Barbara and Ventura counties. Surveys were conducted to determine the presence or absence of SWFL, which are listed as endangered by both the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW). The Ventura River was identified as the only location within the Project Area having the potential to support breeding SWFL. This determination was the result of consultation between SCE and Chris Dellith, a senior biologist with the USFWS (USFWS 2013 Personal Communication). All SWFL surveys were conducted following the survey protocol outlined in *A Southwestern Willow Flycatcher Natural History and Survey Protocol* (Sogge *et al.* 2010). This survey and report fulfills the USFWS Project requirements and the permit requirements of the surveyors.

## Project Description

In 1998, SCE initiated the SBCRP to increase reliability by reinforcing its existing 66 kilovolt (kV) subtransmission system in northwestern Ventura County and southeastern Santa Barbara County to meet the electrical demands of the south coast of Santa Barbara County during emergency conditions while also enhancing operational flexibility (Figure 1).

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

The Project includes the following physical elements:

- Reconstruction of the existing 66-kV subtransmission facilities primarily within existing utility rights-of-way (ROW) between the existing Santa Clara Substation in Ventura County and the existing Carpinteria Substation in Santa Barbara County.
- Installation of marker balls on overhead wire where necessary.
- Modification of subtransmission and substation equipment within the existing Carpinteria Substation, Casitas Substation, and Santa Clara Substation

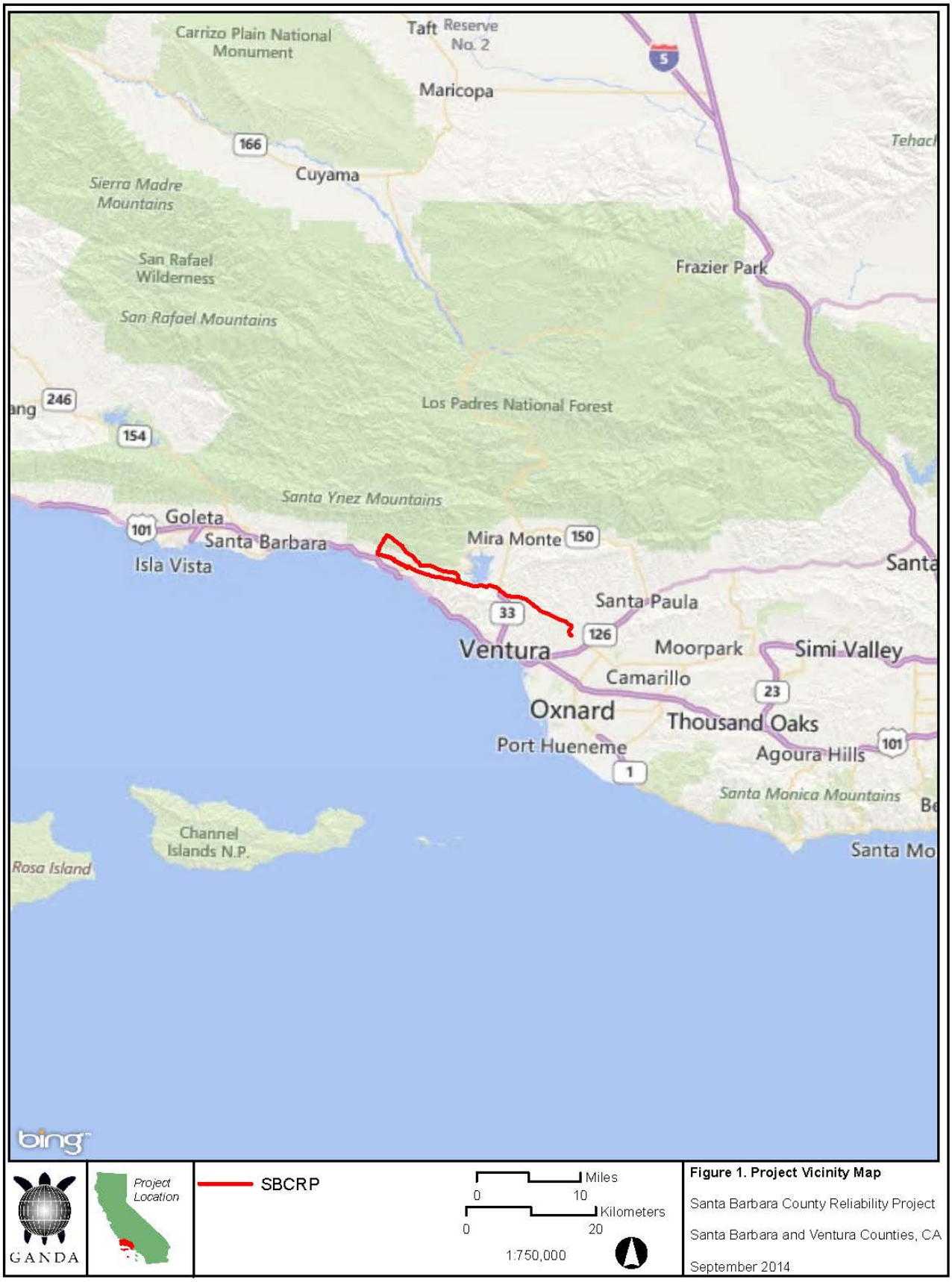


**Figure 1. Project Vicinity Map**

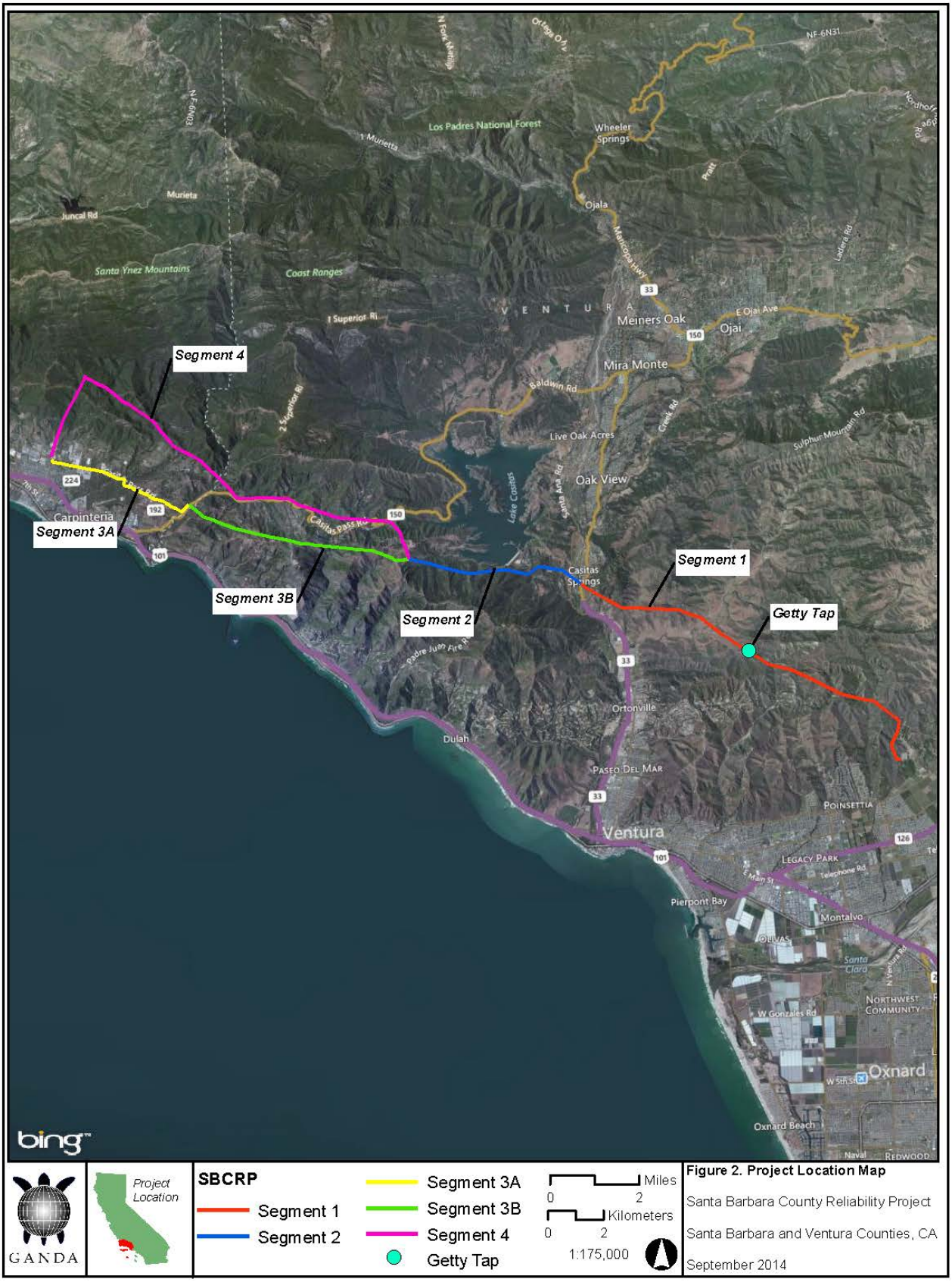


**Figure 2. Project Location Map**

- Replacement of line protection relays within existing substation equipment rooms or cabinets at Getty Substation, Goleta Substation, Ortega Substation, and Santa Barbara Substation.
- Installation of telecommunications facilities to connect the Project to the SCE's existing telecommunications system for the protection, monitoring and control of subtransmission and substation equipment. Installation of new telecommunications facilities along Segments 1, 2, and 4 and at the Carpinteria Substation, Casitas Substation, Santa Clara Substation, and Ventura Substation[1].
- The transfer of distribution lines (and third-party infrastructure as necessary) to subtransmission structures along Segment 3A.
- Removal of subtransmission infrastructure in Segments 1 and 2.

Project activities at the Ventura River are limited to stringing of the telecommunications cable via helicopter between existing poles located on either side of the river. It is expected that stringing operations would be limited to a single pass over the river by a small helicopter, which would briefly pause at each pole to "clip" the cable into place. The entire operation would be completed in less than one hour.

## Site Suitability and Description

The survey area is located where the Project corridor crosses the Ventura River and includes 500 feet upstream and downstream of the Project corridor. This portion of the Ventura River flows south between the town of Casitas Springs and Foster Park in the city of Ventura and is bordered by State Route 33 and the Ojai Valley Trail on the east, and Santa Anna Road and an active agricultural field to the west (Figure 3).

Overall, the survey area is of good habitat quality for SWFL. Though there was no evidence of flowing water during the survey effort, a large pool of water was present throughout the survey effort and the habitat had a multistory canopy and a dense understory. However, habitat fragmentation and human disturbance detract from the overall habitat quality. A photo log of the survey area is included in Appendix A.

The river morphology consists of a wide braided gravel and cobble streambed channel with islands and borders of native riparian vegetation with riprap and gabions lining the outer stream banks. There was no evidence of flowing water during the survey effort, however a large pool of water was observed throughout the survey period.

The riparian vegetation is thick with a multi-story canopy in many locations (Figure 4). The average height of the canopy is 30 feet and the average width of the riparian habitat is 100 meters to either side of the river channel.

[1] The Project also includes additional minor substation and telecommunications work at the Getty Substation, Goleta Substation, Ortega Substation, Santa Barbara Substation, and Ventura Substation; this work would be conducted exclusively on substation property, and thus would have no impact to biological resources. Therefore, this work is not addressed further in this report.

**Figure 3. SWFL Survey Area**

Figure 4. Photo of the SWFL Survey Site

The dominant plant species in the upper and middle canopies of the survey area include red willow (*Salix laevigata)* and sycamore (*Platanus occidentalis*). The dominate species in the lower canopy are red willow (*Salix laevigata)*, mulefat (*Baccharis salicifolia*), and arundo (*Arundo donax*). The ground cover is dominated by blackberry (*Rubus sp.*) and poison oak (*Toxicodendron diversilobum*).

A number of locations within 10 miles of the Project Area have been designated SWFL critical habitat by the USFWS (Figure 5). These areas include portions of the Santa Ynez, Santa Clara, and the Ventura rivers, including the portion of the Ventura River inside the survey area (USFWS 2013).

The California Natural Diversity Database (CNDDB) contains three occurrence records for SWFL within 10 miles of the Project Area (Figure 5) (CDFW 2014). Two of those occurrences are along the Santa Ynez River near Gibraltar Reservoir, and one is along the Santa Clara River. There are no occurrence records within 10 miles of the survey site or on the Ventura River. The closest records to the survey site are at Gibraltar Reservoir, over 20 miles away to the northwest. A September 2014 query on the Cornell Lab of Ornithology and National Audubon Society's eBird website revealed that no observations of southwestern willow flycatcher have been recorded within 10 miles of the Project Area.

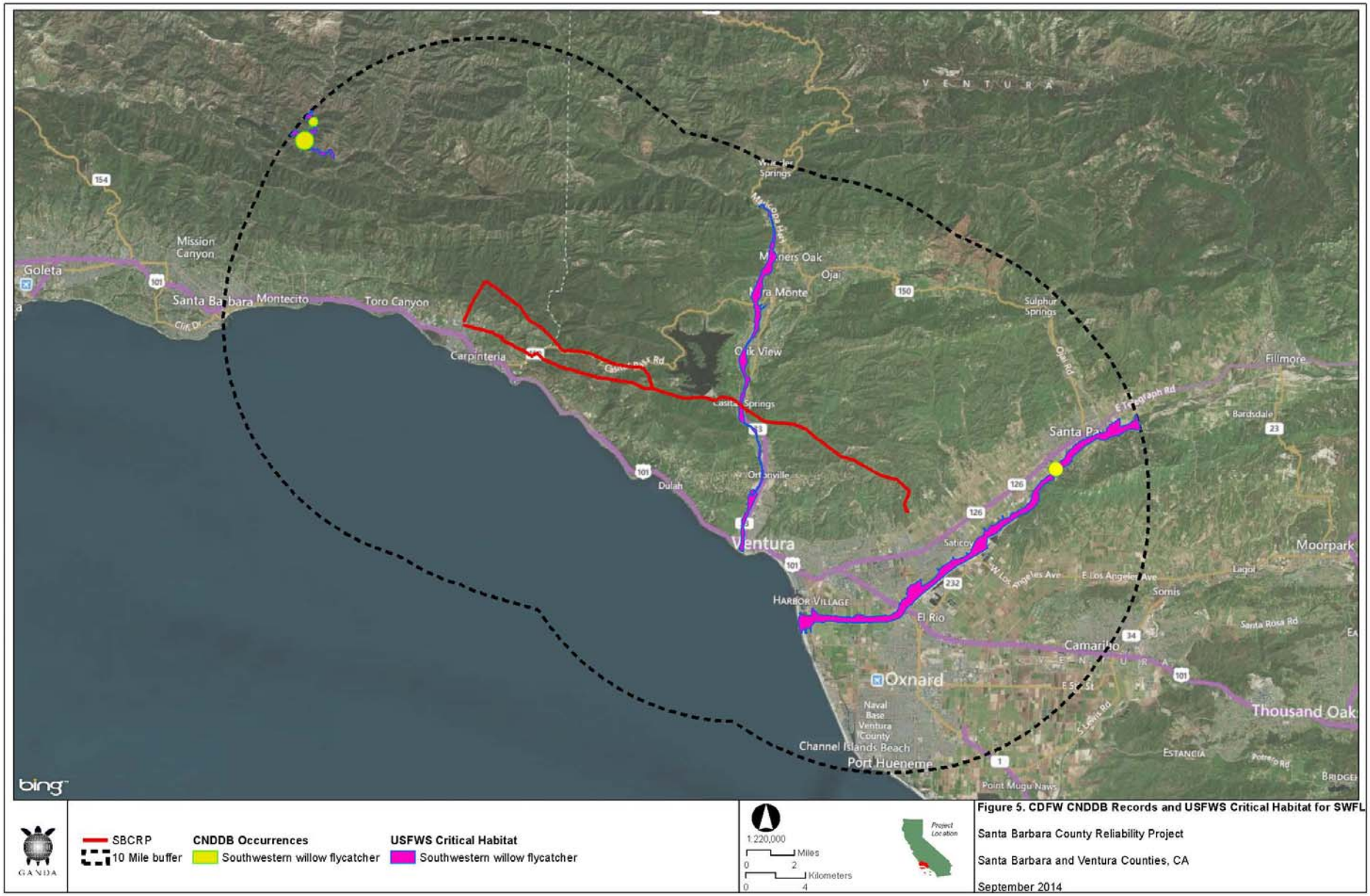


Figure 5. CDFW CNDDB Records and USFWS Critical Habitat for SWFL

## Regulatory Setting

SWFL and their designated critical habitat are protected under various federal and state laws and regulations. The Federal Endangered Species Act and the California Endangered Species Act specifically provide the most direct protection for endangered species by protecting individual birds, bird nests, eggs, and breeding habitat.

### Endangered Species Act

The SWFL was listed as endangered in 1995 under the Endangered Species Act (ESA; 60 Federal Register [FR] 10694). Critical habitat for SWFL was initially designated by the USFWS in 1997 (62 FR 39129), with revised critical habitat designated in 2013 (78 FR 343).

The ESA of 1973 provides for the protection of plant and animal species listed by the federal government as "endangered" or "threatened", and protects "the ecosystems upon which they depend." Pursuant to Section 9 of the ESA, it is unlawful for any person to "take" a federally listed species. "Take," as defined by the ESA, "means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." This can also include the modification of a species' habitat.

When non-federal entities, such as states, counties, local governments, and private landowners, wish to conduct an otherwise lawful activity that might incidentally, but not intentionally, "take" a listed species, an incidental take permit must first be obtained via formal consultation with the USFWS using one of two methods. If a federal nexus is available, an incidental take permit must be obtained for the Project by the federal agency involved in the nexus via formal consultation with USFWS (ESA § 10(a)(1)(B)). If no federal nexus is available, then an incidental take permit must be obtained must first be obtained following formal consultation with the USFWS via Section 7 of the ESA (ESA § 7).

### California Endangered Species Act (CFG Code § 2050, et seq.)

The SWFL was listed as an endangered species in 1990 under the California Endangered Species Act (CESA; CDFW 1991).

The CESA generally parallels the provisions of the Federal ESA, and states that "all native species of fishes, amphibians, reptiles, birds, mammals, invertebrates, and plants, and their habitats, threatened with extinction and those experiencing a significant decline which, if not halted, would lead to a threatened or endangered designation, will be protected or preserved." The CDFW administers the CESA, and has committed to work with all interested persons, agencies, and organizations to protect and preserve such sensitive resources and their habitats.

Under the CESA, "endangered" is defined as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range." "Threatened" is defined as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts." "Take" is defined as "to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill" an individual of a species, but

the definition does not include “harm” or “harass,” as the ESA does. As a result, the threshold for a take under the CESA is higher than that under the federal ESA.

## Methods

Jeff Steinman of GANDA (USFWS permit #TE-085026-4) and John and Jane Griffith of Griffith Wildlife Biology (USFWS permit #TE-75817-11) conducted the SWFL surveys following Sogge et al. 2010. The protocol recommends that five surveys be conducted during three survey periods, with one survey occurring during the first survey period and two surveys occurring within each of the second and third survey periods. The three survey periods are May 15 to 31, June 1 to 24, and June 25 to July 17, 2014. Surveys were conducted concurrently with least Bell’s vireo surveys (*Vireo belli pusillus*), which allowed for two additional SWFL surveys to be conducted, one on May 20 during the first survey period and one on July 18, one day after the end of the final survey period. SWFL surveys were therefore conducted on May 20, May 30, June 10, June 20, July 1, July 11, and July 18. All surveys were conducted between one hour before sunrise and 1030 hours, and during mild weather conditions. A completed survey form for the site is included in Appendix B.

The SWFL survey method consisted of using an MP3 player and speaker system to broadcast SWFL calls along the survey area. The calls were broadcast every 50 to100 feet throughout the survey site depending on the quality of the habitat and thickness of vegetation. At the start of each survey the surveyor first spent 10 minutes listening for the presence of any singing flycatchers before initiating the first broadcast. After this initial listening period, SWFL “*fitz-bew*” calls were broadcast at each broadcast location for a 30-second period, immediately followed by a 60-second listening period. To reduce bias, the starting and broadcast locations were varied from one visit to the next. The entire survey area was surveyed during each visit.

## Results

There were no SWFL detections during any of the survey periods. A number of incidental observations were made of other avian species, including brown-headed cowbird (*Molothrus ater*), a known nest parasite of SWFL. Three female and five male brown-headed cowbirds were observed during the July 1 survey. A complete list of all incidental bird species observed is included in Appendix C. There were no incidental observations of any non-avian vertebrate species.

## Conclusion

Although no SWFL were observed, the presence of suitable habitat within the survey area and its designation as critical SWFL habitat indicate there is some potential for SWFL to breed in the survey area. As work at this site will be limited to stringing the telecommunications cable over the Ventura River, no impacts to SWFL designated critical habitat are expected. However, if work is scheduled to occur during the SWFL breeding season, a pre-construction biological

survey(s) is recommended by a qualified biologist within seven (7) days of the commencement of activities to confirm the absence of SWFL. Best Management Practices (BMPs) should be utilized during stringing operations over the river, as applicable, to protect biological resources within the river corridor.

## References


California Department of Fish and Game (CDFW). 2014. California Natural Diversity Database (CNDDB). Biogeographic Data Branch, California Department of Fish and Game, Sacramento.

--. 1991. Endangered and threatened animals of California: State of California, The Resources Agency, Department of Fish and Wildlife, Sacramento, California, 5 p.

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U.S. Fish and Wildlife Service (USFWS). 2013. Federal Register, Department of the Interior, Fish and Wildlife Service. Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Southwestern Willow Flycatcher; Final Rule. 78 FR 2, pp. 344 – 534. January 3, 2013.

--. 2013 Personal Communication. Personal communication between USFWS Senior Biologist Chris Dellith and SCE during a meeting on November 19, 2013 at the Ventura USFWS Field Office and again during Project site visits with Chris Dellith on November 20, 2013 and December 11, 2013.

--. 1997. Federal Register, Department of the Interior, Fish and Wildlife Service. Endangered and Threatened Wildlife and Plants; Final Determination of Critical Habitat for the Southwestern Willow Flycatcher; Final Rule. 62 FR 140, pp. 39129 – 39147. July 22, 1997.

--. 1995. Federal Register, Department of the Interior, Fish and Wildlife Service. Endangered and Threatened Wildlife and Plants; Southwestern Willow Flycatcher; Final Rule. 60 FR 38, pp. 10694 – 10715. February 27, 1995.

# Appendix A

# Photo Log

Photo 1: Outside site, southeast facing northwest.

Photo 2: Inside site, middle facing east.

Photo 3: Inside site, middle facing north.

Photo 4: Inside site, north facing south.

Photo 5: Inside site, middle facing south.

Photo 6: Outside site, north facing south.

# Appendix B

# SWFL Survey Form

## Southwestern willow Flycatcher Survey Form

Site Name: **SBCRP Site 5** State: **CA** County: **Ventura**

USGS Quad Name: **Ventura** Elevation: **80** (meters)

Creek, River, or Lake Name: **Ventura River**

***Is copy of USGS map marked with survey area and WIFL sightings attached (as required)?*** *Yes* **X** *No* ____

Survey Coordinates: Start: E **297258** N **3800156** UTM Datum: **NAD83** (See instructions)

Stop: E **297548** N **3799854** UTM Zone: **11S**

If survey coordinates changed between visits, enter coordinates for each survey in comments section on back of this page.

*****Fill in additional site information on back of this page*****

| Survey # Observer(s) (Full Name) | Date (m/d/y) Survey Time | Number of Adult LBVI/SWFL | Estimated Number of Pairs | Estimated Number of Territories | Nest(s) Found? Y or N If Yes, number of nests | Comments (e.g., bird behavior; evidence of pairs or breeding;-potential threats [livestock, cowbirds, *Diorhabda* spp.]). If *Diorhabda* found, contact USFWS and State WIFL coordinator. | GPS Coordinates for Detections (this is an optional column for documenting individuals, pairs, or groups of birds found on each survey). Include additional sheets if necessary. | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | # Birds | Sex | UTM E | UTM N |
| **Survey # 1** Observer(s): John Griffith | Date: 5/20/2014 Start: 7:00 Stop: 10:45 Total hrs: 3.75 | 0 | 0 | 0 | No | | | | | |
| **Survey # 2** Observer(s): Jeff Steinman | Date: 5/30/2014 Start: 7:10 Stop: 9:50 Total hrs: 2.6 | 0 | 0 | 0 | No | | | | | |
| **Survey # 3** Observer(s): Jeff Steinman | Date: 6/10/2014 Start: 7:00 Stop: 9:33 Total hrs: 2.5 | 0 | 0 | 0 | No | | | | | |
| **Survey # 4** Observer(s): John Griffith | Date: 6/20/2014 Start: 5:45 Stop: 9:15 Total hrs: 3.5 | 0 | 0 | 0 | No | | | | | |
| **Survey # 5** Observer(s): John Griffith | Date: 7/1/2014 Start: 5:30 Stop: 8:50 Total hrs: 3.3 | 0 | 0 | 0 | No | BHCO present: 3 females/ 5 males | | | | |
| **Survey # 6** Observer(s): Jeff Steinamn | Date: 7/11/2014 Start: 7:11 Stop: 9:33 Total hrs: 2.5 | 0 | 0 | 0 | No | | | | | |
| Overall Site Summary<br>Totals do not equal the sum of each column. Include only resident adults. Do not include migrants, nestlings, and fledglings.<br>Be careful not to double count individuals.<br>Total survey hrs: | | Total Adult Residents | Total Pairs | Total Territories | Total Nests | Were any WIFLs color-banded? Yes ____ No X<br>If yes, report color combination(s) in the comments section on back of form and report to USFWS. | | | | |
| | | 0 | 0 | 0 | 0 | | | | | |

Reporting Individual: **Jeff Steinman** Date Report Completed: **8/15/2014**

US Fish & Wildlife Service Permit #: **085026-4** State Wildlife Agency Permit #: **SCP-7801**

***Submit** form to USFWS and State Wildlife Agency by September 1st. Retain a copy for your records.*

## Southwestern willow Flycatcher Survey Form

Site Name: **SBCRP Site 5** State: **CA** County: **Ventura**

USGS Quad Name: **Ventura** Elevation: **80** (meters)

Creek, River, or Lake Name: **Ventura River**

***Is copy of USGS map marked with survey area and WIFL sightings attached (as required)?*** *Yes* **X** *No* ____

Survey Coordinates: Start: E **297258** N **3800156** UTM Datum: **NAD83** (See instructions)

Stop: E **297548** N **3799854** UTM Zone: **11S**

If survey coordinates changed between visits, enter coordinates for each survey in comments section on back of this page.

*****Fill in additional site information on back of this page*****

| Survey # Observer(s) (Full Name) | Date (m/d/y) Survey Time | Number of Adult LBVI/SWFL | Estimated Number of Pairs | Estimated Number of Territories | Nest(s) Found? Y or N If Yes, number of nests | Comments (e.g., bird behavior; evidence of pairs or breeding;-potential threats [livestock, cowbirds, *Diorhabda* spp.]). If *Diorhabda* found, contact USFWS and State WIFL coordinator. | GPS Coordinates for Detections (this is an optional column for documenting individuals, pairs, or groups of birds found on each survey). Include additional sheets if necessary. | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | # Birds | Sex | UTM E | UTM N |
| Survey # 7 Observer(s): Jane Griffith | Date: 7/18/2014 Start: 5:45 Stop: 9:15 Total hrs: 3.5 | 0 | 0 | 0 | No | | | | | |
| Overall Site Summary Totals do not equal the sum of each column. Include only resident adults. Do not include migrants, nestlings, and fledglings. Be careful not to double count individuals. Total survey hrs: 20.1 | | Total Adult Residents | Total Pairs | Total Territories | Total Nests | Were any WIFLs color-banded? Yes ____ No X ____ If yes, report color combination(s) in the comments section on back of form and report to USFWS. | | | | |
| | | 0 | 0 | 0 | 0 | | | | | |

Reporting Individual: **Jeff Steinman** Date Report Completed: **8/15/2014**

US Fish & Wildlife Service Permit #: **085026-4** State Wildlife Agency Permit #: **SCP-7801**

***Submit form to USFWS and State Wildlife Agency by September 1st. Retain a copy for your records.***

*Fill in the following information completely.* ***Submit*** *form by September 1st. Retain a copy for your records.*

Reporting Individual **Jeff Steinman** Phone # **(415) 250-2692**

Affiliation **Garcia and Associates** E-mail jsteinman@garciaandassociates

Site Name **SBCRP Site 5** Date report Completed _____

Was this site surveyed in a previous year? Yes____ No____ Unknown__X__

Did you verify that this site name is consistent with that used in previous yrs? Yes_____ No_____ Not Applicable ___X___

If name is different, what name(s) was used in the past? _____

If site was surveyed last year, did you survey the same general area this year? Yes_____ No_____ If no, summarize below.

Did you survey the same general area during each visit to this site this year? Yes_____ No_____ If no, summarize below.

Management Authority for Survey Area: Federal_____ Municipal/County ___X___ State_____ Tribal_____ Private _____

Name of Management Entity or Owner (e.g., Tonto National Forest) **City of Ventura**

Length of area surveyed: **0.34** (km)

Vegetation Characteristics: Check (only one) category that best describes the predominant tree/shrub foliar layer at this site:

___X___ Native broadleaf plants (entirely or almost entirely, > 90% native)

_____ Mixed native and exotic plants (mostly native, 50 - 90% native)

_____ Mixed native and exotic plants (mostly exotic, 50 - 90% exotic)

_____ Exotic/introduced plants (entirely or almost entirely, > 90% exotic)

Identify the 2-3 predominant tree/shrub species in order of dominance. Use scientific name.

*Baccharis salicifolia, Salix spp. and Arrundo donax*

Average height of canopy (Do not include a range): **3** (meters)

Attach the following: 1) copy of USGS quad/topographical map (REQUIRED) of survey area, outlining survey site and location of WIFL detections;
2) sketch or aerial photo showing site location, patch shape, survey route, location of any detected WIFLs or their nests;
3) photos of the interior of the patch, exterior of the patch, and overall site. Describe any unique habitat features in Comments.

Comments (such as start and end coordinates of survey area if changed among surveys, supplemental visits to sites, unique habitat features. Attach additional sheets if necessary.

Territory Summary Table. Provide the following information for each verified territory at your site.

| Territory Number | All Dates Detected | UTM E | UTM N | Pair Confirmed? Y or N | Nest Found? Y or N | Description of How You Confirmed Territory and Breeding Status (e.g., vocalization type, pair interactions, nesting attempts, behavior) |
|---|---|---|---|---|---|---|
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Attach additional sheets if necessary

# Appendix C

# Incidental Avian Species List

**Incidental Avian Species**

Mallard (*Anas platyrhychos*)
California Quail (*Callipepla californica*)
Turkey Vulture (*Cathartes aura)*
Cooper's Hawk (*Accipeter cooperii*)
Red-tailed Hawk (*Buteo jamaicensis*)
Red-shouldered Hawk (*Buteo lineatus*)
American Kestral (*Falco sparverius*)
White-winged Dove (*Zenaida asiatica*)
Mourning Dove (*Zenaida macroura*)
Greater Roadrunner (*Geococcyx californianus*)
White-throated Swift (*Aeronautes saxatalis*)
Black Chinned Hummingbird (*Archilochus colubris)*
Anna's Hummingbird (*Calypte anna*)
Costa's Hummingbird (*Calypte costae)*
Acorn Woodpecker (*Melanerpes formicivorus*)
Downy Woodpecker (*Picoides pubescens*)
Nuttall's Woodpecker (*Picoides nuttallii*)
Northern Flicker (*Colaptes sordidulus*)
Black Phoebe (*Sayornis nigricans*)
Ash-throated Flycatcher (*Myiarchus cinerascens*)
Western Wood Pewee (*Contopus sordidulus*)
Pacific-slope Flycatcher (*Enpidonaxdifficilis*)
Cassin's Kingbird (*Tyrranus vociferans*)
California Thrasher *(Toxostoma redivivum)*
Western Scrub-Jay (*Aphelocoma californica*)
American Crow (*Corvus brachyrhynchos)*
Common Raven (*Corvus corax*)
Tree Swallow (*Tachycineta bicolor*)
Northern Rough-winged Swallow (*Stelgidopteryx serripennis*)
Oak Titmouse (*Baeolophus inornatus*)
Bushtit (*Psaltriparus minimus*)
Bewick's Wren (*Thryomanes bewickii*)
Wrentit (*Chamaea fasciata*)
Western Bluebird (*Sialia mexicana*)
American Robin (Turdus migratorius)
Swainson's Thrush (*Catharus ustulatus*)
Common Yellowthroat (*Geothlypis trichas*)
Western Tanager (*Piranga ludoviciana*)
Spotted Towhee (*Pipilo maculatus*)
California Towhee (*Melzone crissalis*)
Song Sparrow (*Melospiza melodia*)
Dark-eyed Junco (*Junco hyemalis*)
Black-headed Grosbeak (*Pheucticus melanocephalus*)
Blue Grosbeak (*Passerina caerulea*)
Hooded Oriole (*Icterus cucullatus*)
Bullock's Oriole (*Icterus bullockii*)
Purple Finch *Carpodacus purpureus*)
House Finch (*Carpodacus mexicanus*)
Lesser Goldfinch (*Spinus psaltria*)
American Goldfinch (Spinus tristis)

# SPECIAL-STATUS WILDLIFE AND HERPETOFAUNA REPORT FOR THE SANTA BARBARA COUNTY RELIABILITY PROJECT VENTURA AND SANTA BARBARA COUNTIES, CALIFORNIA

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September 2014


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Appendix A: Wildlife Species Compendium

# 1.0 INTRODUCTION

This report documents and describes the existing conditions and biological resources in the area of the Santa Barbara County Reliability Project (SBCRP) (hereafter referred to as the "Project"), focusing on special-status wildlife and herpetofauna, and identifies potential impacts to biological resources that may result from implementation and construction of the Project.

## 1.1 Project Description

In 1998, the Southern California Edison Company (SCE) initiated the Project to increase reliability by reinforcing its existing 66-kilovolt (kV) subtransmission system in northwestern Ventura County and southeastern Santa Barbara County to meet the electrical demands of the south coast of Santa Barbara County during emergency conditions while also enhancing operational flexibility (Figure 1).

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

The Project includes the following physical elements:

- Reconstruction of the existing 66-kV subtransmission facilities primarily within existing utility rights-of-way (ROW) between the existing Santa Clara Substation in Ventura County and the existing Carpinteria Substation in Santa Barbara County.
- Installation of marker balls on overhead wire where determined to be necessary.
- Modification of subtransmission and substation equipment within the existing Carpinteria Substation, Casitas Substation, and Santa Clara Substation.
- Replacement of line protection relays within existing substation equipment rooms or cabinets at the Getty Substation, Goleta Substation, Ortega Substation, and Santa Barbara Substation.
- Installation of telecommunications facilities to connect the Project to SCE's existing telecommunications system for the protection, monitoring and control of subtransmission and substation equipment. Installation of new telecommunications facilities along

Segments 1, 2, and 4 and at the Carpinteria Substation, Casitas Substation, Santa Clara Substation, and Ventura Substation[1].

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

[1] The Project also includes additional minor substation and telecommunications work at the Getty Substation, Goleta Substation, Ortega Substation, Santa Barbara Substation, and Ventura Substation; this work would be conducted exclusively within the mechanical and electrical equipment rooms (MEERs) or on substation on substation property, and thus would have no impact to biological resources. Therefore, this work is not addressed further in this report.

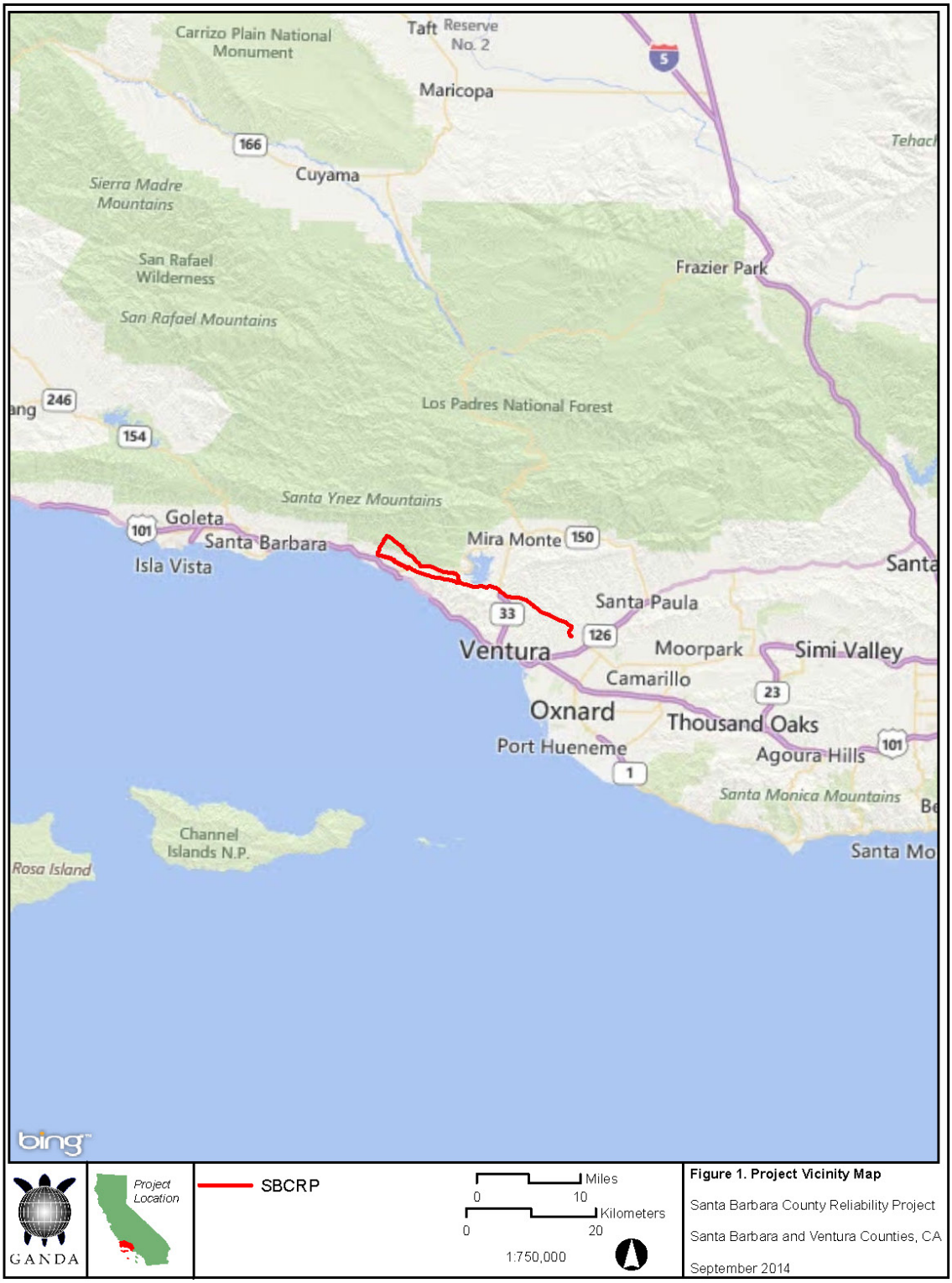


Figure 1. Project Vicinity Map

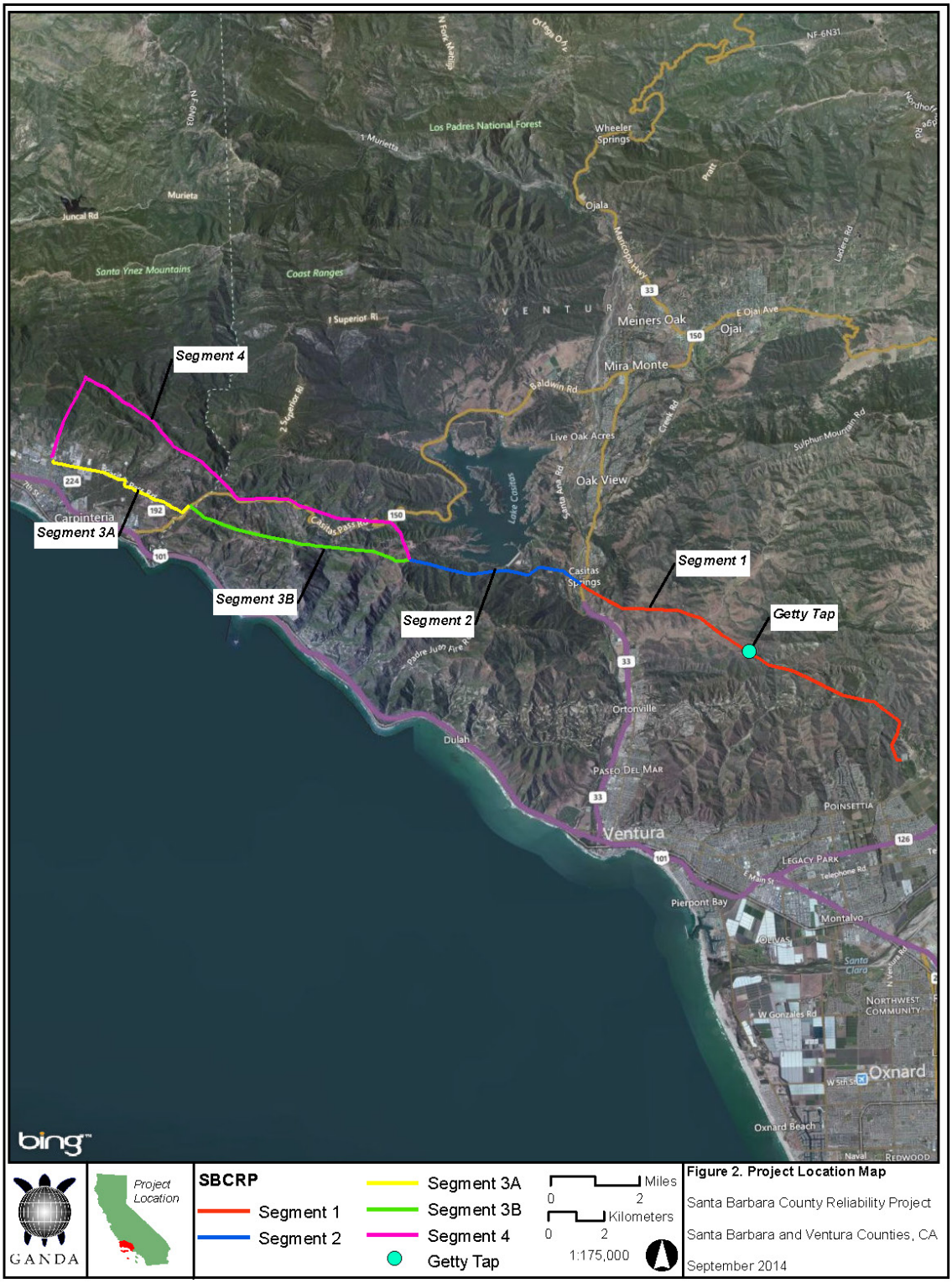


Figure 2. Project Location Map

## 1.2 Environmental Setting

The Project lies north and west of U.S. Highway 101 (US-101), between 1 and 6 miles from the coastline. Elevations vary through the Project Area, from 31 feet above sea level (ASL) near the Carpinteria Substation, which lies in the coastal plain, to 1,500 feet ASL along Segment 4 in the foothills of the western Transverse Ranges, to more than 1,800 feet ASL along portions of Segment 3B near Rincon Peak.

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

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

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

## 1.3 Regulatory Setting

### 1.3.1 Federal Regulations

***Endangered Species Act (16 U.S.C. § 1531 et seq)***

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

When non-federal entities, such as states, counties, local governments, and private landowners, wish to conduct an otherwise lawful activity that might incidentally, but not intentionally, "take" a listed species, an incidental take permit is required via formal consultation with the U.S. Fish and Wildlife Service (USFWS) using one of two methods. If a federal nexus is available, an incidental take permit must be obtained for the project by the federal agency involved in the nexus via formal consultation with USFWS (ESA § 10(a)(1)(B)). If no federal nexus is available, then an incidental take permit must first be obtained following formal consultation with the USFWS via Section 7 of the ESA (ESA § 7).

***Migratory Bird Act (16 U.S.C. §§ 703 – 712)***

The Migratory Bird Treaty Act of 1918 (MBTA) protects species of native, non-game, migratory birds by making take illegal except under the terms of a valid permit issued pursuant to federal regulations. Under the Migratory Bird Treaty Act, "take" is defined as: "pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in the terms of this Convention . . . for the protection of migratory birds . . . or any part, nest, or egg of any such bird." (16 U.S.C. § 703)

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

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

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

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

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

The Secretary of Agriculture's Policy on Fish and Wildlife directs the USFS to "manage habitats for all native and desired non-native plants, fish and wildlife species to maintain viable populations of each species; identify and recover threatened and endangered plant and animal species" and to avoid actions "which may cause species to become threatened or endangered."

### *U.S. Forest Service Manual*

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

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

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

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

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

The Los Padres National Forest Strategy includes specific measures to meet the six goals of the USFS National Strategic Plan. These goals include:

- Goal 1 – Reduce the risk from catastrophic wildland fire;
- Goal 2 – Help meet energy resource needs;
- Goal 3 - Provide outdoor recreation opportunities;
- Goal 4 - Help meet energy resource needs;
- Goal 5 – Improve watershed conditions; and
- Goal 6 – Mission-related work in addition to that which supports the agency's goals.

### 1.3.2 State Regulations

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

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

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

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

The California Endangered Species Act (CESA) generally parallels the provisions of the Federal ESA, and states that "all native species of fishes, amphibians, reptiles, birds, mammals, invertebrates, and plants, and their habitats, threatened with extinction and those experiencing a significant decline which, if not halted, would lead to a threatened or endangered designation, will be protected or preserved." The California Department of Fish and Wildlife (CDFW) administers the CESA, and has committed itself to work with all interested persons, agencies, and organizations to protect and preserve such sensitive resources and their habitats.

Under the CESA, "endangered" is defined as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range;" and "threatened" is defined as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts." "Take" is defined as "to hunt,

pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill" an individual of a species, but the definition does not include "harm" or "harass," as the ESA does. As a result, the threshold for a take under the CESA is higher than that under the federal ESA.

Consistent with the CESA, CDFW has established lists of endangered, threatened, and candidate species that may or may not also be included on a federal ESA list. Pursuant to CFG Section 2081, CESA allows for incidental take permits to otherwise lawful development projects that could result in the take of a state-listed threatened or endangered species. CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate mitigation planning to offset project-caused losses of listed species.

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

California Fish and Game Code Section 3513 furthers the intent of the MBTA by prohibiting any take or possession of birds in California designated by the MBTA as migratory non-game birds, except as allowed by federal rules and regulations promulgated pursuant to the MBTA. In addition, California Fish and Game Code Sections 3503, 3503.5, 3511, and 3800 further protect nesting birds and their parts, including passerine birds, raptors, and state "fully protected" birds. These regulations protect almost all native nesting birds, not just sensitive-status birds.

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

California Fish and Game Code Sections 3511, 4700, 5050, and 5515 for the protection of bird, mammal, reptile, amphibian, and fish species identified as "fully protected." Fully protected animals may not be harmed, taken, or possessed. The classification of "fully protected" was the state's initial effort to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish, amphibians and reptiles, birds, and mammals. Many of the species on these lists have subsequently been listed under the state and/or federal endangered species acts.

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

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

### 1.3.3 Local Regulations

CPUC G.O. No. 131-D, Section XIV. B. states that "local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the Commission's

jurisdiction. However in locating such projects, the public utilities shall consult with local agencies regarding land use matters."

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

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

The CLUP additionally identifies native plants as one of 13 ESHAs. Policies 9-35 and 9-36 encourage native oak preservation and require developments to preserve areas of significant amounts of native vegetation, respectively. The CLUP also identifies streams and identifies Policies 9-37 to 9-43 to preserve riparian vegetation and habitat for dependent species, as well as water quality considerations.

# 2.0 METHODOLOGY

Biological surveys for special-status wildlife species were conducted by Garcia and Associates (GANDA) in the spring and summer of 2014 simultaneously with other survey efforts, including focused raptor surveys and protocol surveys for federally protected riparian-dependent bird species, least Bell's vireo and southwestern willow flycatcher.

## 2.1 Literature and Database Review

Information about documented special-status animal species, and habitats known to occur within the vicinity of the Project, was obtained from CNDDB (CDFW 2014). The CNDDB search included the U.S. Geological Survey (USGS) 7.5-minute quadrangles for Carpinteria, Matilija, Pitas Point, Saticoy, Ventura, and White Ledge Peak, as well as the 11 surrounding quadrangles: Camarillo, Hildreth Peak, Lion Canyon, Little Pine Mountain, Ojai, Old Man Mountain, Oxnard, Santa Paula, Santa Paula Peak, Santa Barbara, and Wheeler Springs.

Additional literature and databases referenced include *The Sibley Field Guide to Birds of Western North America* (Sibley 2003); the *American Ornithologists' Union Check-List of North American Birds* (Chesser et al. 2011); *NatureServe Explorer: An Online Encyclopedia of Life* (NatureServe 2010); the *eBird* website (Cornell Lab of Ornithology and National Audubon Society, Inc. 2012); the *California Fish Species* website (University of California 2012); the *California Herps: A Guide to the Amphibians and Reptiles of California* website (California Herps 2012); the *USFWS Critical Habitat Portal* website (USFWS 2012); *Fish Species of Special Concern* (Moyle et al. 1995), and *California Wildlife Habitat Relationships* software (CDFG 2005).

Wildlife species may be considered to have special status due to declining populations, vulnerability to habitat change, restricted distributions, or insufficient knowledge of the species biological status. Species are considered to be special-status if they meet one or more of the criteria detailed in Section 1.3 above. Special-status animal species known to occur, or with the potential to occur in the Project Area, based on observations and review of sources such as the CNDDB, are listed in Table 1.

In 2012 and 2013, BioResource Consultants, Inc. conducted surveys in the Project Area and prepared Biological Technical Reports (BioResource Consultants 2012, 2013, 2013a). These survey reports were reviewed for background information and data for use in this report.

## 2.2 Survey Methods

Field surveys for special-status wildlife and herpetofauna were conducted from May through July 2014 in conjunction with other surveys. The Project Area was surveyed on foot (i.e., focused surveys for raptors, least Bell vireo, and southwestern willow flycatcher, with methods described in reports completed by GANDA, GANDA 2014a, 2014b, 2014c), and from a vehicle throughout the Project Area along access roads. Incidental sightings were also recorded during botanical surveys, such as the special-status plant survey (GANDA 2014d). Due to the types of surveys conducted, emphasis was placed on riparian habitat and areas of potential raptor nesting habitat. All Segments (Segments 1, 2, 3A, 3B, and 4) were surveyed with binoculars, including a 500-foot buffer wherever possible on either side of the alignment. Dirt roads were driven

carefully in search of reptiles, such as snakes and lizards. Roadside habitat was surveyed for burrowing mammals. Surveys for special-status wildlife species included searching for and identifying species' diagnostic signs including audible calls, prints, scat, nests, skeletal remains, burrows, and habitat features (rock or debris piles, cavities, and rock outcrops) that may attract and/or support special-status species. Sightings of special-status animals were recorded using a GPS device. Common wildlife species were also recorded (see Appendix A).

During protocol-level least Bell's vireo and southwestern willow flycatcher surveys, searches for reptiles and amphibians were conducted, focusing on aquatic species that may occur in riparian habitat, such as frogs, salamanders, and turtles. During surveys of the access roads, dirt roads were slowly driven to search for basking reptiles on roads, such as snakes and lizards. When a species was observed the animal was identified to species.

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

- **Present:** The species was observed in the Project Area during 2014 field surveys.
- **High:** Individuals were observed during previous surveys. The CNDDB or other documented occurrences have been recorded within 1.0 mile of the Project and suitable habitat is present (suitable nesting or roosting habitat for bird and bat species). Individuals were not observed during field surveys; however, the species could be present or otherwise impacted by the Project.
- **Moderate:** CNDDB or other documented occurrences have been recorded within 5 miles of the Project Area and suitable habitat is present (suitable nesting or roosting habitat or high-quality foraging areas for bird and bat species). Individuals were not observed during field surveys; however, the species could be present or otherwise impacted by the Project.
- **Low:** Suitable or marginal habitat may occur in the Project Area but no CNDDB records of the species have been recorded within recent years; records of the species within 5 miles of the Project are suspected to now be extirpated or potentially misidentified with other species; or individuals were not observed during field surveys and are not anticipated to be present. For bird and bat species, this category may be used for species that are documented but likely to be only transient through the area during foraging or migratory movements, and which lack suitable nesting or roosting habitat.
- **None:** The Project Area does not contain suitable habitat, is located out of the species' known geographic range, or is located out of the species' known elevational range limits.

## Table 1. Special-Status Animal Species Known to Occur or with the Potential to Occur within the Project Area.

| Common Name | Scientific Name | Habitat Preference | Status | Likelihood to Occur Within Project Area | Known or Potential Occurrence Determination |
|---|---|---|---|---|---|
| ***INVERTEBRATES*** | | | | | |
| Monarch butterfly | *Danaus plexippus* | Winter roosts found in wind-protected groves of eucalyptus, Monterrey pine, and cypress with sources of water and nectar nearby. Winter roosts are protected by CDFW. | CDFW | *Species:* **High**<br>*Roosts:* Low | Monarch butterflies were observed throughout the Project Area during previous surveys (BioResource Consultants 2012, 2013), but no winter roost sites were observed or are documented from the Project Area. |
| ***FISH*** | | | | | |
| Santa Ana sucker | *Catostomus santaanae* | Habitat generalists but prefer gravel/boulder river bottoms, with cool, clear-flowing water, and algae. | **FT**, CSC | None | Outside of geographic range. Nearest recorded occurrence is on the Santa Clara River. |
| Tidewater goby | *Eucyclogobius newberryi* | Brackish water of shallow lagoons and lower stream reaches. They need fairly still but not stagnant water and high oxygen levels. | **FE**, CSC | None | No suitable habitat. The nearest recorded occurrences are associated with Carpinteria Creek and Ventura and Santa Clara River mouths. |
| Unarmored threespine stickleback | *Gasterosteus aculeatus williamsoni* | Weedy pools, backwaters, and among emergent vegetation at the stream edge in small southern California streams. | **FE**, **SE**, CFP | None | No suitable habitat, nearest recorded occurrence is on the Santa Clara River. |
| Arroyo chub | *Gila orcuttii* | Slow-water stream sections with mud or sand bottoms. They feed heavily on aquatic vegetation and associated invertebrates. | FSS, CSC | **High** | Arroyo chub was documented in 2013 within the Cañada Larga area in Segment 1 (BioResource Consultants 2013a). |
| Southern California steelhead DPS | *Oncorhynchus mykiss irideus* | Streams with cool, clear-running water, often with a developed canopy, bank vegetation or undercut banks. Spawning gravels and low levels of siltation are essential for reproduction. | **FE**, CSC | Low | Critical habitat occurs along Carpinteria, Sutton Canyon, Coyote and Canada Larga creeks, in Rincon Lagoon and the Ventura River. Species was not observed during previous surveys but is expected downstream of Project activities. |
| ***AMPHIBIANS*** | | | | | |
| Arroyo toad | *Anaxyrus californicus* | Rivers with sandy banks, willows, cottonwoods, and sycamores; loose, gravelly areas of streams in drier parts of range. | **FE**, FSS, CSC | None | Critical habitat is approximately 4.5 miles from the nearest project component on the Upper Santa Ynez River Basin. The species has not been recorded within 5 miles of the project. . |

| Common Name | Scientific Name | Habitat Preference | Status | Likelihood to Occur Within Project Area | Known or Potential Occurrence Determination |
|---|---|---|---|---|---|
| Foothill yellow-legged frog | *Rana boylii* | Partly shaded shallow streams and riffles with a rocky substrate in a variety of habitats. | FSS, CSC | None | Nearest record is 3.5 miles northwest of Segment 4 associated with the Santa Ynez River. |
| California red-legged frog | *Rana draytonii* | Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. | **FT**, FSS, CSC | **Moderate** | Critical habitat is present within 1 mile of the Project Area on San Antonio Creek and within 2 miles on the Santa Ynez River.. |
| Western spadefoot | *Spea hammondii* | Occurs primarily in grassland, scrub, and chaparral habitats, but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying. | CSC | None | No vernal pools are known in the Project Area. |
| Coast Range newt | *Taricha torosa* | Lives in terrestrial habitats and riparian woodlands, and will migrate to breed in ponds, reservoirs, vernal pools, and slow moving streams. In region of Project Area, often use bedrock pools. | CSC | **High** | Observed in Sutton Canyon Creek during previous surveys (BRC, 2013a). |
| ***REPTILES*** | | | | | |
| California legless lizard | *Anniella pulchra* | Sandy or loose loamy soils with moisture content under sparse vegetation in live oak woodland, chaparral, and coastal sage scrub. | FSS, CSC | **Moderate** | Suitable habitat in oak woodland areas. |
| Western pond turtle | *Emys marmorata* | A thoroughly aquatic turtle of ponds, marshes, rivers, streams, and irrigation ditches, usually with aquatic vegetation. Suitable upland habitat and basking areas are needed. | FSS, CSC | **Present** | A single western pond turtle was observed in June 2014 where Segment 1 crosses Cañada Larga Creek. The turtle was resting at the time of the observation. Suitable habitat includes the Ventura River and numerous creeks. |
| Coast horned lizard | *Phrynosoma blainvillii* | Uses a wide variety of habitats, including coastal sage scrub. Most common along sandy washes with friable soils and scattered low bushes. | FSS, CSC | **Moderate** | Suitable habitat throughout Project Area. |

| Common Name | Scientific Name | Habitat Preference | Status | Likelihood to Occur Within Project Area | Known or Potential Occurrence Determination |
|---|---|---|---|---|---|
| Coast patch-nosed snake | *Salvadora hexalepis virgultea* | Brushy or shrubby vegetation in coastal southern California. Requires small mammal burrows for refuge and overwintering sites. Seldom detected, even when present. | CSC | Low | Not documented in within 5 miles of the Project vicinity. |
| Two-striped garter snake | *Thamnophis hammondii* | Highly aquatic, found in or near permanent fresh water, often along streams with rocky beds and riparian growth. | FSS, CSC | **Moderate** | Potential habitat in Carpinteria, Gobernador, Coyote, Casitas, Cañada Larga, Los Sauces, and Rincon Creeks. |
| South Coast garter snake | *Thamnophis sirtalis* ssp. | Marsh and upland habitats near permanent water with good strips of riparian vegetation in the southern California coastal plain, from sea level to about 2,800 feet ASL. | CSC | **Moderate** | Potential habitat in Carpinteria, Gobernador, Coyote, Casitas, Cañada Larga, Los Sauces, and Rincon Creeks. |
| ***BIRDS*** | | | | | |
| California condor | *Gymnogyps californianus* | Require vast expanses of open savanna, grasslands, and foothill chaparral in mountain ranges of moderate altitude. | **FE**, MBTA**, SE** | Low | Telemetry tracking data indicates that condor has been documented in the Project Area. No suitable nesting habitat is present within the Project Area. |
| Cooper's hawk | *Accipiter cooperii* | Nest sites mainly in riparian growths of deciduous trees in oak woodlands and riparian communities, in canyon bottoms, and on river floodplains. | MBTA, CWL | **Present** | During the 2014 raptor surveys, Cooper's hawk was observed in an oak woodland adjacent to Cañada Larga Creek in Segment 1, and in the woodlands along SR 150 in the vicinity of Segment 3B (GANDA 2014a). |
| Northern goshawk | *Accipiter gentilis* | Within coniferous forests, usually nests on north slopes, near water. Red fir, lodgepole pine, and aspens are typical nest trees. | FSS, MBTA, CSC | None | Outside of geographic range. Nearest record is more than 5 miles from the Project Area (eBird 2014a). |
| Sharp-shinned hawk | *Accipiter striatus* | Ponderosa pine, black oak, riparian deciduous, mixed conifer foist and Jeffrey pine habitats. Prefers riparian areas. | MBTA, CWL | **Moderate** | Suitable habitat in riparian woodlands. Documented winter visitor in Project vicinity. |
| Golden eagle | *Aquila chrysaetos* | Uses rolling foothills and mountain terrain, wide arid plateaus deeply cut by streams and canyons, open mountain slopes, and cliffs and rock outcrops. | BGEPA, MBTA, CFP, CWL | **Present** | An incidental sighting of a golden eagle was recorded during the 2014 botanical surveys in May of 2014 in the Sexton Canyon area (Segment 1) just south of the project transmission lines (GANDA 2014a). |

| Common Name | Scientific Name | Habitat Preference | Status | Likelihood to Occur Within Project Area | Known or Potential Occurrence Determination |
|---|---|---|---|---|---|
| Bald eagle | *Haliaeetus leucocephalus* | Found near ocean bays, lakes, rivers, and similar bodies of water with abundant fish and waterfowl for prey. | BGEPA, MBTA, SE | **Present** | Two bald eagles were observed foraging over Lake Casitas during the 2014 raptor surveys, approximately 500 feet from the Project (GANDA 2014a). No suitable nesting habitat is present within the Project Area. |
| Swainson's hawk | *Buteo swainsoni* | Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with fields that support suitable rodent populations. | **ST**, FSS, MBTA | Low | Not documented in Project vicinity. This species is uncommon in Santa Barbara and Ventura counties. |
| Northern harrier | *Circus cyaneus* | Coastal salt and freshwater marsh. Nest and forage in grasslands, from salt grass in desert sink to mountain cienegas. | MBTA, CSC | **High** | A northern harrier was observed in the Cañada Larga area of Segment 1 in 2012 (BioResource Consultants 2012). Additional records of the species are known from Cañada Larga and coastal lands of Carpinteria near Segment 3A (eBird 2014). |
| White-tailed kite | *Elanus leucurus* | Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. | MBTA, CSC | **High** | White-tailed kite was observed in the area south of Shepard Mesa near Segment 3A in 2012 (BioResource Consultants 2012). Multiple records for the species are documented in Cañada Larga in Segment 1 (eBird 2014). |
| Peregrine falcon | *Falco peregrinus anatum* | Breeding sites located on cliffs. Forages far afield, even to marshlands and ocean shores. | FSS, MBTA, CFP | **Moderate** | Previously documented in Cañada Larga and the Project vicinity. Suitable foraging habitat in Project Area. |
| Western snowy plover | *Charadrius alexandrinus nivosus* | Sandy beaches, salt pond levees, and shores of large alkali lakes. | **FT**, MBTA, CSC | None | No suitable habitat is present, the nearest recorded observations are coastal. |
| California least tern | *Sternula antillarum brownii* | Colonial breeder on bare or sparsely vegetated, flat substrates: sand beaches, alkali flats, landfills, or paved areas. | **FE**, **SE**, MBTA | None | No suitable habitat present, the nearest recorded observation is more than 5 miles from the Project Area. |
| Western yellow-billed cuckoo | *Coccyzus americanus occidentalis* | Riparian forest nester, along the broad, lower bottomlands of larger river systems. | **FC**, **SE**, MBTA | None | No suitable habitat present in Project Area. |

| Common Name | Scientific Name | Habitat Preference | Status | Likelihood to Occur Within Project Area | Known or Potential Occurrence Determination |
|---|---|---|---|---|---|
| Burrowing owl | *Athene cunicularia* | Open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably the California ground squirrel. | MBTA, CSC | **Moderate** | Suitable breeding and foraging habitat is present in ground squirrel communities in the Cañada Larga area in Segment 1, and near the Segment 3B/4 split. However, no burrowing owls were observed during past surveys. |
| California spotted owl | *Strix occidentalis occidentalis* | Mixed conifer forest, often with an understory of black oaks and other deciduous hardwoods, with a canopy closure > 40%. | FSS, CSC, MBTA | None | No suitable habitat. The nearest recorded observation is more than 5 miles from the Project Area. |
| Southwestern willow flycatcher | *Empidonax traillii extimus* | Riparian habitats with dense lower level vegetation and scattered large trees. Usually nests near open water. | **FE, SE**[1], MBTA | Low | Potential suitable habitat at the Ventura River. No southwestern willow flycatcher observed during protocol surveys in 2014 (GANDA 2014c). |
| Loggerhead shrike | *Lanius ludovicianus* | Broken woodlands, savanna, pinyon juniper, Joshua tree, and riparian woodlands, desert oases scrub, and washes. | MBTA, CSC | **High** | The species was recorded on Segment 1 and near Construction Site 133 in Segment 4 during field surveys in 2012 (BioResource Consultants 2012). Potentially suitable hunting, roosting, and nesting habitat is present. |
| Least Bell's vireo | *Vireo belli pusillus* | Summer resident of southern California in low riparian habitat in vicinity of water or in dry river bottoms; below 2,000 feet ASL. | **FE**, **SE**, MBTA | **Moderate** | The species was not observed during presence/absence surveys conducted in 2014 (GANDA 2014b), but was documented in the Cañada Larga area in 2013 (SCE, pers. comm.). |
| Bank swallow | *Riparia riparia* | Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, or ocean to dig nesting hole. | MBTA**, ST** | None | No suitable habitat, nearest recorded observation is associated with the Santa Clara River. |
| Coastal cactus wren | *Campylorhynchus brunneicapillus sandiegensis* | Southern California coastal sage scrub with large *Opuntia sp.* cactus for nesting. | MBTA, CSC | Low | Low quality habitat, the nearest recorded observation is more than 5 miles from the Project Area. |
| Coastal California gnatcatcher | *Polioptila californica californica* | Obligate, permanent resident of coastal sage scrub in arid washes, on mesas and slopes below 2,500 feet ASL in Southern California. | **FT**, MBTA, CSC | Low | Potentially suitable habitat in sage scrub. Nearest recorded observation is 4.5 miles northeast of Segment 1. |

| Common Name | Scientific Name | Habitat Preference | Status | Likelihood to Occur Within Project Area | Known or Potential Occurrence Determination |
|---|---|---|---|---|---|
| Yellow-breasted chat | *Icteria virens* | Inhabits low, dense riparian thickets of willow, blackberry, wild grape, and nests within 10 feet of the ground. | MBTA, CSC | **Present** | Observed in Segment 1 and at the Ventura River during 2014 surveys (GANDA 2014b). |
| Yellow warbler | *Setophaga petechia* | Riparian forests with riparian plant associations. Prefers willows, cottonwoods, aspens, sycamores, and alders for nesting and foraging. | MBTA, CSC | **Present** | Observed in Segment 1 and Ventura River riparian vegetation during 2014 surveys (GANDA 2014b). |
| Song sparrow | *Melospiza melodia* | Requires a source of water, moderately dense vegetation, plenty of light, and exposed ground or leaf litter for foraging. | MIS, MBTA | **Present** | Detected during the 2014 protocol-level surveys along segments 1, 2, and 3A, B (GANDA 2014b). |
| Belding's savannah sparrow | *Passerculus sandwichensis beldingi* | Inhabits coastal salt marshes from Santa Barbara south through San Diego County. Nests in *Salicornia* on and about margins of tidal flats. | MBTA, **SE** | None | No suitable habitat, the nearest recorded observations are associated with the Carpinteria Salt Marsh and Santa Clara River mouth. |
| Tricolored blackbird | *Agelaius tricolor* | Requires open water, protected nesting substrate, and foraging area with insect prey within a few kilometers of the colony. | MBTA, CSC | Low | No suitable nesting habitat, potential presence during foraging. Documented in Cañada Larga. |
| ***MAMMALS*** | | | | | |
| Mexican long-tongued bat | *Choeronycteris mexicana* | Feeds on nectar and pollen of night-blooming succulents. Roosts in relatively well-lit caves, and in and around buildings. | CSC | None | No suitable foraging or roosting habitat present in the Project Area. |
| Pallid bat | *Antrozous pallidus* | Deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting. Breeds in caves, crevices, and structures. | FSS, CSC | **Moderate** | Foraging and potential roosting habitat is present in the Project Area. |
| Townsend's big-eared bat | *Corynorhinus townsendii* | Throughout California in a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Breeds in caves, crevices, and man-made structures. | **CSL,** FSS | Low | Potential foraging habitat present in Project Area; however, the nearest recorded observation is more than 5 miles from the Project Area. |

| Common Name | Scientific Name | Habitat Preference | Status | Likelihood to Occur Within Project Area | Known or Potential Occurrence Determination |
|---|---|---|---|---|---|
| Western red bat | *Lasiurus blossevillii* | Prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging. | FSS, CSC | Low | Potential foraging habitat present; however, the nearest recorded observation is more than 5 miles from the Project Area. |
| Western mastiff bat | *Eumops perotis californicus* | Many open, semi-arid to arid habitats, including mixed conifer and deciduous woodlands, coastal scrub, grasslands, chaparral. Roosts in crevices in cliff faces, high buildings, trees, and tunnels. | CSC | Low | Potential foraging and roosting habitat present in Project Area. |
| Big free-tailed bat | *Nyctinomops macrotis* | Low-lying arid areas in southern California. Need high cliffs or outcrops for roosting sites. Feeds principally on large moths. | CSC | None | No suitable habitat, the nearest recorded observation is more than 5 miles from the Project Area. |
| Dulzura pocket mouse | *Chaetodipus californicus femoralis* | Variety of habitats including coastal scrub, chaparral, and grassland. | CSC | **Moderate** | Suitable habitat is present in the Project Area. |
| San Diego desert woodrat | *Neotoma lepida intermedia* | Cactus patches in coastal sage scrub and chaparral. They are particularly abundant in rock outcrops and rocky cliffs and slopes. | CSC | Low | Recorded within 2 miles of the Project Area previously; however, the taxon of this species has revised (see Section 3.1.2) and the desert woodrat likely to be in this area is Bryant's woodrat (*Neotoma bryanti intermedia*) which is not a special status species. |
| Ringtail | *Bassariscus astutus* | Rocky desert and riparian areas. | CFP | **High** | A SCE crew member indicated seeing a ringtail (dead) in the vicinity of Casitas Substation (BioResource Consultants 2012). |
| American badger | *Taxidea taxus* | Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food and open, uncultivated ground. Grasslands and scrub habitats. | CSC | **High** | Suitable foraging and denning habitat for badger is present in portions of Segment 1, and near the Segment 3B/4 split. A CNDDB occurrence for a badger (dead) in the vicinity of Casitas Substation was recorded in 2008 (CDFW 2014). |
| Mountain lion | *Puma concolor* | Dense thickets in brush or trees. Caves and other natural cavities within thickets are used for denning. Male home ranges are generally at least 15 square miles, with females utilizing smaller areas of about 3 to 12 square miles. | MIS | **High** | A mountain lion was observed (dead) along SR 33 near Segment 1 in 2011, within 0.5 mile of the Project Area (BioResource Consultants 2012). |

| Common Name | Scientific Name | Habitat Preference | Status | Likelihood to Occur Within Project Area | Known or Potential Occurrence Determination |
|---|---|---|---|---|---|
| Mule deer | *Odocoileus hemionus* | Forages on various shrubs in summer and winter. Prefers tender new growth. Forbs and grasses are important in spring, and brushy areas and tree thickets are used year-round for cover. Moderately dense shrublands and forests and dense herbaceous stands provide suitable year-round habitat for foraging and bedding down. | MIS | **Present** | Mule deer and their sign were found throughout all segments of the Project Area during the 2014 surveys within natural vegetation types. |

[1] The southwestern subspecies is Federal Endangered; the full species in State Endangered.

**Key:**
BGEPA = Protected under the Bald and Golden Eagle Protection Act
CDFW = Special protection by CDF
CFP = CDFW Fully Protected
CSC = CDFW Species of Concern
CSL = Candidate for state-listing as Threatened or Endangered
CWL = CDFW Watch List
FC = Federal Candidate for listing
FE = Federal Endangered
FSS = Forest Service Sensitive Species
FT = Federal Threatened
MBTA = Protected under the Migratory Bird Treaty Act
MIS = USFS Management Indicator Species
SE = State of California Endangered
ST = State of California Threatened

# 3.0 RESULTS

## 3.1 Special-status Biological Resources

### 3.1.1 Critical Habitat

Designated critical habitat is present in the Project Area and/or within five miles of the Project Area for four species: the Southern California steelhead, southwestern willow flycatcher, California red-legged frog, and arroyo toad. For a detailed description of each species and their designated critical habitat see the draft SBCRP Biological Assessment.

### 3.1.2 Special-status Wildlife

Special-status animal species with the potential to occur in the Project Area are listed in Table 2, along with their habitat suitability and an indication of their known presence, or assessment of their potential to occur, within the Project Area.

During the 2014 GANDA surveys no federal- or state-listed threatened or endangered wildlife species were observed in the Project Area. Least Bell's vireos were documented in the Cañada Larga area on July 31, September 5, and September 12, 2013. No evidence of breeding or nesting was observed (SCE, pers. comm.).

Eight special-status wildlife species were documented in 2014 within the Project Area: western pond turtle (*Emys marmorata*), Cooper's hawk (*Accipiter cooperii*), golden eagle (*Aquila chrysaetos*), bald eagle (*Haliaeetus leucocephalus*), song sparrow (*Melospiza melodia*), yellow-breasted chat (*Icteria virens*), yellow warbler (*Dendroica petechia*), and mule deer (*Odocoileus hemionus*). During previous surveys, five additional special-status species were detected: arroyo chub (*Gila orcuttii*), northern harrier (*Circus cyaneus*), white-tailed kite (*Elanus leucurus*), loggerhead shrike (*Lanius ludovicianus*), and Coast Range newt (*Taricha torosa*) (BioResource Consultants 2012). Based on geographic ranges and the presence of suitable habitat within the Project Area, 15 additional special-status wildlife species have a "High" or "Moderate" potential to occur in the Project Area: American badger (*Taxidea taxus*), ringtail (*Bassariscus astutus*), California red-legged frog (*Rana draytonii*), California legless lizard (*Anniella* sp.; in an areas where taxonomic changes for this genus are ongoing), coast horned lizard (*Phrynosoma blainvillii*), two-striped garter snake (*Thamnophis hammondii*), south coast garter snake (*Thamnophis sirtalis*), sharp-shinned hawk (*Accipiter striatus*), burrowing owl (*Athene cunicularia*), peregrine falcon (*Falco peregrinus*), least Bell's vireo (*Vireo pusillus bellii*), pallid bat (*Antrozous pallidus*), Dulzura pocket mouse (*Chaetodipus californicus femoralis)*, San Diego desert woodrat (*Neotoma lepida intermedia*), and mountain lion (*Puma concolor*). Note that there were adjustments to the taxonomy of the Neotoma lepida group in 2007 (Patton et al. 2007). Desert woodrats found in the Coast, Interior Coast, Transverse and Peninsular ranges are now considered to be Bryant's woodrat (*Neotoma bryanti intermedia*). *Neotoma lepida* is now more inland. The distribution of Bryant's woodrat along the coast is generally from the vicinity of Contra Costa County south into Baja California. Thus, the desert woodrat with the potential to occur in the Project Area is Bryant's woodrat.

Although monarch butterfly (*Danaus plexippus*) was observed in the Project Area, no roosting sites are documented within the Project Area. Monarch butterflies are not listed by the USFWS or CDFW, and individual monarch butterflies are not considered a sensitive resource; however, CDFW does consider monarch butterfly winter roosting sites a sensitive resource.

Mule deer, mountain lion, and song sparrow are Management Indicator Species (MIS) when on USFS lands. Deer were observed throughout the Project Area in 2014; a dead mountain lion was found in the area of Segment 1 in 2011 (BioResource Consultants 2012); and song sparrow is documented throughout the Project Area and was detected during the 2014 surveys. All three species could be present on USFS lands within the Project Area.

Suitable bird nesting habitat is present throughout the Project Area and along the access routes. Raptor nests were observed throughout the Project Area (GANDA 2014a).

A full list of wildlife species observed in the Project Area is provided in Appendix A. A total of 114 species have been identified including one insect, one fish, two amphibian, five reptile, 89 bird, and 15 mammal species.

## 3.2 General Wildlife Species

### 3.2.1 Herpetofauna

Herpetofauna species observed in 2014 included coastal whiptail (*Aspidoscelis tigris stejnegeri*), gopher snake (*Pituophis catenifer*), western fence lizard (*Sceloporus occidentalis occidentalis*), and side-blotched lizard (*Uta stansburiana elegans*). Herpetofauna species observed previously include California treefrog (*Pseudacris cadaverina*) and Baja California treefrog (*Pseudacris hypochondriaca hypochondriaca*) (BioResource Consultants 2012).

### 3.2.2 Avian Species

Common bird species observed in 2014 included oak titmouse (*Baeolophus inornatus*), red-tailed hawk (*Buteo jamaicensis*), red-shouldered hawk (*B. lineatus*), California quail (*Callipepla californica*), Anna's hummingbird (*Calypte anna*), lesser goldfinch (*Carduelis psaltria*), American goldfinch (*Carduelis tristis*), house finch (*Carpodacus mexicanus*), turkey vulture (*Cathartes aura*), rock pigeon (*Columba livia*), American crow (*Corvus brachyrhynchos*), common raven (*Corvus corax*), American kestrel (*Falco sparverius*), acorn woodpecker (*Melanerpes formicivorus*), California towhee (*Melozone crissalis*), northern mockingbird (*Mimus polyglottos*), brown-headed cowbird (*Molothrus ater*), house sparrow (*Passer domesticus*), bushtit (*Psaltriparus minimus*), black phoebe (*Sayornis nigricans*), western meadowlark (*Sturnella neglecta*), European starling (*Sturnus vulgaris*), California thrasher (*Toxostoma redivivum*), western kingbird (*Tyrannus verticalis*), and mourning dove (*Zenaida macroura*).

### 3.2.3 Mammals

Common mammals, or their sign, observed within the Project Area during the 2014 surveys included Virginia opossum (*Didelphis virginiana*), coyote (*Canis latrans*), bobcat (*Lynx rufus*), big-eared woodrat (*Neotoma macrotis*), mule deer, California ground squirrel (*Otospermophilus beecheyi*), raccoon (*Procyon lotor*), western gray squirrel (*Sciurus griseus*), fox squirrel (*Sciurus*

*niger*), desert cottontail (*Sylvilagus audubonii*), brush rabbit (*Sylvilagus bachmani*), and various domestic animals.

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# APPENDIX A

## Wildlife Species Compendium

## Animal Species Observed During Surveys in the Project Area 2012-2014

**Bold indicates a special-status species; species observed during 2014 surveys indicated with an asterisk (*)**

| Common Name | Scientific Name |
|---|---|
| ***INSECTS*** | |
| **Monarch** | ***Danaus plexippus*** |
| ***FISH*** | |
| **Arroyo chub** | ***Gila orcuttii*** |
| ***AMPHIBIANS*** | |
| California treefrog | *Pseudacris cadaverina* |
| Baja California treefrog | *Pseudacris hypochondriaca hypochondriaca* |
| ***REPTILES*** | |
| Coastal whiptail* | *Aspidoscelis tigris stejnegeri* |
| Gopher snake* | *Pituophis catenifer* |
| Northwestern fence lizard* | *Sceloporus occidentalis occidentalis* |
| Western side-blotched lizard* | *Uta stansburiana elegans* |
| **Western pond turtle*** | ***Emys marmorata*** |
| ***BIRDS*** | |
| Canada goose* | *Branta Canadensis* |
| Mallard* | *Anas platyrhynchos* |
| California quail* | *Callipepla californica* |
| Great blue heron | *Ardea Herodias* |
| Snowy egret | *Egretta thula* |
| Turkey vulture* | *Cathartes aura* |
| **Northern harrier** | ***Circus cyaneus*** |
| **White-tailed kite** | ***Elanus leucurus*** |
| **Cooper's hawk*** | ***Accipiter cooperii*** |
| Red-shouldered hawk* | *Buteo lineatus* |
| Red-tailed hawk* | *Buteo jamaicensis* |
| **Golden eagle*** | ***Aquila chrysaetos*** |
| **Bald eagle*** | ***Haliaeetus leucocephalus*** |
| Killdeer | *Charadrius vociferous* |
| Rock pigeon* | *Columba livia* |
| Band-tailed pigeon | *Patagioenas fasciata* |
| Eurasian collared-dove | *Streptopelia decaocto* |
| Mourning dove* | *Zenaida macroura* |
| Greater roadrunner* | *Geococcyx californianus* |
| Great horned owl* | *Bubo virginianus* |
| Black-chinned hummingbird* | *Archilochus alexandri* |

| Common Name | Scientific Name |
|---|---|
| Anna's hummingbird* | *Calypte anna* |
| Costa's hummingbird* | *Calypte costae* |
| Allen's hummingbird* | *Selasphorus sasin* |
| Acorn woodpecker* | *Melanerpes formicivorus* |
| Nuttall's woodpecker | *Picoides nuttallii* |
| Downy woodpecker* | *Picoides pubescens* |
| Hairy woodpecker | *Picoides villosus* |
| Northern flicker | *Colaptes auratus* |
| American kestrel* | *Falco sparverius* |
| Western wood-pewee | *Contopus sordidulus* |
| Pacific-slope flycatcher* | *Empidonax difficilis* |
| Black phoebe* | *Sayornis nigricans* |
| Say's phoebe* | *Sayornis saya* |
| Ash-throated flycatcher* | *Myiarchus cinerascens* |
| Cassin's kingbird* | *Tyrannus vociferans* |
| Western kingbird* | *Tyrannus verticalis* |
| **Loggerhead shrike** | ***Lanius ludovicianus*** |
| Warbling vireo* | *Vireo gilvus* |
| Hutton's vireo* | *Vireo huttoni* |
| Western scrub-jay* | *Aphelocoma californica* |
| American crow* | *Corvus brachyrhynchos* |
| Common raven* | *Corvus corax* |
| Northern rough-winged swallow* | *Stelgidopteryx serripennis* |
| Cliff Swallow* | *Petrochelidon pyrrhonota* |
| Mountain chickadee | *Poecile gambeli* |
| Oak titmouse* | *Baeolophus inornatus* |
| Bushtit* | *Psaltriparus minimus* |
| White-breasted nuthatch* | *Sitta carolinensis* |
| Rock wren* | *Salpinctes obsoletus* |
| Canyon wren* | *Catherpes mexicanus* |
| House wren* | *Troglodytes aedon* |
| Bewick's wren* | *Thryomanes bewickii* |
| Wrentit* | *Chamaea fasciata* |
| Ruby-crowned kinglet | *Regulus calendula* |
| Western bluebird* | *Sialia Mexicana* |
| Hermit thrush* | *Catharus guttatus* |
| Swainson's thrush* | *Catharus ustulatus* |
| American robin | *Turdus migratorius* |
| Northern mockingbird* | *Mimus polyglottos* |
| California thrasher* | *Toxostoma redivivum* |
| European starling* | *Sturnus vulgaris* |

| Common Name | Scientific Name |
|---|---|
| Cedar waxwing | *Bombycilla cedrorum* |
| Phainopepla* | *Phainopepla nitens* |
| Orange-crowned warbler* | *Oreothlypis celata* |
| Common yellowthroat* | *Geothlypis trichas* |
| **Yellow warbler** | ***Dendroica petechial*** |
| Yellow-rumped warbler | *Dendroica coronate* |
| Wilson's warbler* | *Wilsonia pusilla* |
| **Yellow-breasted chat** | ***Icteria virens*** |
| Spotted towhee* | *Pipilo maculatus* |
| California towhee* | *Melozone crissalis* |
| Chipping sparrow | *Spizella passerine* |
| **Song sparrow*** | ***Melospiza melodia*** |
| Dark-eyed junco* | *Junco hyemalis* |
| Western tanager* | *Piranga ludoviciana* |
| Black-headed grosbeak* | *Pheucticus melanocephalus* |
| Blue grosbeak* | *Passerina caerulea* |
| Lazuli bunting* | *Passerina amoena* |
| Red-winged blackbird | *Agelaius phoeniceus* |
| Western meadowlark* | *Sturnella neglecta* |
| Brewer's blackbird | *Euphagus cyanocephalus* |
| Brown-headed cowbird* | *Molothrus ater* |
| Hooded oriole* | *Icterus cucullatus* |
| Bullock's oriole* | *Icterus bullockii* |
| House finch* | *Carpodacus mexicanus* |
| Purple finch | *Carpodacus purpureus* |
| Lesser goldfinch* | *Carduelis psaltria* |
| American goldfinch* | *Carduelis tristis* |
| House sparrow* | *Passer domesticus* |
| ***MAMMALS*** | |
| Virginia opossum* | *Didelphis virginiana* |
| California ground squirrel* | *Otospermophilus beecheyi* |
| Western gray squirrel* | *Sciurus griseus* |
| Eastern fox squirrel* | *Sciurus niger* |
| Big-eared woodrat | *Neotoma macrotis* |
| Desert cottontail* | *Sylvilagus audubonii* |
| Brush rabbit* | *Sylvilagus bachmani* |
| **Mule deer*** | ***Odocoileus hemionus*** |
| Wild pig | *Sus scrofa* |
| Bobcat* | *Lynx rufus* |
| **Mountain lion** | ***Puma concolor*** |
| Coyote* | *Canis latrans* |

| Common Name | Scientific Name |
|---|---|
| American black bear | *Ursus americanus* |
| Raccoon | *Procyon lotor* |
| Striped skunk | *Mephitis mephitis* |