

Appendix E

Biological Resources Studies (E1 to E8)

- E1 – Special Status Plant Species Report*
- E2 – Gnatcatcher Survey Report*
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Appendix E1
Special Status Plant Species Report

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Draft

Special-status Plant Species Report

Aliso Canyon Turbine Replacement Project
Los Angeles County, California

Prepared for:

Southern California Gas Company

Prepared by:

AECOM

9675 Businesspark Avenue

San Diego, California 92131

858.536.5610

Contact: Frank Landis, Senior Botanist

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Figure 3. Proposed Project Site (title to be updated by Manju)—this may be seven pages long..... **Error! Bookmark not defined.**

1.0 INTRODUCTION

A focused special-status plant survey was conducted to support the Aliso Canyon Turbine Replacement (ACTR) project proposed by the Southern California Gas Company (SCGC), a Sempra Energy utility company, for their Aliso Canyon Storage Field in Los Angeles County, California. This project would upgrade power lines to the Aliso Canyon Storage Field in Porter Ranch, California and includes an alignment which traverses adjacent property and concludes in the City of Santa Clarita. A portion of the alignment falls within the Santa Susana Mountains Significant Ecological Area, a designation specific to Los Angeles County. This document provides a floristic inventory of the study area and the potentially sensitive botanical resources both on the site and in the surrounding area in accordance with the Los Angeles County Guidelines for Significant Ecological Areas (2004). This report also presents incidental sightings of sensitive wildlife species detected during the surveys.

1.1 Project Description

The Aliso Canyon Storage Field is located in the City of Porter Ranch. The survey included the storage field as well as the electrical alignment in the City of Santa Clarita and Los Angeles County, California.

The proposed project would upgrade power lines and replace existing power poles to the Aliso Canyon Storage Field. The power lines traverse rights-of-way held by Southern California Edison on adjacent properties before connecting to the power poles on the Aliso Canyon Storage Field. Initially, the project considered two routes, the 16kV route, and the 66 kV route. Both routes were surveyed. Subsequent to the field work, SCGC determined that the 66kV route was preferred. Hence, this report only discusses information relevant to the 66kV route. However, the methods section discusses all relevant work performed during this survey.

2.0 Existing Conditions

A summary of the existing conditions for the general vicinity and the study area is presented in the Biological Resources Section of the Proponent's Environmental Assessment prepared for this project. Please refer to that document for descriptions of the existing vegetation communities and specific site characteristics.

3.0 METHODS

The following sections describe the study methods used during the special-status plant surveys.

3.1 Literature Review

For purposes of this report, a plant species is considered sensitive if it is: (1) listed or proposed for listing as threatened or endangered by state or federal agencies; (2) on List 1A (presumed extinct in California), List 1B (considered endangered throughout its range), or List 2 (considered endangered in California but more common elsewhere) of the California Native Plant Society's (CNPS) *Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2009); or (3) considered rare, endangered, or threatened by the State of California (California Department of Fish and Game (CDFG) 2009a) or other local conservation organizations or specialists. Noteworthy plant species are considered to be those that are classified as CNPS List 3 (more information about the plant's distribution and rarity needed) and List 4 (plants of limited distribution) (CNPS 2009).

Prior to conducting the field survey, sensitive plant species that would potentially be present on the site and surrounding areas were identified using the California Natural Diversity Data Base (CNDDDB) (CDFG 2009b), and the Inventory of Rare and Endangered Plants on the CNPS website (CNPS 2009). A CNDDDB database search was conducted, encompassing a 10-mile radius around the proposed study area and a nine-quadrangle search was conducted in the CNPS database around the U.S. Geological Survey quadrangle in which the proposed project site is located. This search included the Newhall, Whitaker Peak, Warm Springs Mountain, Mint Canyon, San Fernando, Green Valley, Val Verde, Santa Susana, and Oat Mountain quadrangles. A briefing was prepared that contained photos and information of all plant species that could potentially be found on the project site and was distributed to field biologists conducting the surveys. A list of special-status species potentially occurring on the project site and surrounding areas is presented in Appendix 1.

3.2 Botanical Surveys

Special-status plant surveys were conducted for ten days in conjunction with the vegetation community mapping effort. From April 14, 2009 to April 17, 2009, Ms. Julie Niceswanger and Mr. Rocky Brown surveyed the 16kV proposed project site and parts of the 66kV site within SCGC property. From April 20, 2009 to April 23, 2009, Dr. Frank Landis and Mr. Rocky Brown surveyed the remaining 66KV proposed alignment site on lands adjacent to the SCGC property. On June 8 and June 9, 2009, Dr. Landis and Mr. Brown surveyed additional towers on the 66 kV proposed alignment, additional areas within the SCGC property, and rechecked five detections of potential sensitive species to confirm identities.

The study area defined for this survey was limited to 25 meters (approximately 82 feet) on each side of the proposed alignment. Surveyors concentrated their effort around each power pole within the alignment as this area would require the most disturbance during project activities. The span between poles was scanned for appropriate habitat

types to support sensitive plant species and surveyed when accessible. In several cases, the survey area included cliffs that were inaccessible and binoculars were used to make a visual assessment of the habitat. The surveys were conducted by walking meandering transects, recording observed plant species within the study area, and indicating special-status and non-native species. Locations of special-status species were recorded with sub-meter accuracy global positioning system units.

Surveys focused on natural areas however, the wildland-urban interface was surveyed if natural plant communities occurred within the 25 meter survey area. Five poles in urban Santa Clarita were scanned but not surveyed, as the entire 25 meter survey area around each pole was landscaped with ornamental non-native plants and there was a low likelihood for special-status plants to occur within these landscaped areas. An additional four poles positioned within the wildland-urban interface were surveyed due to adjacent natural habitat.

Plant species found within the study area, both sensitive and non-sensitive, were identified and recorded. When the identity of the species was not known in the field, either a sample was collected and pressed or a photograph and notes were taken to aid in the identification. Due to their sensitivity, special-status plants were photographed rather than collected.

Plants were identified to the species level from photographs and specimens and a floral inventory was compiled. Nomenclature follows Calflora (2009) and identification was conducted using the *Jepson Manual* (Hickman, 1993) supplemented by McAuley (1996), Lightner (2006), and Calflora (2009). Family names follow the current APG II system (2009) for flowering plants and Allen et al (2006) for ferns which have been updated since Hickman's publication of the *Jepson Manual* in 1993. Appendix 2 provides a list of all species encountered and includes references to the families found in the *Jepson Manual* (Hickman, 1993) where changes have occurred.

3.3 Incidental Wildlife Survey

During the field surveys, observations of potentially sensitive wildlife species were recorded as they occurred. If surveyors were unfamiliar with a species, pictures and other information were used to identify them in the office.

4.0 SURVEY RESULTS

4.1 Plant Species

In the 66kV portion of the proposed project site, 182 plant species were identified, including lycophytes, ferns, conifers, and flowering plants (Appendix 2). Approximately 82 percent of the species found were growing in natural plant communities, and the rest (16 percent) were growing in the urban-wildland interface where escaped ornamentals

were present. Of the plants found in non-urban plant communities, approximately 25 percent were non-native.

Two sensitive plant species were identified during the survey: slender mariposa lily (*Calochortus clavatus* var. *gracilis*) and Plummer's mariposa lily (*Calochortus plummerae*). Both species are listed on CNPS List 1B.

Over 1,320 slender mariposa lilies were detected around seven towers on June 8 and 9, 2009. The species was initially detected in April prior to blooming, and by June 8, almost all plants had finished flowering. Nonetheless, enough plants were blooming at each site to make a definitive identification, based on pictures and a specimen collected.

Four Plummer's mariposa lilies were found in a single population, east of the current compressor site within the SCGC plant. They are growing in burned chaparral, on a slope roughly 8-10 meters from the roadway.

Although other potential sensitive species were thought to occur on the site, subsequent visits determined that all of these were common species. The list in Appendix 2 has been updated to reflect these identifications.

Table 1. Sensitive Plant Data

Species	Location	Number	Count/Estimate
<i>Calochortus clavatus</i> var. <i>gracilis</i>	Tower 12/5	233	Count
<i>Calochortus clavatus</i> var. <i>gracilis</i>	Tower 13/1	40	Count
<i>Calochortus clavatus</i> var. <i>gracilis</i>	Tower 13/2	>300	Estimate
<i>Calochortus clavatus</i> var. <i>gracilis</i>	Tower 13/3	>500	Estimate
<i>Calochortus clavatus</i> var. <i>gracilis</i>	Tower 14/1	186	Count
<i>Calochortus clavatus</i> var. <i>gracilis</i>	Tower 14/2	57	Count
<i>Calochortus clavatus</i> var. <i>gracilis</i>	Tower 14/6	5	Count
<i>Calochortus plummerae</i>	Condenser	4	Count

4.2 Incidental Wildlife Sightings

One coast horned lizard (*Phrynosoma coronatum*) was observed at Tower 14/1. The coast horned lizard is listed by CDFG as a species of special concern (CDFG 2009a). On Tower 14/2, one Cooper's hawk (*Accipiter cooperi*) was observed perching and taking flight over the proposed project area. This species is on the CDFG watch list (CDFG 2009a)

5.0 DISCUSSION AND FUTURE EFFORTS

Two sensitive plant species were observed during the 2009 surveys. Both *Calochortus clavatus* var. *gracilis* and *Calochortus plummerae* were identified at sites within the proposed project area. A second survey should be carried out in August, to look for

any late-blooming special-status plants (as noted in Appendix 1) that were not detectable in the current efforts. Once this survey is complete, this report will be updated to incorporate the results of all surveys.

If impacted by the project development these two sensitive species would need to be mitigated. The four *Calochortus plummerae* found are on the outer edge of the proposed project site, on the far side of the road from the compressor plant. They can and should be avoided. The *Calochortus clavatus* var. *gracilis* plants may be avoided, and the project should be designed to minimize overlap between their habitat and areas directly disturbed by the project.

Mitigation for impacts to *Calochortus clavatus* individuals may include the collection of dormant bulbs and seeds either for transplant to appropriate undisturbed portions of the project site, or for reintroduction to appropriate areas that were disturbed by the project. Additionally, *Calochortus clavatus* has the reputation of being a difficult plant to grow (Gerritsen and Parsons, 2007), so any planting should be assumed to have a low success rate. It is recommended that a Mitigation Plan be developed to provide adequate information about mitigation alternatives.

Depending on the physical characteristics of the soil, it might be possible to use equipment that does not damage the soil in which these plants grow (for instance, by using light weight machinery and using plates to spread the equipment weight across a large surface). There is no precedent for doing this to protect bulbs, and no references that demonstrate how much compaction a buried *Calochortus* bulb might survive have been found in the published literature.. Nonetheless, if it is possible to install the towers without damaging the dormant bulbs in the soil, it would minimize the need for mitigation efforts to the area impacted by the new towers. This might be the cost effective approach.

6.0 REFERENCES

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APPENDIX 1. Potentially Occurring Special-status Plant Species for the Aliso Canyon Turbine Replacement Project

Species	Status	Habitat	Blooming Period	Elevation	Likelihood
Mt. Pinos onion (<i>Allium howellii</i> var. <i>clokeyi</i>)	CNPS List 1B	Great Basin scrub, Pinyon and juniper woodland	Apr-Jun	1300-1850 m	Based on the site description, suitable habitat for this species does not exist within the proposed project site. Therefore, Mt. Pinos onion has a low likelihood of occurring on the proposed project site.
Braunton's milk-vetch (<i>Astragalus brauntonii</i>)	FE, CNPS List 1B	Chaparral, Coastal scrub, Valley and foothill grassland/recent burns or disturbed areas, usually sandstone with carbonate layers	Jan-Aug	4-640 m	Based on habitat and topography, apparently suitable habitat exists within the proposed project site. However, surveys during the species' blooming period did not detect the species. Nonetheless, Braunton's milk-vetch has a high likelihood of occurring on the site. The nearest documented occurrence of this species is approximately 1.5 miles west of the proposed project site.
Nevin's barberry (<i>Berberis nevinii</i>)	FE, CE, CNPS List 1B	Chaparral, Cismontane woodland, Coastal scrub, Riparian scrub/sandy or gravelly soils	Mar-Jun	274-825 m	Based on habitat and topography, apparently suitable habitat exists within the proposed project site. However, surveys during the species' blooming period did not detect the species. Nonetheless, Nevin's barberry has a medium likelihood of occurring on the site. The nearest documented occurrence of this species is approximately 7.5 miles east of the proposed project site.
round-leaved filaree (<i>California macrophylla</i>)	CNPS List 1B	Cismontane woodland, Valley and foothill grassland/clay soils	Mar-May	15-1200 m	Based on habitat and topography, apparently suitable habitat exists within the proposed project site. However, surveys during the species' blooming period did not detect the species. Nonetheless, round-leaved filaree has a high likelihood of occurring on the site. The nearest documented occurrence of this species is approximately 8.5 miles northwest of the proposed project site.
Slender mariposa lily (<i>Calochortus clavatus</i> var. <i>gracilis</i>)	CNPS List 1B	Chaparral, Coastal scrub, Valley and foothill grassland	Mar-Jun	360-1000	Based on habitat and topography, apparently suitable habitat exists within the proposed project site. However, surveys during the species' blooming period did not detect the species. Therefore slender mariposa has a high likelihood of occurring on the site. The nearest documented occurrence of this species is approximately 2 miles north of the proposed project site.

Species	Status	Habitat	Blooming Period	Elevation	Likelihood
Plummer's mariposa lily (<i>Calochortus plummerae</i>)	CNPS List 1B	Chaparral, Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Valley and foothill grassland/granitic, rocky areas	May-Jul	100-1700	Based on habitat and topography, apparently suitable habitat exists within the proposed project site. Surveys have found non-blooming <i>Calochortus</i> on-site. Therefore Plummer's mariposa has a high likelihood of occurring on the site. The nearest documented occurrence of this species is approximately 1.5 miles west of the proposed project site.
southern tarplant (<i>Centromadia parryi</i> ssp. <i>australis</i>)	CNPS List 1B	Marshes and swamps(margins), Valley and foothill grassland (vernally mesic), Vernal pools	May-Nov	0-427 m	Based on the site description, suitable habitat for this species does not exist within the proposed project site. Therefore, southern tarplant has a low likelihood of occurring on the proposed project site.
San Fernando Valley spineflower (<i>Chorizanthe parryi</i> var. <i>fernandina</i>)	FC, CE, CNPS List 1B	Coastal scrub(sandy), Valley and foothill grassland	Apr-Jun	150-1220	Based on habitat and topography, apparently suitable habitat exists within the proposed project site. Surveys have found spineflowers on-site. Therefore San Fernando Valley spineflower has a high likelihood of occurring on the site. The nearest documented occurrence of this species is approximately 1.5 miles west of the proposed project site.
Parry's spineflower (<i>Chorizanthe parryi</i> var. <i>parryi</i>)	CNPS List 1B	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland/sandy or rocky openings	Apr-Jul	270-1220	Based on habitat and topography, apparently suitable habitat exists within the proposed project site. Surveys have found spineflowers on-site. Therefore Parry's spineflower has a high likelihood of occurring on the site. The nearest documented occurrence of this species is approximately 18 miles north of the proposed project site.
Santa Susana tarplant (<i>Deinandra minthornii</i>)	CR,CNPS List 1B	Chaparral, Coastal scrub/rocky areas	Jul-Nov	280-760 m	Based on habitat and topography, apparently suitable habitat exists within the proposed project site. To date, it has not been found on the proposed project site. Nonetheless, Santa Susana tarplant has a medium likelihood of occurring on the site. The nearest documented occurrence of this species is approximately 1.5 miles west of the proposed project site.

Species	Status	Habitat	Blooming Period	Elevation	Likelihood
slender-horned spineflower (<i>Dodecahema leptoceras</i>)	FE, CE, CNPS List 1B	Chaparral, Cismontane woodland, Coastal scrub (alluvial fan)/sandy soils	Apr-Jun	200-760 m	Based on the site description and personal knowledge of the surveyors, suitable habitat for this species does not exist within the proposed project site. Therefore, slender-horned spineflower has a low likelihood of occurring on the proposed project site.
Blochman's dudleya (<i>Dudleya blochmaniae</i> ssp. <i>blochmaniae</i>)	CNPS List 1B	Coastal bluff scrub, Chaparral, Coastal scrub, Valley and foothill grassland/rocky, often clay or serpentinite soils	Apr-Jun	5-450 m	Based on habitat and topography, apparently suitable habitat exists within the proposed project site. However, surveys during the species' blooming period did not detect the species. Nonetheless, Blochman's dudleya has a high likelihood of occurring on the site. The nearest documented occurrence of this species is approximately 9 miles southwest of the proposed project site.
Agoura Hills dudleya (<i>Dudleya cymosa</i> ssp. <i>agourensis</i>)	FT, CNPS List 1B	Chaparral, Cismontane woodland/rocky, volcanic soils	May-Jun	200-500 m	Based on habitat and topography, apparently suitable habitat exists within the proposed project site. However, surveys during the species' blooming period did not detect the species. Nonetheless, Agoura Hills dudleya has a medium likelihood of occurring on the site. . The nearest documented occurrence of this species is approximately 13.5 miles southwest of the proposed project site.
many-stemmed dudleya (<i>Dudleya multicaulis</i>)	CNPS List 1B	Chaparral, Coastal scrub, Valley and foothill grassland/often clay soils	Apr-Jul	15-790 m	Based on habitat and topography, apparently suitable habitat exists within the proposed project site. However, surveys during the species' blooming period did not detect the species. Nonetheless, Blochman's dudleya has a medium likelihood of occurring on the site. The nearest documented occurrence of this species is approximately 13.5 miles southwest of the proposed project site.
San Gabriel bedstraw (<i>Galium grande</i>)	CNPS List 1B	Broadleafed upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest	Jan-Jul	425-1500 m	Based on habitat and topography, apparently suitable habitat exists within the proposed project site. However, surveys during the species' blooming period did not detect the species. Therefore, San Gabriel bedstraw has a medium likelihood of occurring on the proposed project site. The nearest documented occurrence of this species is approximately 17 miles north of the proposed project site.

Species	Status	Habitat	Blooming Period	Elevation	Likelihood
Los Angeles sunflower (<i>Helianthus nuttallii</i> ssp. <i>parishii</i>)	CNPS List 1A,	Marshes and swamps (coastal salt and freshwater)	Aug-Oct	10-1675 m	Based on the site description, suitable habitat for this species does not exist within the proposed project site. Therefore, Los Angeles sunflower has a low likelihood of occurring on the proposed project site.
Ross' pitcher sage (<i>Lepechinia rossii</i>)	CNPS List 1B	Chaparral	May-Sep	305-790 m	Based on habitat and topography, apparently suitable habitat exists within the proposed project site. However, surveys during the species' blooming period did not detect the species. Nonetheless, Ross' pitcher sage has a medium likelihood of occurring on the site. The nearest documented occurrence of this species is approximately 17 miles northwest of the proposed project site.
Davidson's bush mallow (<i>Malacothamnus davidsonii</i>)	CNPS List 1B	Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland	Mar-Jun	185-855	Based on habitat and topography, apparently suitable habitat exists within the proposed project site. Surveys have found non-blooming <i>Malacothamnus</i> on-site. Therefore Davidson's bush-mallow has a high likelihood of occurring on the site. The nearest documented occurrence of this species is approximately 7.5 miles east of the proposed project site.
Moran's navarretia (<i>Navarretia fossalis</i>)	FT, CNPS List 1B	Chenopod scrub, Marshes and swamps (assorted shallow freshwater), Playas, Vernal pools	Apr-Jun	30-1300 m	Based on the site description, suitable habitat for this species does not exist within the proposed project site. Therefore, Moran's navarretia has a low likelihood of occurring on the proposed project site.
Ojai navarretia (<i>Navarretia ojaiensis</i>)	CNPS List 1B	Chaparral (openings), Coastal scrub (openings), Valley and foothill grasslands	May-Jul	275-620 m	Based on habitat and topography, apparently suitable habitat exists within the proposed project site. However, surveys during the species' blooming period did not detect the species. Nonetheless, Ojai navarretia has a medium likelihood of occurring on the site. The nearest documented occurrence of this species is approximately 13 miles northwest of the proposed project site.

Species	Status	Habitat	Blooming Period	Elevation	Likelihood
Peninsular nolina (<i>Nolina cismontana</i>)	CNPS List 1B	Chaparral, Coastal scrub/sandstone or gabbro soils	May-Jul	140-1275 m	Based on habitat and topography, apparently suitable habitat exists within the proposed project site. However, surveys during the species' blooming period did not detect the species. Nonetheless, peninsular nolina has a medium likelihood of occurring on the site. The nearest documented occurrence of this species is approximately 53 miles west of the proposed project site.
short-joint beavertail (<i>Opuntia basilaris</i> var. <i>brachyclada</i>)	CNPS List 1B	Chaparral, Joshua tree "woodland", Mojavean desert scrub, Pinyon and juniper woodlands	Apr-Jun	425-1800 m	Based on the site description, suitable habitat for this species does not exist within the proposed project site. Therefore, short-joint beavertail has a low likelihood of occurring on the proposed project site.
California orcutt grass (<i>Orcuttia californica</i>)	FE, CE, CNPS List 1B	Vernal pools	Apr-Aug	15-660 m	Based on the site description, suitable habitat for this species does not exist within the proposed project site. Therefore, California orcutt grass has a low likelihood of occurring on the proposed project site.
white rabbit-tobacco (<i>Pseudognaphalium leucocephalum</i>)	CNPS List 2	Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland/sandy, gravelly soils	(Jul) Aug-Nov (Dec)	0-2100 m	Based on habitat and topography, apparently suitable habitat exists within the proposed project site. To date, it has not been found on the proposed project site. Nonetheless, Santa Susana tarplant has a medium likelihood of occurring on the site. The nearest documented occurrence of this species is approximately 10 miles west of the proposed project site.
chaparral ragwort (<i>Senecio aphanactis</i>)	CNPS List 2	Chaparral, Cismontane woodland, Coastal scrub/sometimes alkaline soils	Jan-Apr	15-800 m	Based on habitat and topography, apparently suitable habitat exists within the proposed project site. However, surveys during the species' blooming period did not detect the species. Nonetheless, chaparral ragwort has a medium likelihood of occurring on the site. The nearest documented occurrence of this species is approximately 8.5 miles northwest of the proposed project site.

Species	Status	Habitat	Blooming Period	Elevation	Likelihood
Greata's aster (<i>Symphyotrichum greatae</i>)	CNPS List 1B	Broadleafed upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest, Riparian woodland/mesic soils	Jun-Oct	300-2010 m	Based on habitat and topography, apparently suitable habitat exists within the proposed project site. To date, it has not been found on the proposed project site. Nonetheless, Greata's aster has a high likelihood of occurring on the site. The nearest documented occurrence of this species is approximately 7.5 miles east of the proposed project site.
<p><u>Status Codes:</u></p> <p>FE = Federally Endangered; FT = Federally Threatened; CE = State of California Endangered; CT = State of California Threatened; CR = State of California Rare, CNPS 1A = Presumed Extinct in California; CNPS 1B = Rare, Threatened, or Endangered in California and Elsewhere; CNPS 2 = Rare, Threatened, or Endangered in California but Common Elsewhere; CNPS 4 = Plants of Limited Distribution</p>					

Appendix 2. Plant Species Detected During the Survey

Lycopods

- Selaginellaceae (Spike moss family)
 - spike moss (*Selaginella bigelovii*)

Ferns

- Lomariopsidaceae (Climbing holly ferns)
 - boston fern (*Nephrolepis exaltata*)*p
- Pteridaceae (Brake family)
 - birdfoot cliffbrake (*Pellaea mucronata*)
 - goldback fern (*Pentagramma triangularis*)

Conifers (Pines and Cypresses)

- Cupressaceae (Cypress family)
 - italian cypress (*Cupressus sempervirens*)*p
 - juniper (*Juniperus* sp.)*p
 - giant sequoia (*Sequoiadendron giganteum*)p
- Pinaceae (Pine Family)
 - Non-native pine (*Pinus* sp)*p

Angiosperms: Monocots

- Agavaceae (Agave Family, part of Liliaceae in Jepson)
 - agave (*Agave* sp.)*p
 - chaparral yucca (*Hesperoyucca whipplei*)
- Arecaceae (Palm Family)
 - Mexican fan palm (*Washingtonia robusta*)*p
- Asphodelaceae (Asphodel family)
 - aloe (*Aloe* sp.)*p
 - red hot poker (*Kniphofia uvaria*)*p
- Cyperaceae (sedge family)
 - umbrella plant (*Cyperus involucratus*)*
- Hyacinthaceae (Hyacinth family, part of Liliaceae in Jepson)
 - soap plant (*Chlorogalum pomeridianum*)
- Iridaceae (Iris family)
 - iris (*Iris* sp.)*p
 - blue-eyed grass (*Sisyrinchium bellum*)
- Liliaceae (Lily family)
 - Slender mariposa lily (*Calochortus clavatus* var. *gracilis*)
 - Plummer's mariposa lily (*Calochortus plummerae*)
- Poaceae (Grass family)
 - giant ricegrass (*Achnatherum coronatum*)
 - wild oats (*Avena fatua*)*
 - ripgut brome (*Bromus diandrus*)*
 - soft brome (*Bromus hordeaceus*)*
 - red brome (*Bromus madritensis* ssp. *rubens*)*
 - Bermuda grass (*Cynodon dactylon*)*

(Appendix 1, continued)

quackgrass (*Elytrigia* sp.)*
foxtail barley (*Hordeum murinum*)*
sprangletop (*Lamarckia aurea*)*
giant wild-rye (*Leymus condensatus*)
italian ryegrass (*Lolium multiflorum*)*
chaparral melic (*Melica imperfecta*)
foothill needlegrass (*Nasella lepida*)
purple needlegrass (*Nasella pulchra*)
fountaingrass (*Pennisetum setaceum*)*p
smilo grass (*Piptatherum miliaceum*)
Mediterranean grass (*Schismus arabicus*)*
rattail fescue (*Vulpia myuros*)*

Themidaceae (Brodiaea family, part of Liliaceae in Jepson)
blue dicks (*Dichelostemma capitatum*)

Angiosperms: Eudicots

Adoxaceae (Moschatel family, part of Caprifoliaceae in Jepson)
blue elderberry (*Sambucus nigra* ssp. *caerulea*)

Aizoaceae (Fig-marigold family)
baby sun rose (*Aptenia cordifolia*)*p

Altingiaceae (Liquidambar family)
sweetgum (*Liquidambar styraciflua*)*p

Amaranthaceae (Amaranth family, includes Chenopodiaceae from Jepson)
lamb's quarters (*Chenopodium album*)*

Anacardiaceae (Cashew family)
laurel sumac (*Malosma laurina*)
sugarbush (*Rhus ovata*)
poison oak (*Toxicodendron diversilobum*)

Apiaceae (Celery family)
rattlesnake weed (*Daucus pusillus*)
snake root (*Sanicula arguta*)

Apocynaceae (Dogbane Family)
Narrow leaved milkweed (*Asclepias fascicularis*)
oleander (*Nerium oleander*)*p

Asteraceae (Aster family)
perezia (*Acourtia microcephala*)
western ragweed (*Ambrosia psilostachya*)
California sagebrush (*Artemisia californica*)
mugwort (*Artemisia douglasiana*)
coyotebush (*Baccharis pilularis*)
mulefat (*Baccharis salicifolia*)
California brickellbush (*Brickellia californica*)
italian thistle (*Carduus pycnocephalus*)*
tocalote (*Centaurea militensis*)*
yellow star thistle (*Centaurea solstitialis*)*
yellow pincushion (*Chaenactis prob. Artemisifolia*)
California thistle (*Cirsium occidentale*)

(Appendix 1, continued)

horseweed (*Conyza canadensis*)
common tarplant (*Deinandra fasciculata*)
bush sunflower (*Encelia californica*)
golden yarrow (*Eriophyllum confertiflorum*)
California filago (*Filago californica*)
common gumplant (*Grindelia camporum*)
sawtooth goldenbush (*Hazardia squarrosa*)
common sunflower (*Helianthus annuus*)p
telegraph weed (*Heterotheca grandiflora*)
prickly lettuce (*Lactuca serriola*)*
coast goldfields (*Lasthenia californica*)
woolly aster (*Lessingia filaginifolia*)
Slender tarweed (*Madia gracilis*)
cliff aster (*Malacothrix saxatilis*)
two-tone everlasting (*Pseudognaphalium bicolor*)
fragrant everlasting (*Pseudognaphalium canescens*)
California chicory (*Rafinesquia californica*)
shrubby butterweed (*Senecio flaccidus* var. *douglasii*)
milk thistle (*Silybum marianum*)
sow thistle (*Sonchus oleraceus*)
silver puffs (*Uropappus lindleyi*)

Bignoniaceae (Trumpet creeper family)

trumpet creeper (*Campsis radicans*)*p

Boraginaceae (Borage family, includes the Hydrophyllaceae from Jepson)

rancher's fireweed (*Amsinckia menziesii* var. *intermedia*)
white forget-me-not (*Cryptantha clevelandii*)
popcorn flower (*Cryptantha intermedia*)
whispering bells (*Emmenanthe penduliflora*)
yerba santa (*Eriodictyon crassifolium*)
eucrypta (*Eucrypta chrysanthemifolia*)
caterpillar phacelia (*Phacelia cicutaria* var. *hispida*)
branching phacelia (*Phacelia ramosissima* var. *latifolia*)
fern-leaf phacelia (*Phacelia tanacetifolia*)
fiesta flower (*Pholistoma auritum*)
white fiesta flower (*Pholistoma racemosum*)

Brassicaceae (Mustard family)

black mustard (*Brassica nigra*)*
western wallflower (*Erysimum capitatum*)
mediterranean mustard (*Hirschfeldia incana*)*
sweet alyssum (*Lobularia maritima*)*p
london rocket (*Sisymbrium irio*)*

Cactaceae (Cactus family)

barrel cactus (*Ferocactus* sp.)p
indian fig prickly pear (*Opuntia ficus-indica*)*
column cactus (*Trichocereus* sp.)*p

Caryophyllaceae (Pink family)

windmill pink (*Silene gallica*)*
catchfly (*Silene* prob. *multinervia*)
chickweed (*Stellaria media*)

(Appendix 1, continued)

Chenopodiaceae (Goosefoot family)

Lambsquarters (*Chenopodium album*) *

Convolvulaceae (Morning glory family, includes Cuscutaceae from Jepson)

morning-glory (*Calystegia macrostegia*)

bindweed (*Convolvulus arvensis*) *

dodder (*Cuscuta californica*)

Crassulaceae (Stonecrop family)

jade plant (*Crassula argentea*) *p

lance-leaf live-forever (*Dudleya* prob. *lanceolata*)

Cucurbitaceae (Cucumber family)

calabazilla (*Cucurbita foetidissima*)

wild cucumber (*Marah macrocarpus*)

Ericaceae (Heather family)

manzanita (*Arctostaphylos* sp.)

Euphorbiaceae (Spurge family)

rattlesnake mat (*Chamaesyce albomarginata*)

petty spurge (*Euphorbia peplus*) *

Fabaceae (Bean family)

common dwarf locoweed (*Astragalus didymocarpus*)

Santa Barbara locoweed (*Astragalus trichopodus* var. *phoxus*)

spanish clover (*Lotus purshianus*)

coastal lotus (*Lotus salsuginosus*)

deerweed (*Lotus scoparius*)

dove lupine (*Lupinus bicolor*)

bajada lupine (*Lupinus concinnus*)

summer lupine (*Lupinus formosus*)

stinging lupine (*Lupinus hirsutissimus*)

sky lupine (*Lupinus nanus*)

arroyo lupine (*Lupinus succulentus*)

bur clover (*Medicago polymorpha*) *

sour clover (*Melilotus indica*) *

albizia (*Paraserianthes lophantha*) *

rose clover (*Trifolium hirtum*) *

wildcat clover (*Trifolium wildenovii*)

winter vetch (*Vicia villosa* ssp. *villosa*) *

Fagaceae (Beech family)

coast live oak (*Quercus agrifolia*)

valley oak (*Quercus lobata*)

Geraniaceae (Geranium family)

filaree (*Erodium cicutarium*)

Grossulariaceae (Gooseberry family)

chaparral currant (*Ribes malvaceum*)

oak gooseberry (*Ribes quercetorum*)

Juglandaceae (Walnut family)

California black walnut (*Juglans californica*)

(Appendix 1, continued)

Lamiaceae (Mint family)

- horehound (*Marrubium vulgare*)*
- white sage (*Salvia apiana*)
- purple sage (*Salvia leucophylla*)
- black sage (*Salvia mellifera*)

Malvaceae (Mallow family)

- chaparral bush mallow (*Malacothamnus fasciculatus*)
- cheeseweed (*Malva parviflora*)*

Nyctaginaceae (Four o'clock family)

- bougainvillea (*Bougainvillea* sp.)*p
- wishbone bush (*Mirabilis californica*)

Oleaceae (Olive family)

- flowering ash (*Fraxinus dipetala*)
- shamel ash (*Fraxinus uhdei*)*p
- jasmine (*Jasminum polyanthum*)*p
- olive (*Olea europaea*)*p

Onagraceae (Evening primrose family)

- sun cups (*Camissonia californica*)
- miniature suncup (*Camissonia micrantha*)
- elegant clarkia (*Clarkia unguiculata*)
- California fuchsia (*Epilobium canum*)

Orobanchaceae (Broomrape family, part of Scrophulariaceae in Jepson)

- indian paintbrush (*Castilleja affinis*)
- California broomrape (*Orobanche californica* ssp. *grandis*)

Paeoniaceae (Peony family)

- California peony (*Paeonia californica*)

Papaveraceae (Poppy family)

- collarless poppy (*Eschscholzia caespitosa*)
- California poppy (*Eschscholzia californica*)

Phrymaceae (Lopseed family, includes part of Jepson's Scrophulariaceae)

- bush monkeyflower (*Mimulus aurantiacus*)
- scarlet monkeyflower (*Mimulus cardinalis*)
- seep monkeyflower (*Mimulus guttatus*)

Plantaginaceae (Plantago family, includes part of Jepson's Scrophulariaceae)

- white snapdragon (*Antirrhinum coulterianum*)
- heart-leaf penstemon (*Keckiella cordifolia*)

Platanaceae (Sycamore family)

- Western sycamore (*Platanus racemosa*)

Polemoniaceae (Phlox family)

- globe gilia (*Gilia capitata* ssp. *abrotanifolia*)
- California prickly phlox (*Leptodactylon californicum*)

Polygonaceae (Smartweed family)

- Turkish rugging (*Chorizanthe staticoides*)

(Appendix 1, continued)

longstem buckwheat (*Eriogonum elongatum*)
California buckwheat (*Eriogonum fasciculatum*)
pterostegia (*Pterostegia drymarioides*)

Portulacaceae (Purslane family)
scarlet pimpernel (*Anagallis arvensis*)*
red maids (*Calandrinia ciliata*)
miner's lettuce (*Claytonia perfoliata*)

Ranunculaceae (Buttercup family)
chaparral clematis (*Clematis lasiantha*)

Rhamnaceae (Buckthorn family)
hoary leaved ceanothus (*Ceanothus crassifolius*)
hairy ceanothus (*Ceanothus oliganthus*)
holly-leaf redberry (*Rhamnus ilicifolia*)

Rosaceae (Rose family)
chamise (*Adenostoma fasciculatum*)
curl-leaf mountain mahogany (*Cercocarpus ledifolius* var. *intercedens*)
birch-leaved mountain mahogany (*Cercocarpus montanus* var. *glaber*)
toyon (*Heteromeles arbutifolia*)
rose (*Rosa* sp.)*p
pacific blackberry (*Rubus ursinus*)*p

Rubiaceae (Coffee family)
narrow-leafed bedstraw (*Galium angustifolium*)
cleavers (*Galium aparine*)*

Salicaceae (Willow family)
fremont cottonwood (*Populus fremontii*)
red willow (*Salix laevigata*)
arroyo willow (*Salix lasiolepis*)

Simaroubaceae (Quassia family)
tree of heaven (*Ailanthus altissima*)*,p

Solanaceae (Nightshade family)
jimson weed (*Datura wrightii*)
tree tobacco (*Nicotiana glauca*)
white nightshade (*Solanum douglasii*)
purple nightshade (*Solanum xanthii*)

Ulmaceae (Elm family)
chinese elm (*Ulmus parvifolia*)*p
siberian elm (*Ulmus pumila*)*p

Urticaceae (Nettle family)
western nettle (*Hesperocnide tenella*)
stinging nettle (*Urtica dioica* ssp. *holosericea*)

Verbenaceae (Vervain family)
robust vervain (*Verbena lasiostachys*)

(Appendix 1, continued)

Violaceae (Violet family)

California golden violet (*Viola pedunculata*)

Legend:

* = non-native

p = planted

*p = non-native, planted

*,p = non-native, both planted and growing in wild (*Ailanthus*)\

(Appendix 1, continued)

Lamiaceae (Mint family)

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Appendix E2
Gnatcatcher Survey Report

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June 14, 2010

U.S. Fish and Wildlife Service
Ventura Fish & Wildlife Field Office
2493 Portola Road, Suite B
Ventura, CA 93003
Atten: Chris Dellith

Dear Mr. Dellith:

SUBJECT: Results of the Protocol-Level Survey for California Gnatcatcher for the Aliso Canyon Turbine Replacement Project, in Los Angeles County, California

This letter report summarizes the results of a focused survey completed by AECOM for the Coastal California Gnatcatcher (*Poliophtila californica californica*)(CAGN). The surveys were conducted between March 15 and April 29, 2010, for the Southern California Gas Company's Aliso Canyon Turbine Replacement (ACTR) Project. The surveys were performed in accordance with the, "Coastal California Gnatcatcher (*Poliophtila californica californica*) Presence/Absence Survey Guidelines, February 28, 1997."

Southern California Gas Company (SoCalGas) intends to replace three obsolete gas turbine driven centrifugal compressors and associated equipment with a new electric compressor station and construction of other improvements at the Aliso Canyon Storage Facility (proposed project). Power to the new facilities will be provided by improving an existing 66 kilovolt (kV) sub-transmission line operated by Southern California Edison (SCE). The CAGN survey extent included both SoCalGas and SCE areas affected by the proposed project. Not included in the CAGN survey were modifications to the existing Chatsworth, Newhall, San Fernando, and MacNeil SCE substations because these modifications would be exclusively onsite at the substation or do not involve any suitable CAGN habitat.

The survey area investigated all suitable habitat for the CAGN that is anticipated to be directly or indirectly impacted by the proposed project, including a buffer area of at least 150 feet around the project's direct limits of disturbance. In general, the project is bounded by the Santa Susana Mountains and city of Newhall to the west and north, the eastern limits of the Newhall Pass, along Interstate 5, to the east, and the cities of Porter Ranch and Knollwood to the south. The elevation of the various project components ranges from approximately 1,400 to approximately 2,700 feet above sea level. Figures 1 and 2, located at the end of this letter report, shows respectively the project's regional location and specific CAGN survey areas for the proposed project.

INTRODUCTION

The California gnatcatcher is a resident species in coastal (Diegan or Venturan) and inland (Riversidean) sage scrub plant communities of southern California, especially where dominated by California sagebrush (*Artemisia californica*) and California buckwheat (*Eriogonum fasciculatum*). Examples of other shrubs that may be commonly found in habitat occupied by CAGN include California bush sunflower (*Encelia californica*), brittlebush (*Encelia farinosa*), broom baccharis (*Baccharis sarothroides*), deerweed (*Lotus scoparius*) and certain saltbush species (*Atriplex* spp.). Plants that can be present, but are typically less common in the coastal sage scrub (CSS)

community occupied by CAGNs include black sage (*Salvia mellifera*), white sage (*Salvia apiana*), various monkeyflowers (*Mimulus* spp.), and yellow bush snapdragon (*Keckiella antirrhinoides*). The CAGN has a restricted range in the United States, which is limited to six counties in southwestern California. Although primarily occurring in Orange, western Riverside and San Diego counties, relatively small and isolated populations of CAGN are still known in Los Angeles and southwestern San Bernardino counties. During the mid-1990s, an extremely isolated population was rediscovered in southeastern Ventura County, where this species was thought to have been extirpated.

The CAGN is generally found at elevations below 250 meters (800 feet) along the coast and up to 250 to 500 meters (800-1600 feet) at inland locations (Atwood 1990). It is frequently found on hillsides, or rolling terrain, although it generally avoids slopes with a gradient of 40% or greater. The CAGN is non-migratory, although post-breeding dispersal of juveniles, generally in late summer and fall, has been documented to occur as much as 20 km (12.5 miles) (Hunsaker et al. 2000) from natal areas. The primary breeding season for CAGNs in coastal areas is from mid March to late July, while birds occurring in the warmer (i.e., more interior) portions of their range often finish breeding slightly earlier in the season. This species is known to maintain territories ranging in size from 2 to over 14 acres (Atwood 1990), with smaller territory sizes predominating in more coastal areas and larger ones in the interior portion of this species range.

North of Mexico, the CAGN underwent significant population declines during the late 1990s. As of 1990, the gnatcatcher population in California was estimated at approximately 2,000 pairs or less (Atwood 1990). An estimate by the U.S. Fish and Wildlife Service (USFWS) in 1999 revised the total to approximately 3,000 pairs (Atwood and Bontrager 2001). Reasons for this species' decline have been attributed to loss of its preferred habitat from development, agricultural conversion and fuel modification, and from brood parasitism by Brown-headed Cowbirds (*Molothrus ater*). More recently, large fires over significant portions of the CAGN's range have at least temporarily impacted this species. The CAGN was proposed for listing as a federal endangered/threatened species in September, 1991, and officially designated a federally threatened species in March, 1993¹.

Critical habitat for the CAGN was designated by the USFWS on October 2000. Proposed revisions to the critical habitat designations were published on April 2003, although a final rule in regard to these proposed revisions was not published until December 2007². Critical habitat refers to specific geographic areas, both occupied and unoccupied, which are considered essential for the conservation of a listed species (e.g., areas for foraging, nesting, rearing of young, roosting, dispersal, genetic exchange, or sheltering), and that may require special management consideration or protection. As shown in Figure 2, all project areas with suitable CAGN habitat and within CAGN designated critical habitat were surveyed. In addition, a small survey area in the residential neighborhood along Wiley Canyon Road south of the Newhall Substation was included in the survey because it was determined during the scoping phase of the survey to contain suitable CAGN habitat.

METHODS

CAGN survey methods followed protocol developed by the USFWS for jurisdictions that are not participating in an active Natural Communities Conservation Plan/Habitat Conservation Plan (NCCP/HCP). In compliance with this protocol, a total of six visits were made to all areas of suitable CAGN habitat, during the period of March 15 and June 30. CAGN surveys were conducted at intervals of at least one week between visits.

Table 1, below, identifies the survey dates, the primary section of the Proposed Project that was surveyed, survey personnel, time of day during which the survey was conducted, and the weather

¹ USFWS, 1993. Federal Register 58:16742-16757

² USFWS, 2007. Federal Register 72:72009-72213

conditions. All surveys were conducted by AECOM's team lead, Doug Willick (DW), who is permitted to conduct presence/absence surveys for the CAGN (#TE-821404-5). A second biologist assisted Mr. Willick with the surveys for logistical and safety considerations. The additional biologists that assisted with this project included: Johnny Grady (JG; SoCalGas), Rocky Brown (RB; AECOM), Rob Conohan (RC; AECOM) and Tim Armstrong (TA; SoCalGas). Two days each survey week were necessary to conduct one complete survey of all sites identified as supporting potential habitat for the CAGN within the Proposed Project. One of the survey days covered only the SCE portion of the project, including the sub-transmission line between the Newhall Pass and the Aliso Canyon Gas Storage Facility (ACGSF), and a portion of the SCE sub-transmission line on the east side of the Newhall Pass. The second survey day covered the ACGSF and the remaining portion of the SCE sub-transmission line on the east side of the Newhall Pass.

TABLE 1. Survey Details and Conditions

Date	Survey Area ¹	Biologists Initials ²	Time of Day	Survey Conditions
3/15/2010	SCE	DW, RB	0735-1400	54°-72°F. Clear. 10-20 mph NE winds initially, reducing to 5-12 mph by mid-day.
3/16/2010	ACGSF and SCE	DW, RB	0730-1300	High 50s° to mid 70s°F. Mostly clear (some high thin clouds). Windy in the more exposed areas of ACGSF (10-24+ mph); 2-6 mph NE winds in SCE section.
3/22/2010	SCE	DW, JG	0715-1320	57°-70°F. Generally clear. 5-10 mph N winds at start, 4-8 mph SSW winds at end.
3/23/2010	ACGSF and SCE	DW, RC	0715-1245	56°-72°F. Clear to 10% cc. Windy in the more exposed areas of ACGSF (6-18+ mph, N), 4-12+ mph winds elsewhere.
3/29/2010	SCE	DW, TA	0710-1340	57°-high 70s°F. Clear. 3-8 mph, NNE winds, becoming 2-4 mph, SW at end.
3/30/2010	ACGSF and SCE	DW, RC	0720-1250	52°-55°F at ACGSF, with temp to mid 60's elsewhere. Overcast & fog at ACGSF, with 2-6 mph breeze. 75-40% cc in SCE section, with 4-8 mph SW winds.
4/7/2010	SCE	DW, RC	0730-1300	High 50s° to 70°F. Clear. 5-15 mph winds along WCM, with 5-10 mph wind in SCE section.
4/9/2010	ACGSF and SCE	DW, RC	0725-1300	High 50s° to mid 70s°F. Clear. Calm (early) to 3-10 mph SW winds.
4/15/2010	SCE	DW, RC	0710-1230	49° (at 0820 hrs) to 70°F. Mostly clear. 4-8 mph SW winds along WCM, 2-5 mph winds later.
4/16/2010	ACGSF and SCE	DW, JG	0715-1320	54° to low 70s°F. Clear. 2-5 mph SW winds in morning, with 2-8 mph winds by end of survey.
4/27/2010	SCE	DW, RB	0720-1145	High 50s°F (in the WCM area) to high 60s°F. Overcast early, with fog blanketing the lower elevations (below 1,500') along the WCM and in Newhall Pass. Fog/low clouds clearing by mid-morning. Up to 8 mph winds along WCM; 10-14 mph winds in the SCE section (calmer in more sheltered sites).
4/29/2010	ACGSF and SCE	DW, TA	0720-1250	High 40s°F to 60°F. Mostly clear. At ACGSF, winds ranged from to 2 to 18+ mph N/NW. Winds 10-15+ mph NW in SCE portion.
¹ SCE = SCE portion of project (distribution line from Newhall Substation to Aliso Canyon) ACSGF = Aliso Canyon Storage Gas Field ² Biologists DW = Doug Willick (AECOM) JG = Johnny Grady (SoCalGas) RB = Rocky Brown (AECOM) RC = Rob Conohan (AECOM) TA = Tim Armstrong (SoCalGas)				

The total area surveyed per visit was well under the maximum limit of 80 acres, for CAGN surveys conducted outside the jurisdictions participating in the NCCP interim section 4(d) process. The daily survey area included a maximum acreage of approximately 8 to 10 acres. These small daily survey acreages were a result of the distances that were often involved between survey sites, the fairly slow rate of travel that was necessary between many sites because of the condition of the SCE sub-transmission line patrol roads, and the often rugged terrain. All areas of suitable CAGN breeding habitat within the project limits of disturbance (and adjacent buffer areas for potential indirect effects) were surveyed by the AECOM's permitted biologist.

The California Gnatcatcher Survey Work Plan (Appendix A), which was prepared for the ACTR project prior to the initiation of the surveys, provides an explanation of how various components of the project were selected to be surveyed for CAGNs. The evaluation criteria used to determine reasonably suitable CAGN habitat for the ACTR project survey included habitat type, species composition, structure and habitat condition of the CSS, patch size, isolation of habitat, topography, and elevation. A detailed discussion of these criteria is provided in Appendix A (Work Plan).

On the Aliso Canyon Gas Storage Facility, there were four areas examined during this focused CAGN survey, as shown in Figure 2. Figure 2 identifies the soils processing site and the area where the main office buildings will be relocated. Also on the ACGSF are the survey areas along the existing SCE transmission alignment where three towers will be replaced. For the SCE distribution line portion of the ACTR project that is outside the ACGSF, a total of 12 tower locations were surveyed, as shown in Figure 2. Some sections of access roads that are especially narrow or steep will need to be improved (e.g., widening) to facilitate transport of heavy construction equipment. Although not specifically shown on Figure 2, surveys of access roads were conducted on a limited basis where potential CAGN habitat occurred adjacent to sections of roads (including spur roads to SCE tower sites) that would likely be used during the construction phase of the ACTR project. These surveys were performed primarily for scoping purposes and are not part of this protocol survey.

The CAGN surveys were conducted on foot, during primarily morning hours. As much as possible, the surveys avoided weather conditions (e.g., excessive wind, heat, rain, fog, etc.) not conducive to the detection of small songbird species. During a few of the site visits, particularly on the more exposed sections of the Aliso Canyon Gas Storage Facility, winds were relatively strong (e.g., gusts over 15 mph). Wind speed varied considerably, however, depending on the exposure of the particular survey site, and the time of day. During these windy conditions, extra time was taken to wait for periods when wind speeds were temporarily at a minimum. Recordings of CAGN vocalizations were played at regular intervals, as required by the survey protocol, to optimize the potential for this species to be detected, visually or aurally, by the surveyor.

RESULTS

No CAGNs were detected during the performance of this focused CAGN survey. Blue-gray Gnatcatchers (*Polioptila caerulea*) were found in several areas, although most of these appeared to be lingering wintering individuals or migrants. This gnatcatcher species is fairly widespread in southern California during the non-breeding season, and often can be found in CSS and other low scrub plant communities from about September to April. It is generally uncommon and more restricted as a breeder in southern California, preferring wooded habitats for nesting, including oak woodland and riparian communities. During all observations of Blue-gray Gnatcatcher in the survey area, care was taken to note key characteristics (i.e., plumage details) that distinguish this species from CAGN. In addition, behavior and vocalization differences often helped to confirm the identification. In most cases, habitat types where the Blue-gray Gnatcatchers were encountered (e.g., oak woodland) were very much inconsistent with that preferred by CAGNs.

Although potential habitat for CAGNs was found to be present within the ACTR survey area, a number of important factors detracted from the suitability of the survey areas for CAGNs. These factors include historic range, elevation preferences, topography, CSS composition and habitat “patch size” and isolation, as described in detail below:

- Although the general survey area is within the historic range of the CAGN, this area is close to the northern extent of this species historic range. In recent years there has been at least one observation of this species north of its historic range³; however there are no known breeding populations of the CAGN in this area where it has been observed north of its historic range or in the area of the ACTR project.
- Throughout the southern California range of the CAGN, the majority of breeding populations for this species occur below 1,600 feet in elevation. As previously indicated, survey locations for this project ranged from 1,400 to 2,700 feet elevation; therefore most of the survey area is at a greater elevation than is typical for CAGN habitat.
- An additional factor that undoubtedly limits the potential for CAGN in the survey area is the generally rugged topography that prevails. CAGNs typically prefer lower foothills dominated by mild to moderate terrain. In general, the survey area, for the Proposed Project is characterized by moderate to very steep terrain; providing for little contiguous suitable breeding habitat.
- CAGNs typically prefer CSS that is dominated by such common species as California sagebrush, California buckwheat and California bush sunflower. These species were present in many of the ACTR survey locations, but they were often not the dominant species. It is frequently seen that CAGNs can be very scarce or absent from CSS habitat dominated by certain less-preferred plant species. These would include, for example, black sage and bush mallow (*Malacothamnus fasciculatus*), which were noted to be dominant species in some of the patches of CSS in the survey area.
- Lastly, the extent of suitable CSS habitat, and connectivity to other areas of CSS in the vicinity is an important factor in determining if isolation is a factor for lack of species occurrences. If small patches of otherwise suitable CAGN habitat are scattered among larger tracks of unsuitable habitat (e.g., chaparral or woodland communities), these areas are less likely to be occupied by CAGNs. The minimum patch size of suitable habitat to support a breeding territory of CAGNs is approximately two acres, with inland territories typically being larger than that to support a breeding pair. In the survey area, many of the patches of CSS habitat were found to be quite limited in extent, ranging from approximately a quarter to one half acre, considerably less than the typical territory size. In addition, some of these CSS patches were considerably isolated from other areas supporting CSS habitat. Therefore, these smaller and relatively isolated habitat patches would typically be less suitable as breeding habitat for CAGNs.

OBSERVATIONS

Eighty-six species of birds were identified during the surveys (see Appendix B). Of these, three species are recognized by the California Department of Fish and Game as California Species of Special Concern: Northern Harrier (*Circus cyaneus*), Vaux's Swift (*Chaetura vauxi*), and Olive-sided Flycatcher (*Contopus cooperi*). Northern Harrier is considered to most likely be a winter visitor or

³ McCaskie, G. and KL Garrett, 2007. North American Birds 60(4):580.

migrant in the area observed. Vaux's Swift is strictly a spring and fall migrant through southern California, and Olive-sided Flycatcher is a fairly common migrant and local breeder in the region.

When doing focused surveys for endangered song birds it has been our experience that USFWS is interested in knowing the status of cowbirds in the survey area because they are known to be a brood parasite on CAGNs and other small songbird species. It should therefore be noted here that no Brown-headed Cowbirds were identified. Where relatively large populations of cowbirds are present, nest productivity of the host species will often be impaired.

CONCLUSIONS

The survey did not identify any CAGN or indication of the presence of CAGN populations. This can be explained by the limited habitat suitability and other related factors that pertain to the likelihood of CAGN presence. This survey was conducted during the CAGN breeding season when populations tend to be more stable. Therefore the survey would have had a high probability of identifying CAGN's if they were present in the project area.

CERTIFICATION STATEMENT

I certify that the information in this survey report and attachments fully and accurately represents my work.

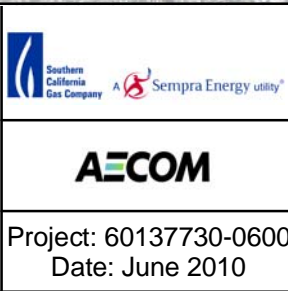
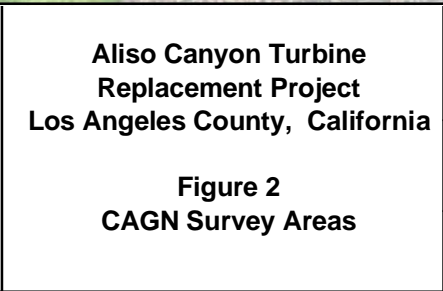
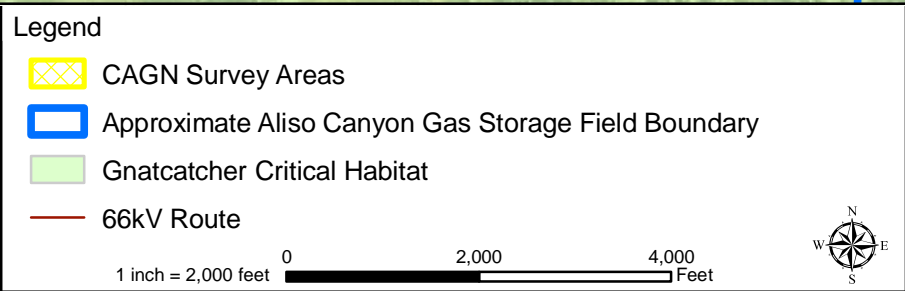
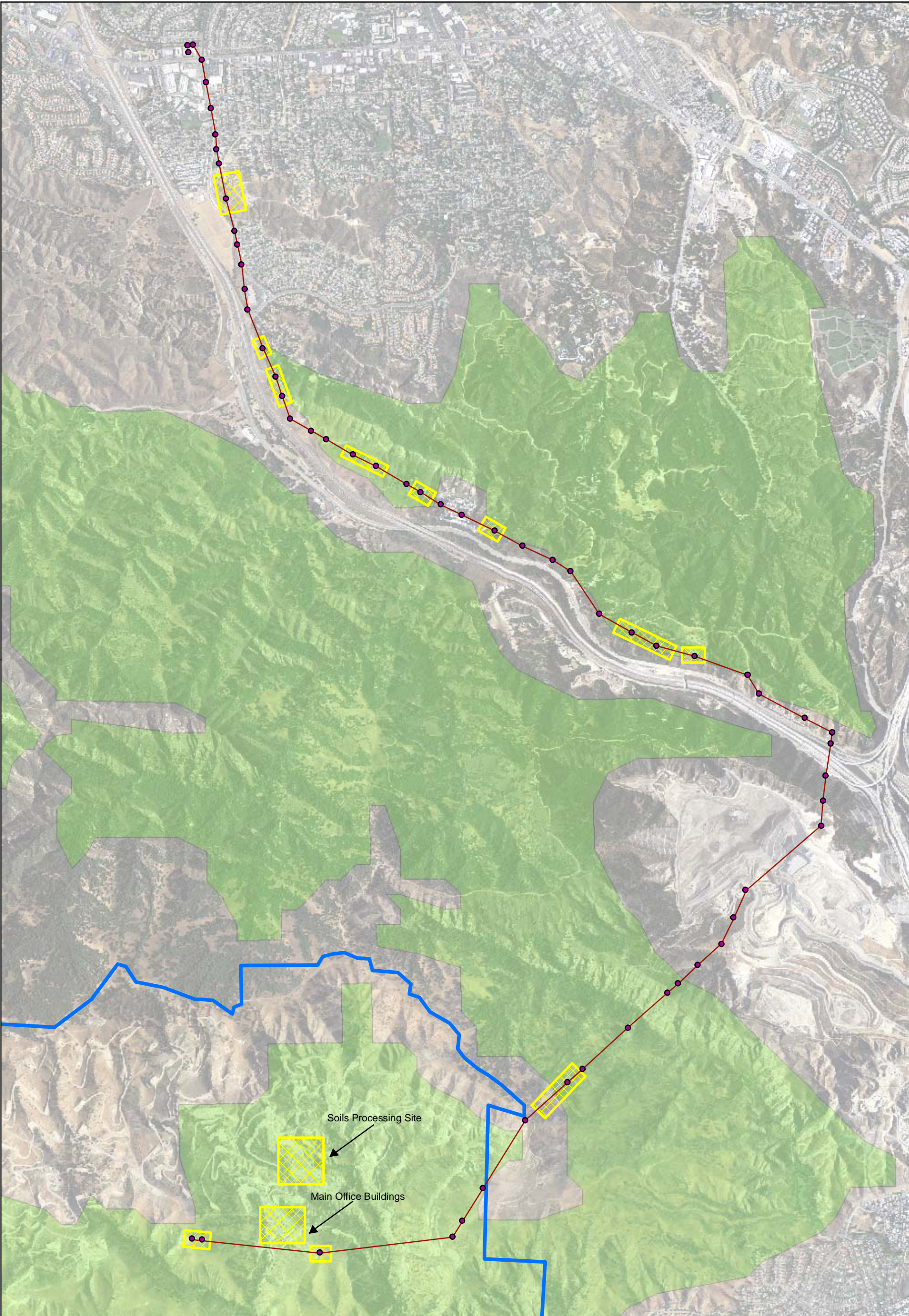
Douglas R. Willick
Surveyor's name
(AECOM Senior Wildlife Biologist)

TE-821404-5
Surveyor's permit number

June 14, 2010
Date

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Appendix A

CALIFORNIA GNATCATCHER SURVEY WORK PLAN for the ALISO CANYON TURBINE REPLACEMENT PROJECT

AECOM has prepared the following work plan to conduct a protocol survey for the federally threatened Coastal California Gnatcatcher (*Poliophtila californica californica*). This survey has been proposed to be conducted in support of the Aliso Canyon Turbine Replacement Project (ACTR Project). A portion of this work plan is based on the original scope of work and cost proposal for the survey, which was submitted to the Southern California Gas Company (SoCalGas) on February 1, 2010. The work plan includes the following sections: Survey Coordination and Pre-Survey Habitat Assessment; Methodology Used to Determine Survey Extent and Specific Locations within the Project Limits; Details Associated with the Performance of the Gnatcatcher Protocol Survey; and the Gnatcatcher Survey Findings Report.

Gnatcatcher Survey Coordination and Pre-Survey Habitat Assessment

AECOM will coordinate with SoCalGas the planning necessary to conduct a “protocol-level” survey for the California gnatcatcher (CAGN) for the ACTR project. The CAGN technical lead will attend up to three coordination meetings, which will include field visits in order to conduct a habitat assessment of the project site. The habitat assessment will help determine the specific sites to be surveyed within the project limits for potential occupation by CAGNs. Coordination will also be conducted with Southern California Edison (SCE), to ensure proper coverage of all SCE components of the project that may have effects on potential CAGN habitat.

Methodology Used to Determine Survey Extent and Specific Locations within the Project Limits

The ACTR Project Study Area includes a total of approximately 10 acres of Venturan Sage Scrub in the project’s study area, as well as approximately eight acres of a mixed, or transition, community identified as Coastal Sage-Chaparral Scrub. These plant communities are the primary focus of the area to be surveyed for potential occupation by CAGNs.

Evaluation criteria were used to identify habitat that would be directly or indirectly affected by the ACTR project, with the specific goal of determining which portions of the project would be considered appropriate to survey for the CAGN based on what would mostly likely constitute “reasonably suitable” habitat for this species. “Reasonably suitable” may also be defined as habitat which is considered most typical of areas known to support breeding territories of CAGNs. It is understood that CAGNs may occasionally or temporally use other habitats, such as during periods of dispersal or for additional foraging resources. However, these atypical, or more marginal, habitat types would not be expected to support year-round breeding territories of the CAGN.

The following evaluation criteria were used to determine reasonably suitable CAGN habitat for the ACTR project survey:

- **Habitat type.** CAGNs are considered obligate residents of coastal sage scrub (CSS) habitat, including such associations as Venturan, Diegan and Riversidean sage scrub. Although other scrub type communities (such as certain chaparral and riparian associations) can occasionally be used by CAGNs, especially for temporary foraging or dispersing, it is not typical that these other scrub communities are occupied by resident or nesting individuals. CAGNs may occur in areas of mixed plant communities, such as CSS and chaparral, or in areas where CSS is transitioning to another community. Nevertheless, CAGNs will typically avoid habitat in which more arborescent species become dominant, or co-dominant, with CSS.

Appendix A

- **Species composition, structure and habitat condition of the CSS.** Throughout the southern California range of the CAGN, this species typically prefers sage scrub with certain dominant plant species. These include California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), bush sunflower (*Encelia californica*), brittlebush (*Encelia farinose*) and various sage species (*Salvia* spp.). Certain taller CSS species, however, when dominant—such as bush (or chaparral) mallow (*Malacothamnus fasciculatus*)—are typically avoided by the gnatcatcher. CSS that is unusually dense or tall, such as might occur on a north-facing slope, or habitat that has been disturbed by such influences as fire, grazing, or off-road vehicles, may also be unsuitable for the species.
- **Patch size.** The extent of suitable CSS habitat, and connectivity to adjacent areas of CSS is an important factor. If small patches of otherwise CSS suitable habitat are scattered among larger tracks of unsuitable habitat, such as chaparral or woodland communities, depending on the size of the CSS patches, these areas are unlikely to be occupied by CAGNs. The minimum patch size (of suitable habitat) that would support a breeding territory for the CAGN is approximately two acres. Many of the patches of potentially suitable CSS vegetation were found to be limited in extent, and estimated to be in the vicinity of approximately one quarter to one half acre. Therefore, these smaller patches would not typically be suitable to support breeding territories of CAGNs.
- **Isolation of habitat.** The extent of suitable habitat is especially important when these areas are completely isolated by extensive areas of unsuitable habitat (such as woodland, dense chaparral, or developed/disturbed areas). The more isolated the patch of CSS, the more important it is that the patch is of sufficient size to support a resident, breeding territory for CAGN.
- **Topography.** CAGNs are generally known to prefer areas of more moderate terrain, including areas with gentle slopes. Breeding territories, however, will generally avoid terrain dominated by very steep slopes (e.g., slopes with a slope gradient of greater than 40%).
- **Elevation.** CAGNs prefer lower elevations throughout their southern California range, with most occurring from sea level to about 500 meters (1,640') elevation. Elevations associated with the ACTR project site primarily range from about 1,500' to over 2,500', which is at the upper elevational limits for this species.

Based on the above criteria, we have selected specific sites that show the characteristics of what is considered suitable habitat for the CAGN. These sites, as shown on the attached exhibit, are the project locations to be surveyed as part of this protocol CAGN survey.

(NOTE: The exhibit included in the work plan is shown as Figure 2 in the CAGN Survey Report and therefore not provided as an attached exhibit in this Appendix)

Details Associated with the Performance of the Gnatcatcher Protocol Survey

It is AECOM's understanding that the ACTR Project site occurs outside of an approved Natural Communities Conservation Plan (NCCP) or Habitat Conservation Plan (HCP). SoCalGas has requested that the protocol CAGN survey be conducted during the period of March 15 to June 30, 2010. The survey will be conducted by AECOM's team lead, Doug Willick, who is permitted to conduct presence/absence surveys for the CAGN (#TE-821404-5). A second biologist may assist with the surveys for safety considerations, as well as efficiency in completing the fieldwork.

Appendix A

The AECOM permitted biologist will conduct the CAGN protocol survey in all areas of suitable habitat for this species occurring within the project's limits of disturbance. In addition, to address potential indirect affects associated with project activities, suitable habitat that occurs adjacent to the disturbance limits will also be surveyed, where appropriate. An explanation of how suitable habitat was identified within the project limits was provided in the previous section.

These surveys will follow protocol established for the CAGN by the U.S. Fish and Wildlife Service (USFWS). Surveys will be conducted on foot, generally during morning hours and will avoid weather conditions (e.g., excessive wind, heat, rain, fog, etc.) that would not be conducive to the detection of small songbird species. Recordings of CAGN vocalizations will be played at regular intervals, as required by the survey protocol, to optimize the potential for this species to be detected by the surveyor.

Because the ACTR project area (approximately 18 total acres of CSS) is substantially less in size than the daily survey limit in accordance with the USFWS protocol for surveys conducted outside of an established NCCP/HCP area, on no occasion will more than 80 acres of suitable habitat will be surveyed per day. Due to constraints associated with rugged terrain, and widely scattered patches of CSS, a maximum daily survey of 8-10 acres will be more typical. All areas of suitable habitat will be surveyed a minimum of six times, at intervals of at least a week between site visits.

Gnatcatcher Survey Findings Report

Following the completion of the survey, a post-survey ("45-day") letter report summarizing survey findings will completed and submitted to the USFWS. The report will include an introduction as to the purpose of the survey; the survey location, including map exhibits; methods that were employed during the performance of the protocol survey for CAGN; survey dates and weather conditions; and a results section, which would provide details associated with any CAGNs that were encountered, and their specific locations, as well as provide findings on any other sensitive species encountered during the performance of the survey. A complete list of all avian species detected during the survey will also be included in the letter to USFWS.

Schedule

It is anticipated that the survey would be initiated on or immediately after March 15, 2010, and be completed prior to June 30, 2010. As stated previously, all areas considered to be suitable habitat for the CAGN will be surveyed a minimum of six times, at intervals of at least one week between site visits. It is also anticipated that the survey will take approximately two days to complete one full "pass" of all areas with potentially suitable CAGN habitat. This is due to the difficulty of the terrain, the widely scattered locations of project sites supporting potential CAGN habitat, and access road conditions.

Appendix B

AVIAN SPECIES LIST

The following is a list of all bird species (arranged in taxonomic order) recorded during the performance of the focused California Gnatcatcher survey for the ACTR Project. Survey conducted during the period of March 15 to April 29, 2010.

Turkey Vulture <i>Cathartes aura</i>	Ash-throated Flycatcher <i>Myiarchus cinerascens</i>
Mallard <i>Anas platyrhynchos</i>	Western Kingbird <i>Tyrannus verticalis</i>
Mountain Quail <i>Oreortyx pictus</i>	Cassin's Vireo <i>Vireo cassinii</i>
California Quail <i>Callipepla californica</i>	Hutton's Vireo <i>Vireo huttoni</i>
Double-crested Cormorant <i>Phalacrocorax auritus</i>	Warbling Vireo <i>Vireo gilvus</i>
Osprey <i>Pandion haliaetus</i>	Steller's Jay <i>Cyanocitta stelleri</i>
Northern Harrier <i>Circus cyaneus</i>	Western Scrub-Jay <i>Aphelocoma californica</i>
Cooper's Hawk <i>Accipiter cooperii</i>	American Crow <i>Corvus brachyrhynchos</i>
Red-shouldered Hawk <i>Buteo lineatus</i>	Common Raven <i>Corvus corax</i>
Red-tailed Hawk <i>Buteo jamaicensis</i>	Tree Swallow <i>Tachycineta bicolor</i>
American Kestrel <i>Falco sparverius</i>	Violet-green Swallow <i>Tachycineta thalassina</i>
Merlin <i>Falco columbarius</i>	Northern Rough-winged Swallow <i>Stelgidopteryx serripennis</i>
Band-tailed Pigeon <i>Columba fasciata</i>	Cliff Swallow <i>Petrochelidon pyrrhonota</i>
Mourning Dove <i>Zenaida macroura</i>	Barn Swallow <i>Hirundo rustica</i>
Great Horned Owl <i>Bubo virginianus</i>	Oak Titmouse <i>Baeolophus inornatus</i>
White-throated Swift <i>Aeronautes saxatalis</i>	Bushtit <i>Psaltirparus minimus</i>
Vaux's Swift <i>Chaetura vauxi</i>	White-breasted Nuthatch <i>Sitta carolinensis</i>
Black-chinned Hummingbird <i>Archilochus alexandri</i>	Rock Wren <i>Salpinctes obsoletus</i>
Costa's Hummingbird <i>Calypte costae</i>	Bewick's Wren <i>Thryomanes bewickii</i>
Anna's Hummingbird <i>Calypte anna</i>	House Wren <i>Troglodytes aedon</i>
Rufous Hummingbird <i>Selasphorus rufus</i>	Ruby-crowned Kinglet <i>Regulus calendula</i>
Acorn Woodpecker <i>Melanerpes formicivorus</i>	Blue-gray Gnatcatcher <i>Polioptila caerulea</i>
Nuttall's Woodpecker <i>Picoides nuttallii</i>	Western Bluebird <i>Sialia mexicana</i>
Northern Flicker <i>Colaptes auratus</i>	Hermit Thrush <i>Catharus guttatus</i>
Olive-sided Flycatcher <i>Contopus cooperi</i>	American Robin <i>Turdus migratorius</i>
Pacific-slope Flycatcher <i>Empidonax difficilis</i>	Wrentit <i>Chamaea fasciata</i>
Black Phoebe <i>Sayornis nigricans</i>	Northern Mockingbird <i>Mimus polyglottos</i>
Say's Phoebe <i>Sayornis saya</i>	California Thrasher <i>Toxostoma redivivum</i>

Appendix B

AVIAN SPECIES LIST

European Starling <i>Sturnus vulgaris</i>	Savannah Sparrow <i>Passerculus sandwichensis</i>
Phainopepla <i>Phainopepla nitens</i>	Song Sparrow <i>Melospiza melodia</i>
Orange-crowned Warbler <i>Vermivora celata</i>	White-crowned Sparrow <i>Zonotrichia leucophrys</i>
Nashville Warbler <i>Vermivora ruficapilla</i>	Golden-crowned Sparrow <i>Zonotrichia atricapilla</i>
Yellow Warbler <i>Dendroica petechia</i>	Dark-eyed Junco <i>Junco hyemalis</i>
Yellow-rumped Warbler <i>Dendroica coronata</i>	Lazuli Bunting <i>Passerina amoena</i>
Black-throated Gray Warbler <i>Dendroica nigrescens</i>	Black-headed Grosbeak <i>Pheucticus melanocephalus</i>
Common Yellowthroat <i>Geothlypis trichas</i>	Western Meadowlark <i>Sturnella neglecta</i>
Wilson's Warbler <i>Wilsonia pusilla</i>	Hooded Oriole <i>Icterus cuculattus</i>
Western Tanager <i>Piranga ludoviciana</i>	Bullock's Oriole <i>Icterus bullocki</i>
Spotted Towhee <i>Pipilo maculatus</i>	Purple Finch <i>Carpodacus purpureus</i>
California Towhee <i>Pipilo crissalis</i>	House Finch <i>Carpodacus mexicanus</i>
Rufous-crowned Sparrow <i>Aimophila ruficeps</i>	Lesser Goldfinch <i>Spinus psaltria</i>
Chipping Sparrow <i>Spizella passerina</i>	Lawrence's Goldfinch <i>Spinus lawrencei</i>
Lark Sparrow <i>Chondestes gramineus</i>	American Goldfinch <i>Spinus tristis</i>

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Appendix E3
Late Bloom Special Status Plant Species
Survey Report

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Environment

Prepared for:
Southern California Gas Company

Prepared by:
AECOM
Camarillo, CA
60137730
January 2011

Late-Bloom Special-Status Plant Species Survey Report

Aliso Canyon Turbine Replacement Project
Los Angeles County, California

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Appendix 1 Late-Season Target List of Potentially Occurring Special-Status Plant Species for the Aliso Canyon Turbine Replacement Project

Appendix 2 Plant Compendium for the Aliso Canyon Turbine Replacement Project

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1.0 Introduction

This report details the results of a follow-up, “late blooming period” special-status plant species survey conducted for the Southern California Gas Company (SoCalGas) Aliso Canyon Turbine Replacement (ACTR) project. The project areas include the SoCalGas Aliso Canyon Storage Field and pole locations along the Southern California Edison (SCE) sub-transmission line route in Los Angeles County, California that runs from the existing Newhall Substation to the proposed Natural Substation.

During surveys conducted at the site in April and June of 2009, the results of which are detailed in the “Special-Status Plant Species Report” (AECOM 2009a), two sensitive plant species, Plummer’s mariposa lily (*Calochortus plummerae*) and slender mariposa lily (*Calochortus clavatus* var. *gracilis*) were detected. Both of these plant species are listed as 1B.2 in the California Native Plant Society’s (CNPS) Inventory of Rare and Endangered Plants. Due to the potential for additional late-blooming plant species to occur within the ACTR Project area, this follow up survey was conducted to maximize the probability that additional plant species would be detected if they were present in the project area.

This late blooming period special-status plant species report for the ACTR project provides a brief background, description of survey methodology and survey results, and presents conclusions based on data collected during the survey.

1.1 Project Description and Background

SoCalGas is proposing to upgrade the existing injection system at the Aliso Canyon Storage Field by constructing and operating a new, electrically-driven natural gas compressor station to efficiently meet the overall need for natural gas storage in Southern California. The project involves the installation of a new compressor station, relocation of onsite offices, construction of a new electrical substation, a distribution power line, the replacement of existing poles along approximately 7 miles of an existing SCE 66-kilovolt (kV) sub-transmission line (alignment), and minor upgrades to existing substations. Modifications to the electrical systems are necessary to accommodate the added electrical load required by the proposed electric-driven compressors.

As noted above, an early blooming season survey was conducted during the spring and early summer of 2009. During that survey, two special-status plant species, Plummer’s mariposa lily (*Calochortus plummerae*), and slender mariposa lily (*Calochortus clavatus* var. *gracilis*), were identified along the 66-kV subtransmission line and/or within the Aliso Canyon Storage Field. The population size of the Plummer’s mariposa lily consisted of four (4) specimens, while the slender mariposa lily was estimated at 1,320 specimens. No other special-status plant species were identified during the early blooming survey.

1.2 Survey Areas

The Project area encompasses a variety of habitat types, ranging from built environments, characterized by non-native landscape species, to natural vegetation communities. The survey areas were broadly categorized and described by environment, as follows:

- **SCE 66-kV Alignment – Built Environment**

This survey area consisted of urban uses characterized by existing infrastructure and

associated landscaping and drainage components. SCE's 66-kV subtransmission line extends from the Santa Clarita/Newhall area into the San Francisquito Mountains. Other built environments along this portion of the Project area include adjacent private properties within portions of the San Francisquito Mountains, the Interstate 5 (I-5)/State Route 14 (SR-14) transition within San Francisquito Pass, and pole locations adjacent to The Old Road and Wiley Canyon Road.

- **SCE 66-kV Alignment – Natural Environment**

This survey area consists predominately of native plant communities, located mainly in the San Francisquito Mountains, Santa Susana Mountains, and areas on the Aliso Canyon Storage Field adjacent to Aliso and Limekiln Canyons. Access to the tower and pole locations are typified by unimproved access routes, often with road stabilizing components, due to the extreme nature of the topography. Access routes are approximately 12 to 16 feet wide and many have had recent blading activities to improve the road conditions.

- **Aliso Canyon Storage Facility (Aliso and Limekiln Canyons)**

With the exception of the site of the proposed Natural Substation and existing tower locations, the bulk of this survey area is situated within Aliso and Limekiln canyons. The canyons are typified by native vegetation, with the exception of non-native ruderal and landscape species around the infrastructure components on the site. The proposed substation is located on the ridgeline west of Limekiln Canyon, near SCE tower locations within non-native grasslands and a chaparral transitional environment.

2.0 Methodology

This section describes the late blooming period survey methodology. The methodology presents the definitions used to identify special-status plants, a description of the literature and database review, voucher specimen review, reference population visits, and the field survey methods.

2.1 Special-Status Definition

For the purposes of this document, special-status plants include all plant species that meet one or more of the following criteria (taken from California Department of Fish and Game [CDFG] 2009):

- Listed or proposed for listing as threatened or endangered under Endangered Species Act (ESA) or candidates for possible future listing as threatened or endangered under the ESA (50 Code of Federal Regulations [CFR] Section 17.12).
- Listed or candidates for listing by the State of California as threatened or endangered under California ESA (Fish and Game Code Section 2050 et seq.).
- Listed as rare under the California Native Plant Protection Act (Fish and Game Code Section 1900 et seq.).
- Meet the definition of rare or endangered under California Environmental Quality Act (CEQA) Section 15380(b) and (d). Species that may meet the definition of rare or endangered include the following:
 - Species considered by the CNPS to be “rare, threatened or endangered in California” (Lists 1A, 1B and 2). Although CNPS List 3 (Review List – need more information) and List 4 (Watch List – limited distribution) species are not included in the definition of rare or endangered under CEQA, pre-construction focused surveys included these species.
 - Species that may warrant consideration on the basis of local significance or recent biological information.
 - Some species included on the California Natural Diversity Database (CNDDB) *Special Plants, Bryophytes, and Lichens List* (CDFG 2008).
 - Considered a locally significant species; that is a species that is not rare from a statewide perspective but is rare or uncommon in a local context such as within a county or region (CEQA Section 15125 (c)) or is so designated in local or regional plans, policies, or ordinances (CEQA Guidelines, Appendix G).

2.2 Literature and Database Review

A literature and database search of the CNDDB and CNPS *Inventory for Rare and Endangered Vascular Plants of California* was conducted on August 16, 2010 to update the species list established during the early blooming period survey. The queried results identified 26 plant species based in the following U. S. Geological Survey 7.5-minute topographic quadrangles: Newhall, Whitaker Peak, Warm Springs Mountain, Mint Canyon, San Fernando, Green Valley, Val Verde, Santa Susana, and Oat Mountain. The results were compared to the original determination of these species' potential to occur on within the project area (Special-Status Plant Species Report, Appendix 1 [AECOM 2009]).

The 2010 results were identical to the results queried from the August 2009 literature and database search.

The list was comprised of four (4) species that, according to the literature and database search and analysis of physical conditions within the project areas, have a moderate to high potential of occurrence and whose late-season blooming period means they may not have been identified during the early and late spring surveys. In addition, ten (10) special-status species from the database query were added to the target species list as they may still exhibit identifiable features, even though they would have been outside the blooming period and are likely desiccated. Together, these 14 identified target species are listed in Appendix 1 of this report.

2.3 Voucher Specimen Review

To ensure accuracy of identification in the field and for purposes of consultation, a target special-status voucher specimen review was performed on August 17, 2010 at the University of California, Riverside (UCR) Herbarium under the assistance of the curator, Andy Sanders, and assistant curator, Teresa Salvato. The UCR Herbarium provided specimens of the 14 target special-status plant species for review. By examining the specimens and consulting with curators it was determined that only three (3) of the 14 species from the list generated in the Special-Status Plant Species Report would have a moderate to high potential to be observed as late blooming plants in the Project area. The three (3) species were:

- Santa Susana tarplant (*Hemizonia minthornii*),
- Ross' pitcher sage (*Lepechinia rossii*), and
- White rabbit tobacco (*Pseudognaphalium leucocephalum*).

In addition, earlier blooming period species with a moderate to high potential for observance were also reviewed. Although these species had a high likelihood of mortality due to the timing of the survey, remains of their skeletal framework, fruit structure, or other indicators would likely retain sufficient identifiable features to adequately key to the species level. These include:

- Braunton's milkvetch (*Astragalus brautonii*);
- San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina*);
- Parry's spineflower (*Chorizanthe parryi* var. *parryi*);
- Blochman's dudleya (*Dudleya blochmaniae* ssp. *blochmaniae*);
- Agoura Hills dudleya (*Dudleya cymosa* ssp. *agourensis*);
- Many-stemmed dudleya (*Dudleya multicaulis*);
- Nevins' barberry (*Mahonia nevinii*);
- Davidson's bush mallow (*Malacothamnus davidsonii*);
- Peninsular nolina (*Nolina cismontana*);
- Ojai navarretia (*Navarretia ojaiensis*); and
- Chaparral ragwort (*Senecio aphanactis*).

2.4 Reference Population Visits

Based on the Consortium of California Herbaria (<http://ucjeps.berkeley.edu/consortium/>) and personal communication with Andy Sanders, several reference sites were identified for pre-field survey visits. The reference sites were determined based on proximity to the project area and the likelihood of occurrence based on recent observations and voucher collections.

Several reference sites were visited, however due to “rights of entry” issues and the fact that target special-status species could not be located in the field; only the Santa Susana tarplant could be referenced. Data collected for the Santa Susana tarplant included target plant geospatial position information (e.g. GPS coordinates), phenology, general habitat descriptions, and associated vegetation species. Representative photographs were taken of the target sensitive plant species and a voucher specimen was collected. The voucher specimen and reference information was submitted to the UCR Herbarium.

2.5 Survey Methodology

Surveys were conducted in accordance with specifications in the CDFG guidance document *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFG, 2009).

The survey of the portion of the project involving transmission line areas included a 25-meter (approximately 82-foot) radial buffer surrounding each pole/tower, utilizing meandering pedestrian transects where taxa could be identified between surveyors. Likewise, for the Aliso Canyon Storage Field component, survey areas included the proposed impact areas plus a 25-meter buffer. Where topographical conditions limited access, vantage points in conjunction with binoculars were utilized to record plant species observed to the best level of confidence. Field staff focused survey efforts around each tower, pole, or proposed impact area.

Field staff biologists brought the following survey equipment in the field for use as needed:

- Field notebook for documenting species encountered and plant habitat characteristics;
- Target special-status plant species reference sheets;
- Garmin Rino 530 HcX GPS units with preloaded Project area data layers with topographical basemaps;
- Digital camera for survey references, flora, and points of interest;
- Local voucher specimen location descriptions and/ or coordinates;
- 10x hand lenses;
- *The Jepson Manual; Higher Plants of California* (Hickman 1993);
- Plant press to collect unknown and voucher specimens;
- CDFG California Native Species Field Survey Forms for recording special-status plant information;
- CDFG Scientific Collection Permit (#801051-04); and
- CDFG Authorization to Collect Voucher Specimens (#2081(a)-10-56-V).

When necessary, voucher specimens of unknown plants were collected during the surveys to provide an administrative record for plant species observed and confirm identity of selected species. Collected plant species were deposited at the UCR Herbarium.

3.0 Survey Results

This section presents results of the late-blooming period plant survey. Results include identification of soils and vegetation communities within the survey area, identification of climate conditions during the survey, and survey schedule and environmental conditions.

3.1 Literature and Database Review

AECOM conducted a literature and database review to characterize soils and vegetation communities. The results of these reviews are presented below.

3.1.1 Soils

The United States Department of Agriculture (USDA) Web Soil Survey (<http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm>) was reviewed to identify the soil associations that occur within the Project area (USDA-NRCS 2010). Soil associations within the Project area are listed below:

- Badland;
- Balom silty clay loam, 9-15 percent slopes;
- Balcome silty clay loam, 30-50 percent slopes;
- Castaic-Balcom silty clay loams, 15-30 percent slopes;
- Castaic-Balcom silty clay loams, 30-50 percent slopes;
- Castaic and Saugus soils, 30-65 percent slopes, severely eroded;
- Chualar-Urban land complex, 2-9 percent slopes;
- Gazos clay loam, 30-50 percent slopes;
- Gazos silty clay loam, 15-30 percent slopes;
- Gazos silty clay loam, 30-50 percent slopes;
- Gazos-Balcom complex, 30-50 percent slopes;
- Lopez shaly clay loam, 30-50 percent slopes;
- Millsholm loam, 30-50 percent slopes;
- Millsholm rocky loam, 30-50 percent slopes, eroded;
- Saugus loam, 30-50 percent slopes;
- Saugus loam, 30-50 percent, eroded;
- Soper gravelly sandy loam, 15-30 percent slopes;
- Xerorthents-Urban land-Saugus complex, 15-30 percent slopes;
- Yolo loam, 0-2 percent slopes; and
- Yolo loam, 2-9 percent slopes.

3.1.2 Vegetation Communities – General Description

Vegetation communities were initially identified and mapped during the Spring 2009 habitat assessment and have been described in detail in the Proponent's Environmental Assessment (PEA) (AECOM 2009b). The vegetation communities are categorized according to the *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986). The following vegetation communities were observed during the 2010 late blooming period survey and correspond to the survey areas as described in Section 1.2 of this report. The vegetation communities associated with each survey area is listed below.

1. SCE 66-kV Alignment – Built Environment

- Non-Native Grasslands,
- Southern Willow Scrub, and
- Ruderal/Landscape/Vagrant Ornamental.

2. SCE 66-kV Alignment – Natural Environment

- Non-Native Grasslands,
- Venturan Coastal Sage Scrub,
- [California] Walnut Woodland,
- Chamise Chaparral (Chamisal),
- Poison Oak Chaparral,
- Coast Live Oak Woodland, and
- Ruderal/Landscape/Vagrant Ornamental.

3. Aliso Canyon Storage Facility (Aliso and Limekiln Canyons)

- Non-Native Grasslands,
- Venturan Coastal Sage Scrub,
- [California] Walnut Woodland,
- Chamise Chaparral (Chamisal),
- Poison Oak Chaparral,
- Coast Live Oak Woodland, and
- Ruderal/Landscape/Vagrant Ornamental.

Project-specific descriptions of the plant species found in each vegetation community are presented below with each community's Holland reference codes in parentheses:

- **Non-native Grassland (42200)**

Plant species observed that define this vegetation community include slender oat (*Avena barbata*), wild oat (*A. fatua*), rip-gut brome (*Bromus diandrus*), soft chess (*B. hordaceus*),

foxtail chess (*B. madritensis*), downy brome (*B. tectorum*), and smilo grass (*Piptatherum miliaceum*).

- **Southern Willow Scrub (63320)**

Plant species observed that define this vegetation community include red willow (*Salix laevagata*), arroyo willow (*S. lasiolepis*), black willow (*S. goodingii*), white alder (*Alnus rhombifolia*), and mulefat (*Baccharis salicifolia*).

- **Coast Live Oak Woodland (71160)**

Plant species observed that define this vegetation community include coast live oak (*Quercus agrifolia*), scrub oak (*Q. berberidifolia*), valley oak (*Q. lobata*), laurel sumac (*Malosma laurina*), sugarbush (*Rhus ovata*), toyon (*Heteromeles arbutifolia*), non-native avena and brome species (*A. barbata*, *A. fatua*, *B. diandrus*, *B. madritensis*, *B. tectorum*), and poison oak (*Toxicodendron diversilobum*).

- **[California] Walnut Woodland (71210)**

Plant species observed that define this vegetation community include California walnut, coast live oak, valley oak, laurel sumac, sugarbush, toyon, non-native avena and brome species (*A. barbata*, *A. fatua*, *B. diandrus*, *B. madritensis*, *B. tectorum*), and poison oak.

- **Chamise Chaparral (Chamisal) (37200)**

Plant species observed that define this vegetation community are chamise (*Adenostoma fasciculatum*), bigberry manzanita (*Arctostaphylos glauca*), birch-leaved mountain mahogany (*Cercocarpus betuloides*), hairy ceonothus (*Ceanothus oliganthus*), California buckwheat (*Eriogonum fasciculatum* var. *polifolium*), white sage (*Salvia apiana*), black sage (*S. millifera*), chaparral yucca (*Yucca whipplei*), sugarbush, deerweed (*Lotus scoparius* var. *scoparius*), and thick-leaved yerba santa (*Eriodictyon crassifolium* var. *nigrescens*).

- **Venturan Coastal Sage Scrub (32300)**

Plant species observed that define this vegetation community include California sagebrush (*Artemisia californica*), California buckwheat, white sage, black sage, chaparral yucca, sugarbush, and deerweed.

- **Poison Oak Chaparral (37F00)**

Dominant and transitional species observed within this vegetation community prone to disturbance include poison oak, orange monkey flower (*Mimulus aurantiacus*), California sagebrush, California buckwheat, white sage, black sage, chaparral yucca, sugarbush, and deerweed.

- **Ruderal/Landscape/Vagrant Ornamental (no Holland designation).**

The more aggressive species observed within areas characterized by this vegetation community include: castor bean (*Ricinus communis*), tamarisk (*Tamarix ramosissima*), California fan palm (*Washingtonia filifera*), tree tobacco (*Nicotiana glauca*), tree-of-heaven (*Ailanthus altissima*), oleander (*Nerium oleander*), Peruvian pepper tree (*Schinus molle*), Italian thistle (*Carduus pycnocephalus*), tocalote (*Centaurea melitensis*), yellow star-thistle (*Centaurea solstitialis*), bull thistle (*Cirsium vulgare*), artichoke thistle (*Cynara cardunculus*), and Russian thistle (*Salsola tragus*).

Along the roadsides and access roads for Wiley Canyon Road, The Old Road, SCE access roads, tower and pole disturbance areas, and within the Aliso Canyon Storage Facility, non-native vegetation occurs as ruderal species, or is encompassed within a landscape design. Other transitional areas, from ruderal or landscape to natural communities, have escaped ornamentals that have begun to establish themselves, especially along water influx areas (e.g. roadside windrows, depression at tower and pole locations, laydown yards).

3.2 Climate

Monthly precipitation totals from August 2009 through July 2010 indicate that rainfall during this period was high relative to average, with a peak precipitation level for the Newhall, California area of 10.63 inches in January 2010. Sporadic precipitation events continued through May 2010 with no rainfall data recorded thereafter. Based on this level of precipitation, it is likely that late-blooming plants would have had sufficient soil moisture over the course of the season to germinate and/or flower.

3.3 Survey Conditions and Results

The 2010 late season special-status plant surveys for the ACTR Project was conducted on August 19, 20, and 23, 2010 by AECOM biologists Jonas Winbolt and Rocky Brown. Table 1 describes the weather conditions for each survey day:

Table 1 Weather Conditions During Late Blooming Period Special-Status Plant Survey (2010)

Date	Weather	Average Temperature (°F)	Wind Speed (miles per hour)
8/19/2010	Sunny, clear	92	0-3
8/20/2010	Sunny, clear	94	3-7
8/23/2010	Sunny, clear	94	3-7

Observed temperatures and lack of precipitation during the field surveys were within normal parameters for the area, given the time of season.

Surveys began with a briefing to identify potential safety concerns and overview of proposed work activities for the day. The work plan for implementing the surveys dictated starting from the northernmost tower locations near Wiley Canyon Road and Leon Road, extending south along the 66-kV subtransmission line down Wiley Canyon Road, adjacent to I-5 and The Old Road. As the subtransmission line turns west, the towers and pole locations were accessed along the I-5/northbound SR-14 interchange and within the Michael D. Antonovich Regional Park along Weldon Canyon Motorway off of Coltrane Avenue. Access to the Aliso Canyon Storage Facility is via existing SCG paved roads. Where unpaved road access was required, SCE and SCG unimproved access roads were utilized.

3.3.1 Survey Area Summaries

1. SCE 66-kV Alignment – Built Environment

Surveys at the tower and pole locations within this portion of the SCE 66-kV subtransmission line were performed on August 19, 2010. The majority of these locations occurred within the built environment along Wiley Canyon Road near Salle Canyon Drive. Surveys around each tower or pole location within the specified 25-meter survey area did not yield any visual observances of special-status species.

The soil characteristics varied greatly between pavement and asphalt, compacted silty clay, and manufactured slopes.

The area is heavily disturbed via industrial and residential uses. Plant species within this survey area were transitional between ruderal, roadside ditch species, to landscape and manufactured slopes and pad species, with infiltrations of native vegetation such as southern willow scrub vegetation and non-native grasslands.

Dominant species observed through this survey area included ornamental species such as Canary Islands Pine (*Pinus camariensis*), Italian Pine (*Pinus pinea*), zonal geraniums (*Pelagonium zonale*), Oleander, citrus (*Citrus* sp.), brown fig (*Ficus carica*), Peruvian pepper tree, Indian fig cactus (*Opuntia ficus indica*), landscape mesquite (*Prosopis* sp.), European olive (*Olea europaea*), bottle brush (*Callistemon citrinus*), Siberian elm (*Ulmus pumila*), California fan palm, and tree-of-heaven.

Other ruderal species were observed along roadside edges, ditches, and transitional areas to private property and open space areas (roadside pullouts, utility easements, etc.). These species included western ragweed (*Ambrosia psilostachya*), bull thistle, artichoke thistle, hoary mustard (*Hirschfeldia incana*), yellow sweet clover (*Melilotus indicus*), curly dock (*Rumex crispus*), salt heliotrope (*Heliotropium curassavicum*), prickly lettuce (*Lactuca serriola*), dove weed (*Croton setigerus*), tree tobacco, and non-native grasses (e.g. *Bromus diandrus*, *B. hordaceus*, *B. madritensis*, *B. tectorum*, *Avena barbatus*, *A. fatua*, *Schismus barbatus*, *Piptatherum miliaceum*).

Native vegetation community inclusions within this survey area include Southern Willow Scrub along Wiley Canyon Road. Due to the level of disturbances along this section of the 66-kV subtransmission line, this occurrence may be considered marginal and fragmented. A description of this vegetation community is provided above. One California walnut was noted within the roadside drainage along Wiley Canyon Road between Fourl Road and Calgrove Road among arroyo willows. The walnut's location was recorded for verification that it had been identified during earlier surveys.

2. SCE 66-kV Alignment – Natural Environment

Surveys at the tower and pole locations within this portion of the SCE 66-kV subtransmission line occurred on August 19 and 20, 2010. These locations occur primarily within the natural environment along the I-5 corridor, The Old Road, I-5/northbound SR-14 interchange, Michael D. Antonovich Regional Park, and Aliso Canyon Storage Facility. Surveys around each tower or pole location, within the specified 25-meter survey area buffers, did not yield any visual observances of special-status species.

The soil characteristics were primarily composed of silty-clay, often with exposed slope faces within the San Francisquito and Santa Susana Mountain ranges.

The general make up of the survey area is within native vegetation communities. Along the I-5 corridor and The Old Road, the vegetation communities transition between Non-Native Grasslands among Coast Live Oak Woodlands and [California] Walnut Woodlands. SCE access roads generally traverse the above-listed communities. However, along the west ridge of the San Francisquito Mountains, the vegetation communities are composed of recently burnt Chamise Chaparral (Chamisal), Poison Oak Chaparral and Venturan Coastal Sage Scrub. In addition, along the windrows of the access roads, some ruderal species exist, likely a result of the disturbance from the high degree of runoff during precipitation events. Other landscape and vagrant ornamental species exist adjacent to private property parcels.

One occurrence of fasciculate tarplant (*Hemizonia fasciculata*) was observed immediately south of Tower 7-1, at the I-5 and SR-14 interchange. This species was keyed and verified that it was not Santa Susana tarplant.

3. Aliso Canyon Storage Field (Aliso and Limekiln Canyons)

Surveys within the Aliso Canyon Storage Facility, including the portion of the SCE 66-kV subtransmission line within Aliso and Limekiln Canyons, were conducted on August 23, 2010. The survey area has distinct transitions between built and natural environments. Surveys around each pole location and construction and laydown areas within the specified 25-meter survey area and buffers did not yield any visual observances of special-status species.

Soil characteristics varied greatly throughout the Aliso Canyon Storage Field area due to the heavy influx of infrastructure improvements and ongoing maintenance. General observations throughout the facility indicate that the site is mainly composed of silty-clay complexes. However, on-site fill/disposal sites were observed, along with various types of imported materials (e.g. aggregates).

Because of the substantial infrastructure within the SoCalGas facility and the SCE access roads and tower and pole locations, ruderal species are located along the roadsides throughout the site. Landscape species are located around office buildings, all with irrigation linkages. Vagrant ornamentals are located near the facility buildings, but are also scattered through adjacent access roads and canyons.

Outside of the facility infrastructure, the general habitat make up of the survey area is predominately native vegetation communities, including Venturan Coastal Sage Scrub, [California] Walnut Woodland, Chamise Chaparral (Chamisal), Poison Oak Chaparral, and Coast Live Oak Woodland.

Several large populations of fasciculate tarplant were observed near Towers 12-3 and 12-4 within the roadway on the eastern ridge overlooking Limekiln Canyon. This species was verified that it was not Santa Susana tarplant.

Appendix 1 provides a detailed table of all special-status plant species identified as having some potential to occur within the ACTR project areas. Appendix 2 provides a plant compendium of all species identified in the initial spring/early summer 2009 surveys and 2010 late-bloom survey.

4.0 Conclusion

This late blooming period rare plant survey, and the prior early bloom and summer plant survey, were focused and timed to enhance or maximizes the probability of detection of a plant species. As a result, the early and late bloom surveys of the ACTR Project areas identified 121 plant species, including two special-status species, the Plummer's mariposa lily and slender mariposa lily, both listed as CNPS 1B.2. Through the timing of the surveys, the use of voucher specimens and reference sites for verifications, and consultations with regional experts, these surveys were designed to maximize the potential to identify all plant species occurring within the ACTR Project areas.

In preparation of the late bloom surveys, a review of historical records and annual data for precipitation and weather for the greater Santa Clarita area indicated that the winter and early spring of 2010 yielded an above-average rainfall. Perennial plant species indicators showed an overall healthy growth and sign of flowering/fruiting (e.g. chaparral yucca, toyon, holly leaf redberry, California walnut, coast live oak). Based on these observations, the level of precipitation in the region appears to have been adequate in relation to the germination requirements for late-season plant species. Therefore, it is likely that they would have been observed during this survey effort, if present.

Moreover, the ACTR Project area has had numerous plant vegetation and habitat surveys and at no time during any of these surveys has rare plant been observed. Starting in 2008 with the initial habitat assessment and vegetation mapping, through the early and late-blooming rare plant surveys, the Project area has been observed at various times of year and weather conditions that, when taken in total, represents well the range of environmental conditions at the site and the potential for rare plants to be observed.

Based on the data collected during the early and late-blooming period surveys conducted by AECOM, with the exception of the Plummer's and slender Mariposa lilies, no additional special-status plant species appear to occur within the ACTR Project area. Therefore it may be concluded that for the purposes of assessing impacts of on flora the ACTR Project may have potential impacts on two sensitive species. Applicant Proposed Measures (APMs) in the PEA (APM-BR-04, APM-BR-06, and APM-BR-08) have been proposed to minimize impacts to sensitive species populations and, based on the results of this survey, would effectively mitigate any potential impact to less than significant.

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Personal Communication:

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Appendix 1

Late-Season Target List of Potentially Occurring Special- Status Plant Species for the Aliso Canyon Turbine Replacement Project

APPENDIX 1 Late-Season Target List of Potentially Occurring Special-Status Plant Species for the Aliso Canyon Turbine Replacement Project

Species	Status	Habitat	Blooming Period	Elevation
Braunton's milk-vetch (<i>Astragalus brauntoni</i>)	FE, CNPS List 1B	Chaparral, Coastal scrub, Valley and foothill grassland/recent burns or disturbed areas, usually sandstone with carbonate layers	Jan-Aug	4-640 m
Nevin's barberry (<i>Berberis nevinii</i>)	FE, CE, CNPS List 1B	Chaparral, Cismontane woodland, Coastal scrub, Riparian scrub/sandy or gravelly soils	Mar-Jun	274-825 m
San Fernando Valley spineflower (<i>Chorizanthe parryi</i> var. <i>fernandina</i>)	FC, CE, CNPS List 1B	Coastal scrub(sandy), Valley and foothill grassland	Apr-Jun	150-1220
Parry's spineflower (<i>Chorizanthe parryi</i> var. <i>parryi</i>)	CNPS List 1B	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland/sandy or rocky openings	Apr-Jul	270-1220
Santa Susana tarplant (<i>Hemizonia minthornii</i>)	CR, CNPS List 1B	Chaparral, Coastal scrub/rocky areas	Jul-Nov	280-760 m

Species	Status	Habitat	Blooming Period	Elevation
Blochman's dudleya (<i>Dudleya blochmaniae</i> ssp. <i>blochmaniae</i>)	CNPS List 1B	Coastal bluff scrub, Chaparral, Coastal scrub, Valley and foothill grassland/rocky, often clay or serpentinite soils	Apr-Jun	5-450 m
Agoura Hills dudleya (<i>Dudleya cymosa</i> ssp. <i>agourensis</i>)	FT, CNPS List 1B	Chaparral, Cismontane woodland/rocky, volcanic soils	May-Jun	200-500 m
many-stemmed dudleya (<i>Dudleya multicaulis</i>)	CNPS List 1B	Chaparral, Coastal scrub, Valley and foothill grassland/often clay soils	Apr-Jul	15-790 m
Ross' pitcher sage (<i>Lepechinia rossii</i>)	CNPS List 1B	Chaparral	May-Sep	305-790 m
Davidson's bush mallow (<i>Malacothamnus davidsonii</i>)	CNPS List 1B	Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland	Mar-Jun	185-855
Ojai navarretia (<i>Navarretia ojaiensis</i>)	CNPS List 1B	Chaparral(openings), Coastal scrub(openings), Valley and foothill grasslands	May-Jul	275-620 m
Peninsular nolina (<i>Nolina cismontana</i>)	CNPS List 1B	Chaparral, Coastal scrub/sandstone or gabbro soils	May-Jul	140-1275 m

Species	Status	Habitat	Blooming Period	Elevation
white rabbit-tobacco (<i>Pseudognaphalium leucocephalum</i>)	CNPS List 2	Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland/sandy, gravelly soils	(Jul) Aug-Nov (Dec)	0-2100 m
chaparral ragwort (<i>Senecio aphanactis</i>)	CNPS List 2	Chaparral, Cismontane woodland, Coastal scrub/sometimes alkaline soils	Jan-Apr	15-800 m

Appendix 2

Plant Compendium for the Aliso Canyon Turbine Replacement Project

APPENDIX 2 Plant Compendium for the Aliso Canyon Turbine Replacement Project

KINGDOM PLANTAE – PLANTS

PHYLUM CONIFEROPHYTA – CONIFERS

Pinaceae - Pine Family

- @ *Pinus canariensis*
Canary Islands Pine
- @ *Pinus pinea*
Italian Stone Pine
- @ *Pinus* sp.
Ornamental Pine

Taxodiaceae - Redwood Family

- @ *Sequoia sempervirens*
Ornamental Coast Redwood

PHYLUM ANTHOPHYTA - ANGIOSPERMS

CLASS MAGNOLIOPSIDA -

DICOTYLEDONS

Aceraceae - Maple Family

- Acer macrophyllum*
Big-leaved Maple

Anacardiaceae - Sumac Family

- Malosma laurina*
Laurel Sumac
- Rhus ovata* X *integrifolia*
Sugar Bush
- ** *Schinus molle*
Peruvian Pepper-tree
- Toxicodendron diversilobum*
Western Poison-oak

Apocynaceae - Dogbane Family

- @ *Nerium oleander*
Oleander

Asteraceae - Sunflower Family

- Ambrosia acanthicarpa*
Annual Bur-sage
- Ambrosia psilostachya*
Western Ragweed
- Artemisia californica*
California Sagebrush
- Artemisia douglasiana*
California Mugwort
- Artemisia tridentata* var. *parishii*
Basin Sagebrush
- Baccharis pilularis*

- Coyote Brush
- Baccharis salicifolia*
Mule Fat
- Brickellia nevini*
Nevin's Brickellbush
- ** *Carduus pycnocephalus*
Italian Thistle
- ** *Centaurea melitensis*
Tocalote
- ** *Centaurea solstitialis*
Yellow Star-thistle
- ** *Cirsium vulgare*
Bull Thistle
- Conyza canadensis*
Common Horseweed
- ** *Cynara cardunculus*
Artichoke thistle
- Gnaphalium californicum*
California cudweed
- Gnaphalium canescens* ssp. *microcephalum*
White Everlasting
- Grindelia camporum*
Great Valley Grindelia
- Hazardia squarrosa*
Saw-toothed Goldenbush
- Hemizonia fasciculata*
Clustered tarweed
- Helianthus gracilentus*
Slender Sunflower
- Heterotheca grandiflora*
Telegraph Weed
- Isocoma menziesii*
Coastal Goldenbush
- * *Lactuca serriola*
Prickly Lettuce
- Lessingia filaginifolia*
California-Aster
- Malacothrix saxatilis*
Cliff Malacothrix
- Senecio flaccidus* var. *douglasii*
Shrubby Butterweed
- ** *Silybum marianum*
Blessed Milk Thistle
- * *Sonchus oleraceus*
Common Sow Thistle
- Stephanomeria virgata*
Twiggy Wreathplant
- Xanthium strumarium*

Rough Cocklebur

Betulaceae - Birch Family

Alnus rhombifolia
White Alder

Boraginaceae - Borage Family

Cryptantha muricata
Pointed Cat's-eye
Heliotropium curassavicum
Salt Heliotrope

Brassicaceae - Mustard Family

Hirschfeldia incana
Short-pod Mustard

Cactaceae - Cactus Family

* *Opuntia ficus-indica*
Indian-fig Cactus

Callitrichaceae - Water-starwort Family

Sambucus nigra
Blue Elderberry

Chenopodiaceae - Goosefoot Family

* *Salsola tragus*
Prickly Russian-thistle

Convolvulaceae - Morning-glory Family

Calystegia macrostegia
Western Bindweed

Crassulaceae - Stonecrop Family

Dudleya lanceolata
Lance-leaved Dudleya

Cucurbitaceae - Gourd Family

Cucurbita palmata
Coyote Melon
Marah macrocarpus
Wild Cucumber

Cuscutaceae - Dodder Family

Cuscuta californica
California Dodder

Ericaceae - Heath Family

Arctostaphylos glauca
Bigberry Manzanita

Euphorbiaceae - Spurge Family

Croton californicus
California Croton
** *Ricinus communis*
Castor-bean

Fabaceae - Pea Family

Astragalus trichopodus var. *phoxus*
Santa Barbara Milk-vetch
Lotus purshianus
Spanish Lotus
Lotus scoparius var. *scoparius*
Common Deerweed
Lupinus formosus
Summer Lupine
* *Melilotus indicus*
Annual Yellow Sweetclover
Prosopis sp.
Ornamental Mesquite

Fagaceae - Beech Family

Quercus agrifolia
Coast Live Oak
Quercus berberidifolia
Interior Scrub Oak
Quercus lobata
Valley Oak

Geraniaceae - Geranium Family

** *Erodium cicutarium*
Red-stemmed Filaree
@ *Pelargonium* sp.
Ornamental Geranium
* *Pelargonium zonale*
Zonal Geranium

Grossulariaceae - Gooseberry Family

Ribes malvaceum
Pink-flowered Currant

Hydrophyllaceae - Waterleaf Family

Eriodictyon crassifolium var. *nigrescens*
Thick-leaved Yerba Santa
Phacelia cicutaria
Caterpillar Phacelia

Juglandaceae - Walnut Family

Juglans californica
California Black Walnut

Lamiaceae - Mint Family

** *Marrubium vulgare*

White Horehound

Salvia apiana

White Sage

Salvia columbariae

Chia

Salvia mellifera

Black Sage

Trichostema lanceolatum

Vinegar Plant

Malvaceae - Mallow Family

Malacothamnus fasciculatus

Chaparral Mallow

Moraceae - Mulberry Family

** *Ficus carica*

Edible Fig

Myrtaceae - Myrtle Family

@ *Callistemon citrinus*

Crimson Bottlebrush

Oleaceae - Olive Family

Fraxinus dipetala

California Ash

Jasminum sp.

Jasmine

** *Olea europaea*

European Olive

Onagraceae - Evening-primrose Family

Clarkia purpurea

Winecup Clarkia

Epilobium canum

California Fuchsia

Papaveraceae - Poppy Family

Eschscholzia californica

California Poppy

Platanaceae - Sycamore Family

Platanus racemosa

California Sycamore

Polygonaceae - Buckwheat Family

Eriogonum elongatum

Long-stemmed Buckwheat

Eriogonum fasciculatum var. *polifolium*

California Buckwheat

** *Rumex crispus*

Curly Dock

Rhamnaceae - Buckthorn Family

Ceanothus oliganthus

Hairy Ceanothus

Rhamnus ilicifolia

Holly-leaved Redberry

Rosaceae - Rose Family

Adenostoma fasciculatum

Chamise

Cercocarpus betuloides

Birch-leaved Mountain-mahogany

Heteromeles arbutifolia

Toyon

Rubiaceae - Madder Family

Galium angustifolium

Narrow-leaved Bedstraw

Rutaceae - Citrus Family

Citrus sp.

Ornamental citrus

Salicaceae - Willow Family

Salix gooddingii

Goodding's Black Willow

Salix laevigata

Red Willow

Salix lasiolepis

Arroyo Willow

Scrophulariaceae - Figwort Family

Mimulus aurantiacus

Orange Bush Monkeyflower

Penstemon heterophyllus

Foothill Penstemon

Simaroubaceae - Quassia Family

** *Ailanthus altissima*

Tree-of-heaven

Solanaceae - Nightshade Family

* *Datura stramonium*

Annual Jimsonweed

** *Nicotiana glauca*

Tree Tobacco

Tamaricaceae - Tamarisk Family

** *Tamarix ramosissima*

Mediterranean Tamarisk

Ulmaceae - Elm Family

- @ *Ulmus pumila*
Siberian Elm

CLASS LILIOPSIDA - MONOCOTYLEDONS

Arecaceae - Palm Family

- @ *Washingtonia filifera*
California Fan Palm

Liliaceae - Lily Family

- Yucca whipplei*
Chaparral Yucca

Poaceae - Grass Family

- Achnatherum hymenoides*
Indian Ricegrass
- ** *Avena barbata*
Slender Oat
- ** *Avena fatua*
Wild Oat
- ** *Bromus diandrus*
Ripgut Brome
- ** *Bromus hordeaceus*
Soft Chess
- ** *Bromus madritensis*
Foxtail Chess
- ** *Bromus tectorum*
Downy Brome
- ** *Cynodon dactylon*
Bermuda Grass
- Leymus condensatus*
Giant Wild Rye
- ** *Piptatherum miliaceum*
Smilo Grass
- ** *Schismus barbatus*
Mediterranean Schismus
- Setaria gracilis*
Knotroot Bristlegrass
- @ *Stenotaphrum secundatum*
Saint Augustine Grass

STATUS CODES IN THE LIST

The following codes are applied in this list:

- * Nonnative, with believed-to-be established populations. Cited sources are followed, especially for guidance on "cryptogenic" species, those whose native status in the region is relatively unclear.
- ** Nonnative; classified as an invasive species per Cal-IPC (2006; all Table 1 species).
- @ Adventive; non-established "waifs" or "escapes" found sufficiently often to be noted as present. Includes some species that appeared to have established populations in the past but are now present only in this more limited role. Individuals of these species may be reproducing in the region (e.g., from seed), but the available evidence indicates no long-term establishment has occurred.

Appendix E4
Oak Tree Survey Report

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Environment

Prepared for:
Southern California Gas Company

Prepared by:
AECOM
60137730
February 2011

Oak Tree Survey Report

Aliso Canyon Turbine Replacement Project
Los Angeles County, California

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Appendix C Map of Surveyed Trees

Appendix D Los Angeles Oak Tree Ordinance

1.0 Introduction

Pursuant to the requests of the California Public Utilities Commission (CPUC), AECOM completed a detailed survey of individual oak tree impacts within the Aliso Canyon Turbine Replacement Project (ACTR) area, as defined in the Proponent's Environmental Assessment (PEA). The tree survey identified oak trees that have the potential to be impacted by project construction activities.

1.1 Survey Methodology

Trees were surveyed along tower access roads and within 25-meters of each tower location. The survey also included any trees with canopies covering access roads that lead to towers. Trees meeting ordinance criteria of average diameter at breast height (DBH) of 8" at time of survey were assessed for their current status and degree of impact from project activities. Only trees with impacts beyond that of regular maintenance, such as pruning/trimming greater than 25 percent of the canopy, were tagged. The remainder of trees was surveyed based on canopy coverage.

Project activities and potential impacts were determined during the field survey with SCE electrical engineering personnel. For each surveyed tree, information was collected on tree location, health, habitat, understory species, and potential project activity that would impact individual trees or overall oak tree woodland environments. Project activities include the following:

Project Activities:

- Road regrading
- Road widening, Tower Replacement
- Road widening, vehicular traffic
- Tower replacement
- Tower replacement, grading, and vehicular traffic
- Tower replacement, retaining wall construction
- Tower replacement, vehicular traffic
- Compressor station construction

Potential impacts were assessed based on the project activity and the tree condition. Examples of impacts to tree include significant loss of canopy (greater than 25 percent), unbalancing of the tree's scaffolding system, significant root zone disturbance, removal of a tree, or disruption to an oak tree woodland environment.

1.2 Survey Area

The survey area covered all tower locations and area surrounding the towers by 25-meters, tower access roads, and areas on the Aliso Canyon Storage Facility including equipment laydown areas, office locations, the proposed compressor station, and the proposed Natural substation. Trees were assessed for potential impacts if their canopies overarch access roads. Trees whose canopies do not overhang access roads or who overhang a regularly maintained access road without any required heavy pruning (greater than 25 percent of the canopy) were not assessed (i.e., tagged) during this survey.

1.3 Survey Schedule

Field surveys were conducted between January 31, 2011 and February 3, 2011.

1.4 Field Data Collection

Trees identified to be potentially impacted by construction activities were measured and tagged with a hard aluminum tag and a stainless steel nail. Each impacted tree is assessed for the following:

- Identification (scientific, common names)
- Diameter at breast height (DBH)
- Universal Transverse Mercator (UTM) coordinates
- General health notes
- Associated Habitat
- Understory species
- General notes
- Project activity
- Potential impact

The information was logged within a formatted field sheet and logged into a Trimble Juno unit for cross accuracy of field data. A copy of all field data sheets is provided in **Appendix A**.

1.5 Documentation

Field maps which document tower locations and access roads were utilized as field reference documents. All information was logged on tree assessment sheets for the tree survey (see Attachment A). General information regarding each riparian area was recorded for the tree survey.

All potentially impacted trees were photographed using the Trimble Juno Series built in 3 megapixel camera. All photographs are automatically geo-referenced in ARCPAD. Data for each point was collected in an ARCPAD data dictionary prior to saving the photograph. Equipment used to identify and map suitable trees within the impact zone include the following:

- Trimble Juno SB handheld with built in 3 megapixel camera. 2 to 5 meter positioning accuracy in real time or 1 to 3 meter post processed.
- Spencer Products Co. tree diameter tape
- Hard aluminum tree tags- 1 1/4" circular sequentially numbered.
- Stainless steel nails.

2.0 Survey Results

A total of twenty nine trees were surveyed and tagged. Trees that met the criteria for impacts beyond general maintenance (i.e., pruning greater than 25 percent of the canopy, vehicular traffic along groomed access roads) were tagged. The results of the tree survey are discussed below. Detailed information on each tagged tree is provided in **Appendix B**, including tag number, DBH, UTM coordinates, general health, associated habitat, understory species, and project activity associated with the impact. A narrative description of the trees is provided below. Where possible, trees were grouped for the purpose describing the environmental context in which the trees occur. Although the survey included all trees that may have potential impacts, the results are that only coast live oaks (*Quercus agrifolia*) were surveyed (i.e., no other tree species was identified having potential impacts beyond those that would be associated with general maintenance activity).

- Tree 1: A large diameter coast live oak along a north facing slope adjacent to Tower 3-8. The oak currently has a canopy within the tower scaffolding and is proposed for impacts from grading a modified tower pad. Impacts to this tree would potentially consist of loss of canopy from tower replacement and retaining wall construction activities.
- Trees 2-3: Both coast live oaks are along an ephemeral drainage to the southwest of Tower 3-8. The trees were within the proposed delivery path for construction supplies from Round Canyon Road. Impacts to these trees would potentially consist of loss of canopy from tower replacement activities.
- Trees 4-11: Seven coast live oaks line the terminal of an access road to Tower 5-6. Two coast live oaks edge the perimeter of the turn around and several are within the pad of the Tower. The trees form part of a comprehensive oak woodland area on the border of Santa Clarita Trailer Park below the tagged oaks. The understory is composed primarily of exotic annual grasses such as bromes (*Bromus* sp.) and wild oats (*Avena* sp.). The woodland understory above the access road transitions to a more native dominated understory with dominant species such as California ranunculus (*Ranunculus californica*) and stickywilly (*Galium aparine*). Impacts to these trees would potentially consist of loss of canopy and root zone disturbance from road widening, vehicular traffic, and pole replacement activities.
- Trees 12-13: Both coast live oaks are located on the Aliso Canyon Gas Plant and are planted on previously engineered slopes. Both specimens are small enough to be suitable candidates for relocation if required. Impacts to these trees would potentially consist of tree removal due to compressor station construction activities.
- Trees 14 -18: These five oaks occur along a heavily degraded road in between Tower 5-8 and Tower 5-9. Road maintenance has not occurred for a significant period of time as native understory species such as bush monkeyflower (*Mimulus aurantiacus*) and heart-leaf penstemon (*Keckiella cordifolia*) have grown into the roadway. Impacts to these trees would potentially consist of root zone disturbance from road regrading activities.
- Trees 19-20: These two coast live oaks are on a slope below Tower 6-5. The canopy of tree 19 reaches into the tower scaffolding. The oaks are part of large oak woodlands along the mesic slope north of Tower 6-5. The understory is heavily dominated by non-native annual grasses and milk thistle (*Silybum marianum*). Impacts to these trees would potentially consist

of loss of canopy and root zone disturbance from road widening, vehicular traffic, and tower replacement activities.

- Trees 21-22: The two coast live oaks border the utility access road to Tower 6-7 and the turnaround for the tower pad. The trees are mature to senescent and provide numerous cavities for wildlife to inhabit. The oaks are part of a larger oak woodland complex. Impacts to these trees would potentially consist of root zone disturbance from road widening and vehicular traffic.
- Tree 23: the coast live oak is bordered on two-third of its canopy by the utility access road to 6-7. This specimen is a large diameter oak with a wide canopy that reaches the access road through a large portion of the curve. Impacts to this tree would potentially consist of root zone disturbance from road widening and vehicular traffic.
- Tree 24: This large coast live oak has approximately forty percent of its canopy along the access road to Tower 6-7. One of the main scaffolds overhangs the road under the twelve foot height. Impacts to this tree would potentially consist of loss of canopy and root zone disturbance from road widening and vehicular traffic.
- Tree 25: This coast live oak on an exposed ridge is within the slope crest pad area for Tower 7-5. The oak is isolated from other oaks and is characterized by annual grassland and remnant Venturan coastal sage scrub (*Achnatherum coronatum*, *Eriogonum fasciculatum*, *Yucca whipplei*). Impacts to this tree would potentially consist of loss of canopy and root zone disturbance from road widening and tower replacement activities.
- Trees 26-27: Two coast live oaks grow closely together adjacent to Tower 14-3. The oaks were previously impacted by fire and are show heavy epicormic growth along their trunks and scaffolds. A healthy, native dominated understory flora is present. Impacts to these trees would potentially consist of loss of canopy and root zone disturbance from tower replacement activities.
- Tree 28: A coast live oak heavily impacted by a fire is adjacent to Tower 14-1. Scaffolds and associated branches formerly grew into the tower scaffolding, but now are only recovering by epicormic sprouting along the main scaffolds and trunk. Impacts to this tree would potentially consist of loss of canopy and root zone disturbance from tower replacement, road grading, and vehicular traffic.
- Tree 29: A coast live oak within an oak walnut woodland remnant within the Santa Clarita Trailer Park. The oak has some branches growing into the scaffolding of Tower 5-7. The majority of the canopy and the trunk occur to the south of Tower 5-7. Impacts to this tree would potentially consist of loss of canopy and root zone disturbance from tower replacement, road grading, and vehicular traffic.

A map showing all surveyed trees is provided in **Appendix C**.

3.0 Conclusion

Impacts to all of the twenty-nine surveyed and tagged trees consisted of loss of canopy, root zone disturbance, removal, or a combination of these impacts. Project activities that would cause these impacts include tower replacement, construction of retaining walls or of the compressor station, road widening and repaving, and vehicular traffic. These project activities were considered based on the best information available at this time regarding construction and may be modified or altered to avoid or minimize impacts to trees.

Results of the survey show potential impacts primarily to individual oak trees or to small clusters of oak trees in areas of oak woodland that support dozens if not hundreds of oak trees. In only two cases would there be the potential for tree removal and these occur on the Aliso Canyon Storage Field at the site of the proposed compressor station. Potential impacts are limited to individual trees, and not in ways that will damage or create stress on any oak woodland community. The ACTR PEA provides for this in the following Applicant Proposed Measure:

APM-BR-07 Pursuant to city of Santa Clarita/Los Angeles County ordinance guidelines, loss or impacts to all native oak trees via trimming or ground disturbance within the dripline shall be avoided using specific measures and/or agency guidance; if impacts cannot be avoided, SoCalGas must submit an Oak Tree Permit Application (including an Oak Tree Report) to Los Angeles County and obtain an Oak Tree Permit prior to construction.

Specifically, Section 22.56.2180 *Additional Conditions Imposed* of the County of Los Angeles Oak Tree Ordinance, Section B outlines a plan for protecting oak trees on subject property during and after development. Ordinance measures can mitigate potential impacts to oaks identified during tree surveys in the project area, and including the following:

- The installation of temporary fencing around the protected zones of oaks;
- limiting excavation within 15 feet of the trunk to hand operated tools;
- Protective fencing restricting storage and access during construction to oaks;
- Employment of a qualified arborist to monitor field construction activities; and,
- Corrective remedial actions such as corrective pruning, fertilization, or aeration.

A copy of the County of Los Angeles Oak Tree Ordinance is provided in **Appendix D** for reference. The City of Santa Clarita ordinance 17.17.090 *Oak Tree Preservation* also requires protective measures that will minimize potential impacts to trees. The ACTR project will implement protective measures in accordance with the City of Santa Clarita and/or the County of Los Angeles ordinance guidelines prior to the implementation of ground disturbing activities. The applicable protective measures, such as those listed above, will be implemented in accordance with APM-BR-07.

Adherence to the protective measures set forth in these ordinances will minimize impacts to the maximum extent feasible; therefore no mitigation for tree impacts is required.

Appendix A

Tree Field Forms

01-31-2011

ALISO CANYON TURBINE REPLACEMENT PROJECT TREE INVENTORY

AECOM

NO.	001	002
SCIENTIFIC NAME	<i>Quercus agrifolia</i>	<i>Quercus agrifolia</i>
COMMON NAME	COAST LIVE OAK	COAST LIVE OAK
DBH	42"	18"
UTM COORDINATES	34.37109 -118.55645	356886034237057 3804402.92155226
GENERAL HEALTH NOTES	Proper topwork and scaffolding. CAVITISE w/ good CAUTION! growth. LANDSCAPE LIGHTING IN TREE.	Borer Damage on roots. Dead branching and scaffolding.
ASSOCIATED HABITAT	OAK WOODLAND TRANSITIONING INTO DISTURBED/ORNAMENTAL	OAK WOODLAND
UNDERSTORY SPECIES	Bromus sp. Aster/ea. Coast Iron Plant (Aspidistra elatior) CALLA LILY (ZANDERESCLARA AETHIOPICA)	duffing layer; no understory plants.
GENERAL NOTES	On 2:1 slope. ROOTS grow with slope downwards. tree will be AVOIDED w/ some scaffold pruning at core tower site.	ADJACENT TO CDFG JURISDICTION dry/EPHEMERAL STREAMBED

IMPACTS

Removal:

Soil:

Equipment Operation:

Abiotic:

Tree

Grading

Strike

Grade Change

Scaffold

Grubbing

Soil Compaction

Soil Piling

Branch

Trenching

Chemical (spill wastes etc)

Topsoil Removal

01/31/2011

ALISO CANYON TURBINE REPLACEMENT PROJECT TREE INVENTORY

AECOM

NO.	003	004
SCIENTIFIC NAME	<i>Quercus agrifolia</i>	<i>Quercus Agrifolia</i>
COMMON NAME	Coast Live Oak	Coast Live Oak
DBH	30"	15"
UTM COORDINATES	34.3711 -118.55649	34.35178 -118.54050
GENERAL HEALTH NOTES	CODOMINANT SCAFFOLD DEAD BRANCHES & TWIGGS → Approx. 10% of canopy. GROBING ON BARK, leading to exposed roots.	Sparse canopy Dead, branching Collars growth on trunk
ASSOCIATED HABITAT	Oak Woodland	Oak Woodland
UNDERSTORY SPECIES	heavy duffus layer, no significant plant growth outside of isolated Bromus.	Bromus sp. Sambucus mexicana
GENERAL NOTES	Adjacent to CDFG Ephemeral drainage	

IMPACTS

Removal:

Soil:

Equipment Operation:

Abiotic:

Tree

Grading

Strike

Grade Change

Scaffold

Grubbing

Soil Compaction

Soil Piling

Branch

Trenching

Chemical (spill wastes etc)

Topsoil Removal

01.31.2011

ALISO CANYON TURBINE REPLACEMENT PROJECT TREE INVENTORY

AECOM

NO.	005	006
SCIENTIFIC NAME	<i>Quercus agrifolia</i>	<i>Quercus agrifolia</i>
COMMON NAME	Coast Live Oak	Coast Live Oak
DBH	15" @ 1' 15" @ 1'	23"
UTM COORDINATES	34.35184 -118.54053	34.35182 -118.54061
GENERAL HEALTH NOTES	CODOMINANT TREES, Formerly a three trunked tree. Significant Suck.	LARGE cavity w/ limited canopy growth Codominant scaffold. Dead Scaffold + BRANCHES. Seep on scaffold.
ASSOCIATED HABITAT	Oak WOODLAND TRANSITIONING to disturbed (mobile home park)	OAK WOODLAND TRANSITIONING to disturbed (mobile home park)
UNDERSTORY SPECIES	<i>Bromus</i> sp. <i>MARAH MACROCARPA</i> <i>Silybum marianum</i>	<i>Bromus</i> sp. <i>MARAH MACROCARPA</i> <i>Silybum marianum</i>
GENERAL NOTES		* HUMMINGBIRD nest Small side sprout @ Root flare.

IMPACTS

Removal:	Tree	Scaffold	Branch
Soil:	Grading	Grubbing	Trenching
Equipment Operation:	Strike	Soil Compaction	Chemical (spill wastes etc)
Abiotic:	Grade Change	Soil Piling	Topsoil Removal

01.31.2011

ALISO CANYON TURBINE REPLACEMENT PROJECT TREE INVENTORY

AECOM

NO.	007	008
SCIENTIFIC NAME	<i>Quercus agrifolia</i>	<i>Quercus agrifolia</i>
COMMON NAME	Coast Live Oak	Coast Live Oak
DBH	5"	6"
UTM COORDINATES	34.35173 -118.54057	34.35178 -118.54059
GENERAL HEALTH NOTES	young trees; vigorous w/ large growth cracks.	young tree; vigorous w/ large growth cracks.
ASSOCIATED HABITAT	OAK WOODLAND	OAK WOODLAND
UNDERSTORY SPECIES	Bromus sp. RANUNCULUS CALIFORNICA GALIUM APARINE ERIOPHYLLUM CONFERTIFLORUM SILYBUM MARITIMUM	Bromus sp. RANUNCULUS CALIFORNICA GALIUM APARINE MELATH MACROCARPA MEXIGADO POLYMOORPHA SILYBUM MARITIMUM
GENERAL NOTES	Adjacent to access road.	Adjacent to access road.

IMPACTS

Removal:

Soil:

Equipment Operation:

Abiotic:

Tree

Grading

Strike

Grade Change

Scaffold

Grubbing

Soil Compaction

Soil Piling

Branch

Trenching

Chemical (spill wastes etc)

Topsoil Removal

01.31.2011

ALISO CANYON TURBINE REPLACEMENT PROJECT TREE INVENTORY

AECOM

NO.	009	010
SCIENTIFIC NAME	<i>Quercus agrifolia</i>	<i>Quercus agrifolia</i>
COMMON NAME	Coast Live Oak	Coast Live Oak
DBH	23"	10"@3', 12"@3'
UTM COORDINATES	34.35199 -118.54056	34.35159 -118.54052
GENERAL HEALTH NOTES	GOOD TAPOR; SOME CALLUSOS CAVITIES, DEAD BRANCHES.	CODOMINANT SCAFFOLDS. Vigorous w/ many growth cracks. young tree.
ASSOCIATED HABITAT	OAK WOODLAND	OAK WOODLAND
UNDERSTORY SPECIES	<i>Eriophyllum confertiflorum</i> <i>Sambucus mexicana</i> <i>Piptadenia milzium</i>	<i>Bromus</i> sp.
GENERAL NOTES	ADJACENT TO THE TURN AROUND AREA. w/ potential impact area for ROAD ACTIVITIES.	ADJACENT TO THE TURN AROUND AREA. w/ potential impact AREA for ROAD ACTIVITIES.

IMPACTS

Removal:	Tree	Scaffold	Branch
Soil:	Grading	Grubbing	Trenching
Equipment Operation:	Strike	Soil Compaction	Chemical (spill wastes etc)
Abiotic:	Grade Change	Soil Piling	Topsoil Removal

*TOWER 5-6 → Does the CRANE need to come up the ROAD
OR CAN IT BE PLACED ON THE PAVED ACCESS ROAD.

01.31.2011

02.01.2011

ALISO CANYON TURBINE REPLACEMENT PROJECT TREE INVENTORY

AECOM

NO.	011	012
SCIENTIFIC NAME	<i>Quercus agrifolia</i>	<i>Quercus agrifolia</i>
COMMON NAME	Coast Live Oak	Coast Live Oak
DBH	10"	19"
UTM COORDINATES	34.35174 -118.54053	34.30719 -118.55234
GENERAL HEALTH NOTES	good branching, balanced taper on trunk.	Young tree with self corrected incline in trunk. well balanced canopy.
ASSOCIATED HABITAT	OAK WOODLAND transitioning into ventucapsage scrub.	ORNAMENTAL adjacent to GRAVEL ACCESS path.
UNDERSTORY SPECIES	<i>Silybum marianum</i> <i>Artemisia californica</i> <i>Salvia mellifera</i> <i>Bromus</i> sp. <i>marattia macrocarpa</i>	MTA Bare soil w/ signs of Gopher activity.
GENERAL NOTES	Lots of dead woody material from shrubs. on embankment adjacent to turn around.	Along access road. Proposed for removal for gas station site. Can be boxed and relocated.

IMPACTS

Removal:

Soil:

Equipment Operation:

Abiotic:

Tree

Grading

Strike

Grade Change

Scaffold

Grubbing

Soil Compaction

Soil Piling

Branch

Trenching

Chemical (spill wastes etc)

Topsoil Removal

02.01.2011

ALISO CANYON TURBINE REPLACEMENT PROJECT TREE INVENTORY

AECOM

NO.	013	
SCIENTIFIC NAME	<i>Quercus agrifolia</i>	
COMMON NAME	Coast Live oak.	
DBH	9" @ 3' 11" @ 3'	
UTM COORDINATES	34.30724 -118.55226	
GENERAL HEALTH NOTES	young tree. Some possibility of impact from to roots. Trunk fibre not evenly balanced.	
ASSOCIATED HABITAT	ORNAMENTAL Engineered slope.	
UNDERSTORY SPECIES	NA/	
GENERAL NOTES	Planted specimen. wooden stakes still in specimen.	

IMPACTS

Removal:

Tree

Scaffold

Branch

Soil:

Grading

Grubbing

Trenching

Equipment Operation:

Strike

Soil Compaction

Chemical (spill wastes etc)

Abiotic:

Grade Change

Soil Piling

Topsoil Removal

ALISO CANYON TURBINE REPLACEMENT PROJECT TREE INVENTORY

AECOM

NO.	014	015
SCIENTIFIC NAME	<i>Quercus agrifolia</i>	<i>Quercus agrifolia</i>
COMMON NAME	Coast Live Oak	Coast Live Oak
DBH	18"@3', 18"@3'	15"@1', 16"@1', 17"@1', 27"@4'
UTM COORDINATES	34.35018 -118.53488	34.35046 -114.53462
GENERAL HEALTH NOTES	Codominant trunks. However there is no inclusion of bark in the trunk and both trunks have an even taper. dense canopy w/ minimal dead wood	Multi-trunked specimen w/ decay + pooling water in center of trunks. Large cavity w/ decay + pooling water evident. Dense Canopy.
ASSOCIATED HABITAT	oak woodland chamise / ceanothus chaparral.	oak woodland / seasonal wd.
UNDERSTORY SPECIES	<i>Ranunculus californicus</i> <i>Pentstemon triangularis</i> <i>Koeberlinia cordifolia</i> <i>Marrubium macrocarpa</i> <i>Galium aparine</i> <i>Sambucus mexicana</i> <i>Silybum marianum</i> <i>Lesqueria</i> Liverwort.	<i>Lesqueria filaginifolia</i> <i>Galium aparine</i> <i>Bromus</i> sp.
GENERAL NOTES	on BANK by degraded road. Canopy reaches CDFG/ACOE jurisdictional streambed (ephemeral) Evidence of extensive Root growth w/in old road.	CDFG jurisdictional. Approximately 40% of canopy + corresponding root zone w/in old access road.

IMPACTS

Removal:

Soil:

Equipment Operation:

Abiotic:

Tree

Grading

Strike

Grade Change

Scaffold

Grubbing

Soil Compaction

Soil Piling

Branch

Trenching

Chemical (spill wastes etc)

Topsoil Removal

ALISO CANYON TURBINE REPLACEMENT PROJECT TREE INVENTORY

AECOM

NO.	016	017
SCIENTIFIC NAME	<i>Quercus agrifolia</i>	<i>Quercus agrifolia</i>
COMMON NAME	Coast Live Oak	Coast Live oak
DBH	20"	23"
UTM COORDINATES	34.35038 -118.53420.	34.35031 -118.53384
GENERAL HEALTH NOTES	Calloused cavity on trunk midway. Self corrected incline Dense Canopy.	Some dead wood Self corrected incline in trunk healthy scaffolds + canopy
ASSOCIATED HABITAT	oak woodland/seasonal wash.	oak woodland.
UNDERSTORY SPECIES	<i>Leckertella cordifolia</i> <i>Silybum marianum</i> <i>Galium officinale</i> <i>Eucrypta minutiflora</i> <i>Sambucus mexicana</i>	<i>Silybum marianum</i> <i>Minulus aurantiacus</i> <i>Sambucus mexicana</i> <i>Lessingia fillo-rifolia</i> <i>Slytonia</i> sp.
GENERAL NOTES	within CDFG jurisdictional wash. potentially AWE as well.	EDFG jurisdictional. Approx 40% of canopy + associated root structure within former road.

IMPACTS

Removal:

Soil:

Equipment Operation:

Abiotic:

Tree

Grading

Strike

Grade Change

Scaffold

Grubbing

Soil Compaction

Soil Piling

Branch

Trenching

Chemical (spill wastes etc)

Topsoil Removal

ALISO CANYON TURBINE REPLACEMENT PROJECT TREE INVENTORY

AECOM

NO.	018	019
SCIENTIFIC NAME	<i>Quercus agrifolia</i>	<i>Quercus agrifolia</i>
COMMON NAME	Coast Live Oak	Coast Live Oak
DBH	14" @ 8", 17" @ 8"	18" @ 2', 17" @ 2'
UTM COORDINATES	34.55031 -118.53389	34.3454539 -118.52872
GENERAL HEALTH NOTES	Exposed roots on embankment Decay in trunk w/ callous formations. Codominant trunks included bark	Codominant trunks, included bark, healthy, dense canopy.
ASSOCIATED HABITAT	Oak woodland	Oak woodland, Annual Grassland.
UNDERSTORY SPECIES	<i>Marah macrocarpa</i> <i>Mimulus aurantiacus</i> <i>Pentstemon frigidus</i> <i>Silybum maritimum</i> <i>Leptochloa cordifolia</i> <i>Sambucus mexicana</i> <i>Prunus ilicifolia</i> <i>Ceanothus</i> <i>Artemisia californica</i>	<i>Silybum maritimum</i> <i>Bromus diandrus</i>
GENERAL NOTES	on bank by road former road.	open field with canopy reaching into tower 6-5.

IMPACTS

Removal:

Soil:

Equipment Operation:

Abiotic:

Tree

Grading

Strike

Grade Change

Scaffold

Grubbing

Soil Compaction

Soil Piling

Branch

Trenching

Chemical (spill wastes etc)

Topsoil Removal

ALISO CANYON TURBINE REPLACEMENT PROJECT TREE INVENTORY

AECOM

NO.	20	21
SCIENTIFIC NAME	<i>Quercus agrifolia</i>	<i>Quercus agrifolia</i>
COMMON NAME	Coast Live Oak	Coast Live Oak
DBH	23"	26"
UTM COORDINATES	34.3439 -118.52894	34.34388 -118.52456
GENERAL HEALTH NOTES	Self corrected incline 180° growth for most of trunk growth then vertical scaffold growth into canopy.	Slight incline in growth, healthy scaffolding + dense canopy.
ASSOCIATED HABITAT	Oak woodland transitioning to annual grassland	Oak woodland
UNDERSTORY SPECIES	<i>Bromus diandrus</i> <i>Silybum marianum</i>	<i>Solanum douglasii</i> <i>Marah macrocarpa</i> <i>Sambucus mexicana</i> <i>Bromus diandrus</i> <i>Silybum marianum</i>
GENERAL NOTES	Canopy reaches into road of tower 6-5.	Canopy reaches into the access road. will be significantly impacted ALSO ADJACENT TO THE turnaround. Access road to tower 6-7.

IMPACTS

Removal:

Soil:

Equipment Operation:

Abiotic:

Tree

Grading

Strike

Grade Change

Scaffold

Grubbing

Soil Compaction

Soil Piling

Branch

Trenching

Chemical (spill wastes etc)

Topsoil Removal

ALISO CANYON TURBINE REPLACEMENT PROJECT TREE INVENTORY

AECOM

NO.	22	23
SCIENTIFIC NAME	<i>Quercus agrifolia</i>	<i>Quercus agrifolia</i>
COMMON NAME	Coast Live oak	Coast Live Oak
DBH	19" @ 18"	30"
UTM COORDINATES	34.34589 -118.59445	34.34378 -118.52387
GENERAL HEALTH NOTES	Double trunked. 1st larger trunk senescent with significant cavity w/ calloused edges. larger cavity where large scaffold existed @ 7' from trunk plane.	Broader scaffold; Dead branches fully callous former trunk site (former scaffold) Some oak borer damage on lower NW portion of trunk.
ASSOCIATED HABITAT	oak woodland	oak woodland
UNDERSTORY SPECIES	<i>Toxicodendron diversilobum</i> <i>Solanum douglasii</i> <i>Bromus diandrus</i> <i>Phacelia ramosissima</i> <i>Marrubium macrocarpa</i>	<i>Sambucus mexicana</i> <i>Silybum marianum</i> <i>Marrubium macrocarpa</i> <i>Bromus diandrus</i> <i>Marrubium vulgare</i> <i>Mimulus aurantiacus</i>
GENERAL NOTES	Canopy within access road and turn around. wildlife tree → cavity. Access road to tower 6-7.	tree to be potentially impacted by access road as it "u" turns around 2/3 of the canopy. wildlife tree → cavity. Access road to Tower 6-7.

IMPACTS

Removal:	Tree	Scaffold	Branch
Soil:	Grading	Grubbing	Trenching
Equipment Operation:	Strike	Soil Compaction	Chemical (spill wastes etc)
Abiotic:	Grade Change	Soil Piling	Topsoil Removal

ALISO CANYON TURBINE REPLACEMENT PROJECT TREE INVENTORY

AECOM

NO.	24	N/A
SCIENTIFIC NAME	<i>Quercus agrifolia</i>	<i>Quercus agrifolia</i>
COMMON NAME	Coast live oak	Coast live oak.
DBH	35"	N/A
UTM COORDINATES	34.34420 -118.52439	N/A
GENERAL HEALTH NOTES	Some dead scaffolds. Pocket formation between 3 major scaffolds @ 15' Thick/dense canopy/corok.	N/A
ASSOCIATED HABITAT	oak woodland	undifferentiated chaparral and oak venturan sage scrub.
UNDERSTORY SPECIES	<ul style="list-style-type: none"> • <i>Bromus diandrus</i> • <i>Silphium maritimum</i> • <i>Sambucus mexicana</i> 	N/A
GENERAL NOTES	oak on spine to access Road to tower 7-2 does not appear to be impacted	within access road to tower 6-7. Lower scaffolds may be removed for access grading. Canopy w/in the

IMPACTS

Removal:

Soil:

Equipment Operation:

Abiotic:

Tree

Grading

Strike

Grade Change

Scaffold

Grubbing

Soil Compaction

Soil Piling

Branch

Trenching

Chemical (spill wastes etc)

Topsoil Removal

ALISO CANYON TURBINE REPLACEMENT PROJECT TREE INVENTORY

AECOM

NO.	25	26
SCIENTIFIC NAME	<i>Quercus agrifolia</i>	<i>Quercus agrifolia</i>
COMMON NAME	Coast live oak	Coast live oak
DBH	10" @ 3', 11" @ 3'	25"
UTM COORDINATES	34.33869 -118.51185	34.31670 -118.53107
GENERAL HEALTH NOTES	Some dead branches. Compact growth from exposed growth site (location)	Epicormic growth, charred trunk from previous fire event. Crown fine event but extensive recovery.
ASSOCIATED HABITAT	Annual grassland, montane sage scrub	oak-walnut woodland
UNDERSTORY SPECIES	<i>Plagiobotrys</i> sp. <i>Avena barbata</i> <i>Eriogonum fasciculatum</i> <i>Solanum xanthi</i> <i>Lupinus hirsutissimus</i> <i>Achnatherum coronatum</i> <i>Yucca whipplei</i> <i>Mirabilis californica</i>	<i>Eucrypta minutiflora</i> <i>Marrubium macrocarpum</i> <i>Ribes aureum</i> <i>Claytonia</i> sp. <i>Galium sp.</i> <i>Galium officinale</i> <i>Silybum marianum</i> <i>Rhus ovata</i> <i>Bromus</i> sp.
GENERAL NOTES	Small tree on side of slope growing into tower 7-5.	Canopy reaches to tower 14-7.

IMPACTS

Removal:	Tree	Scaffold	Branch
Soil:	Grading	Grubbing	Trenching
Equipment Operation:	Strike	Soil Compaction	Chemical (spill wastes etc)
Abiotic:	Grade Change	Soil Piling	Topsoil Removal

ALISO CANYON TURBINE REPLACEMENT PROJECT TREE INVENTORY

AECOM

NO.	27	28
SCIENTIFIC NAME	<i>Quercus agrifolia</i>	<i>Quercus agrifolia</i>
COMMON NAME	Coast live oak	Coast live oak
DBH	10"	21"
UTM COORDINATES	34.31667 -118.53108	34.31439 -118.53414
GENERAL HEALTH NOTES	partially suppressed by tree 26. previous fire damage, numerous epicormic sprouts through canopy	Heavily impacted by fire. Epicormic growth on trunk and branches.
ASSOCIATED HABITAT	oak-walnut woodland	oak woodland-chaparral.
UNDERSTORY SPECIES	<i>Galium aparine</i> <i>Galium officinale</i> <i>Rhus ovata</i> <i>Chytoria</i> sp. <i>marah macrocarpa</i> <i>Bromus</i> sp. <i>Eucryptis minutiflora</i>	<i>Melica imperfecta</i> <i>Rhaphanus sativus</i> <i>THACELLA IMBRICATA</i> <i>Rhus ovata</i> <i>Bromus</i> sp. misting galium (<i>Galium angustifolium</i>)
GENERAL NOTES	same as 26.	Canopy formerly grow into frame of tower 14-1.

IMPACTS

Removal:

Soil:

Equipment Operation:

Abiotic:

Tree

Grading

Strike

Grade Change

Scaffold

Grubbing

Soil Compaction

Soil Piling

Branch

Trenching

Chemical (spill wastes etc)

Topsoil Removal

ALISO CANYON TURBINE REPLACEMENT PROJECT TREE INVENTORY

AECOM

NO.	29.	
SCIENTIFIC NAME	<i>Quercus agrifolia</i>	
COMMON NAME	Coast live Oak	
DBH	23"	
UTM COORDINATES	39.35116 -118.53815	
GENERAL HEALTH NOTES	Healthy tree, dense canopy.	
ASSOCIATED HABITAT	Oak woodland w/ disturbed (mobile home park)	
UNDERSTORY SPECIES	cliffy log with occasional MARAH MACROCARPA.	
GENERAL NOTES	Canopy grows into Tower on north facing slope.	




IMPACTS



Removal:	Tree	Scaffold	Branch
Soil:	Grading	Grubbing	Trenching
Equipment Operation:	Strike	Soil Compaction	Chemical (spill wastes etc)
Abiotic:	Grade Change	Soil Piling	Topsoil Removal



Appendix B



Oak Tree Table




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TAG NO	SCIENTIFIC NAME	COMMON NAME	DBH	UTM COORDINATES	GENERAL HEALTH NOTES	ASSOCIATED HABITAT	UNDERSTORY SPECIES	GENERAL NOTES	PROJECT ACTIVITY	POTENTIAL IMPACT	PHOTO
1	<i>Quercus agrifolia</i>	Coast live oak	42"	358833.66, 3802053.00	Proper taper and scaffolding. Cavities with good callous growth. Landscape lighting in tree	Oak woodland transitioning into disturbed/ornamental	<i>Bromus</i> sp. <i>Azalea</i> 'Southern Indica' <i>Aspidistra elatior</i> <i>Zantendeschia aeithiopica</i>	Root system growth downslope on 2:1 slope. A large diameter coast live oak (<i>Quercus agrifolia</i>) along a north facing slope adjacent to Tower 3-8. The oak currently has a canopy within the tower scaffolding. Tree will be accessed from above, avoiding most impacts outside of some pruning within the tower site.	Tower replacement, retaining wall construction	Loss of canopy	
2	<i>Quercus agrifolia</i>	Coast live oak	18"	358896.69, 3802075.00	Border damage on roots. Dead branches and scaffolds.	Oak woodland	Heavy duffus layer; no understory plants.	Adjacent to undelineated ephemeral streambed. Tree is along an ephemeral drainage to the southwest of Tower 3-8. The trees were within the proposed delivery path for construction supplies from Round Canyon Road	Tower replacement	Loss of canopy	
3	<i>Quercus agrifolia</i>	Coast live oak	30"	358931.81, 3802065.75	Codominant scaffolds. Dead branches on approx. 10% of canopy. Erosion on bank has exposed roots.	Oak woodland	Heavy duffus; no understory.	Adjacent to undelineated ephemeral streambed. Tree is along an ephemeral drainage to the southwest of Tower 3-8. The trees were within the proposed delivery path for construction supplies from Round Canyon Road	Tower replacement	Loss of canopy	



TAG NO	SCIENTIFIC NAME	COMMON NAME	DBH	UTM COORDINATES	GENERAL HEALTH NOTES	ASSOCIATED HABITAT	UNDERSTORY SPECIES	GENERAL NOTES	PROJECT ACTIVITY	POTENTIAL IMPACT	PHOTO
4	<i>Quercus agrifolia</i>	Coast live oak	15"	358927.31, 3802061.50	Sparse canopy. Dead branches. Callous growth on trunk.	Oak woodland	<i>Bromus</i> sp. <i>Sambucus mexicana</i>	The tree is part of a comprehensive oak woodland area on the border of Santa Clarita Trailer Park below the tagged oaks.	Road widening, Tower Replacement	Loss of canopy	
5	<i>Quercus agrifolia</i>	Coast live oak	15"@1',15" @1'	359394.50, 3801510.25	Codominant trunks. Formerly a three trunked tree. Significant burls.	Oak woodland transitioning to disturbed/ornamental (mobile home park)	<i>Bromus</i> sp. <i>Marah macrocarpa</i> <i>Silybum marianum</i>	The tree forms part of a comprehensive oak woodland area on the border of Santa Clarita Trailer Park below the tagged oaks.	Road widening	Root zone disturbance	




TAG NO	SCIENTIFIC NAME	COMMON NAME	DBH	UTM COORDINATES	GENERAL HEALTH NOTES	ASSOCIATED HABITAT	UNDERSTORY SPECIES	GENERAL NOTES	PROJECT ACTIVITY	POTENTIAL IMPACT	PHOTO
6	<i>Quercus agrifolia</i>	Coast live oak	23"	359377.00, 3801510.00	Large cavity with limited callous growth. Codominant scaffolds. Dead scaffolds and branches. Seepage on scaffolds.	Oak woodland transitioning to disturbed/ornamental (mobile home park)	<i>Bromus</i> sp. <i>Marah macrocarpa</i> <i>Silybum marianum</i>	* Active hummingbird nest. Small side sprout at root flare.	Road widening, vehicular traffic	Root zone disturbance	
7	<i>Quercus agrifolia</i>	Coast live oak	5"	359774.34, 3801339.25	Young tree. Vigorous growth with large growth cracks	Oak woodland	<i>Bromus</i> sp. <i>Ranunculus californica</i> <i>Galium aparine</i> <i>Eriophyllum confertiflorum</i> <i>Silybum marianum</i>	Adjacent to access road.	Road widening, vehicular traffic	Root zone disturbance	




TAG NO	SCIENTIFIC NAME	COMMON NAME	DBH	UTM COORDINATES	GENERAL HEALTH NOTES	ASSOCIATED HABITAT	UNDERSTORY SPECIES	GENERAL NOTES	PROJECT ACTIVITY	POTENTIAL IMPACT	PHOTO
8	<i>Quercus agrifolia</i>	Coast live oak	6"	359778.69, 3801340.75	Young tree. Vigorous growth with large growth cracks	Oak woodland	<i>Bromus</i> sp. <i>Ranunculus californica</i> <i>Galium aparine</i> <i>Marah macrocarpa</i> <i>Medicago polymorpha</i> <i>Silybum marianum</i>	Adjacent to access road.	Road widening, vehicular traffic	Root zone disturbance	
9	<i>Quercus agrifolia</i>	Coast live oak	23"	359841.00, 3801324.00	Good trunk taper. Some calloused cavities and dead branches.	Oak woodland	<i>Eriophyllum confertiflorum</i> <i>Sambucus mexicana</i> <i>Piptatherum milaceum</i>	Adjacent to the turn around. Potential for impact from grading and heavy machinery operation.	Road widening, vehicular traffic	Root zone disturbance	
10	<i>Quercus agrifolia</i>	Coast live oak	10"@3', 12"@3'	359791.91, 3801374.00	Codominant scaffolds. Vigorous growth with large growth cracks. Young tree.	Oak woodland	<i>Bromus</i> sp.	Adjacent to the turn around. Potential for impact from grading and heavy machinery operation.	Road widening, vehicular traffic	Loss of canopy, Root zone disturbance	




TAG NO	SCIENTIFIC NAME	COMMON NAME	DBH	UTM COORDINATES	GENERAL HEALTH NOTES	ASSOCIATED HABITAT	UNDERSTORY SPECIES	GENERAL NOTES	PROJECT ACTIVITY	POTENTIAL IMPACT	PHOTO
11	<i>Quercus agrifolia</i>	Coast live oak	10"	360933.84, 3800672.25	Good branching. Balanced taper on trunk.	Oak woodland transitioning into Venturan sage scrub.	<i>Silybum mariaunum</i> <i>Artemisisa californica</i> <i>Salvia mellifera</i> <i>Bromus</i> sp. <i>Marah macrocarpa</i>	On embankment adjacent to turn around. Dead woody material underneath canopy.	Road widening, vehicular traffic	Loss of canopy, Root zone disturbance	
12	<i>Quercus agrifolia</i>	Coast live oak	19"	359129.72, 3798329.25	Young tree within self-corrected incline in trunk. Well balanced canopy.	Ornamental planting on slope adjacent to gravel access path.	Bare soil with signs of pocket gopher (<i>Botta</i> sp.) activity.	Located on engineered slope at site of existing office trailers. Proposed for removal for new compressor station. Tree is suitable for relocation.	Compressor station construction	Removal of tree	
13	<i>Quercus agrifolia</i>	Coast live oak	9"@3', 11"@3'	359128.34, 3798330.75	Young tree with some possible root impacts. Root flare not balanced.	Ornamental planting on slope adjacent to gravel access path.	Bare soil	Planted specimen. Wooden stakes still adjacent to trunk flare. Tree is suitable for relocation.	Compressor station construction	Removal of tree	




TAG NO	SCIENTIFIC NAME	COMMON NAME	DBH	UTM COORDINATES	GENERAL HEALTH NOTES	ASSOCIATED HABITAT	UNDERSTORY SPECIES	GENERAL NOTES	PROJECT ACTIVITY	POTENTIAL IMPACT	PHOTO
14	<i>Quercus agrifolia</i>	Coast live oak	18"@3', 18"@3'	358844.34, 3798081.00	Codominant trunks. No included bark within trunks. Both trunks are evenly tapered. Dense canopy with minimal dead wood.	Oak woodland and chamise/ceanothus chaparral.	<i>Ranunculus californica</i> <i>Pentagramma triangularis</i> <i>Keckiella cordifolia</i> <i>Marah macrocarpa</i> <i>Galium aparine</i> <i>Sambucus mexicana</i> <i>Silybum marianum</i> <i>Lessingia filaginifolia</i> <i>Asterella</i> sp.	On bank by degraded road. Canopy reaches into undelineated streambed (ephemeral). Evidence of extensive root growth within old road.	Road regrading	Root zone disturbance	
15	<i>Quercus agrifolia</i>	Coast live oak	15'@1', 16'@1', 17'@1', 27'@1'	358535.31, 3802167.75	Multitrunked specimen with decay and pooling water in center of trunks. Large cavity with decay and pooling water on upper trunk. Dense canopy .	Oak woodland/seasonal wash	<i>Lessingia filaginifolia</i> <i>Galium aparine</i> <i>Bromus</i> sp.	Undelineated streambed, approximately 40 percent of the canopy and corresponding root zone within old access road.	Road regrading	Root zone disturbance	

TAG NO	SCIENTIFIC NAME	COMMON NAME	DBH	UTM COORDINATES	GENERAL HEALTH NOTES	ASSOCIATED HABITAT	UNDERSTORY SPECIES	GENERAL NOTES	PROJECT ACTIVITY	POTENTIAL IMPACT	PHOTO
16	<i>Quercus agrifolia</i>	Coast live oak	20"	358858.88, 3802031.00	Calloused cavity on trunk midway. Self corrected incline in trunk. Dense canopy.	Oak woodland/seasonal wash.	<i>Keckiella cordifolia</i> <i>Silybum marianum</i> <i>Galium officinal</i> <i>Eucrypta minutiflora</i> <i>Sambucus mexicana</i>	Within undelineated wash.	Road regrading	Root zone disturbance	
17	<i>Quercus agrifolia</i>	Coast live oak	23"	356890.41, 3804410.25	Some dead wood. Self corrected incline in trunk. Healthy scaffolds. Dense canopy.	Oak woodland	<i>Silybum marianum</i> <i>Mimulus aurianticus</i> <i>Sambucus mexicana</i> <i>Lessingia filaginifolia</i> <i>Claytonia</i> sp.	Approximately 40% of canopy and associated root structure within former road.	Road regrading	Root zone disturbance	

TAG NO	SCIENTIFIC NAME	COMMON NAME	DBH	UTM COORDINATES	GENERAL HEALTH NOTES	ASSOCIATED HABITAT	UNDERSTORY SPECIES	GENERAL NOTES	PROJECT ACTIVITY	POTENTIAL IMPACT	PHOTO
18	<i>Quercus agrifolia</i>	Coast live oak	14"@8", 17"@8"	356886.09, 3804403.00	Exposed roots on embankment. Decay in trunk with surrounding callous formations. Codominant trunks have included bark.	Oak woodland	<i>Marah macrocarpa</i> <i>Mimulus aurianticus</i> <i>Pentagramma triangularis</i> <i>Silybum marianum</i> <i>Keckiella cordifolia</i> <i>Sambucus mexicana</i> <i>Prunus ilicifolia</i> <i>Ceanothus</i> sp.	On bank by degraded road.	Road regrading	Root zone disturbance	
19	<i>Quercus agrifolia</i>	Coast live oak	18"@2', 17"@2'	356884.09, 3804402.00	Codominant trunks. Included bark at crotch. Dense canopy.	Oak woodland transitioning to annual grassland.	<i>Silybum marianum</i> <i>Bromus diandrus</i>	Open field with canopy reaching into Tower 6-5.	Road regrading	Root zone disturbance	
20	<i>Quercus agrifolia</i>	Coast live oak	23	358326.59, 3802239.00	Self corrected incline. 180 degree trunk growth then vertical scaffold growth into canopy.	Oak woodland transitioning to annual grassland.	<i>Bromus diandrus</i> <i>Silybum marianum</i>	Canopy reaches into the pad of Tower 6-5.	Tower replacement, vehicular traffic	Loss of canopy	

TAG NO	SCIENTIFIC NAME	COMMON NAME	DBH	UTM COORDINATES	GENERAL HEALTH NOTES	ASSOCIATED HABITAT	UNDERSTORY SPECIES	GENERAL NOTES	PROJECT ACTIVITY	POTENTIAL IMPACT	PHOTO
21	<i>Quercus agrifolia</i>	Coast live oak	26	358316.09, 3802241.25	Slight incline in trunk. Healthy scaffolding and dense canopy	Oak woodland	<i>Solanum douglasii</i> <i>Marah macrocarpa</i> <i>Sambucus mexicana</i> <i>Bromus diandrus</i> <i>Silybum marianum</i>	Canopy reaches into the access road. Will be potentially significantly impacted. Also reaches into access road.	Road widening, vehicular traffic	Loss of canopy, Root zone disturbance	
22	<i>Quercus agrifolia</i>	Coast live oak	19" @8", '9"@8"	358310.84, 3802243.75	Double trunked. 1st larger trunk senescent with significant cavities with calloused edges.	Oak woodland	<i>Toxicodendron diversilobum</i> <i>Solanum douglasii</i> <i>Bromus diandrus</i> <i>Phacelia ramosissima</i> <i>Marah macrocarpa</i>	Canopy within access road and turnaround. Wildlife tree-cavities.	Road widening, vehicular traffic	Root zone disturbance	
23	<i>Quercus agrifolia</i>	Coast live oak	30	358314.59, 3802236.50	Broken scaffold. Dead branches. Fully calloused former trunk. Some oak borer damage on lower N/W portion of trunk	Oak woodland	<i>Sambucus mexicana</i> <i>Silybum marianum</i> <i>Marah macrocarpa</i> <i>Bromus diandrus</i> <i>Marrubium vulgare</i> <i>Mimulus aurianticus</i>	Tree to be potentially impacted by access road as 2/3 of the canopy is within the access road. Wildlife tree (many large cavities).	Road widening, vehicular traffic	Root zone disturbance	

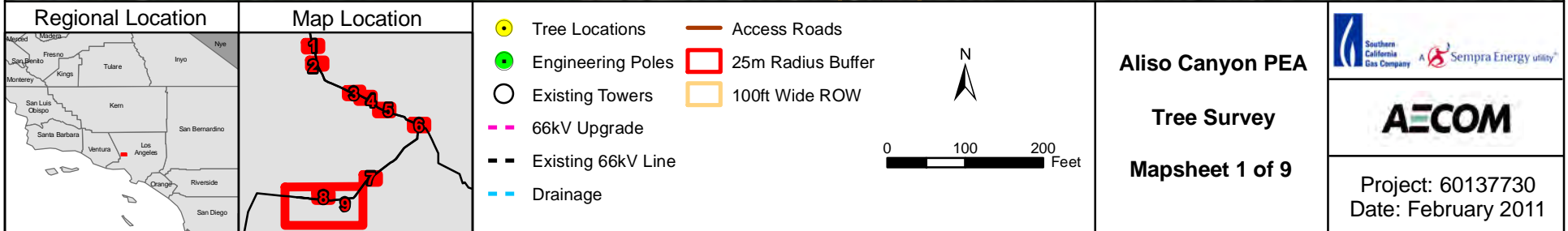
TAG NO	SCIENTIFIC NAME	COMMON NAME	DBH	UTM COORDINATES	GENERAL HEALTH NOTES	ASSOCIATED HABITAT	UNDERSTORY SPECIES	GENERAL NOTES	PROJECT ACTIVITY	POTENTIAL IMPACT	PHOTO
24	<i>Quercus agrifolia</i>	Coast live oak	35"	358306.63, 3802246.75	Some dead scaffolds. Pocket formation between 3 main scaffolds @ 15'. Dense canopy cover.	Oak woodland	<i>Bromus diandrus</i> <i>Silybum marianum</i> <i>Sambucus mexicana</i>	Removal of scaffold over the road would unbalance the tree, causing potential further structural failures on the oak.	Road widening, vehicular traffic	Loss of canopy, root zone disturbance	
25	<i>Quercus agrifolia</i>	Coast live oak	10"@3', 11"@3'	358316.16, 3802249.75	Some dead limbs. Compact growth from exposed site (location).	Annual grassland/Venturan sage scrub remnants.	<i>Plagiobotrys</i> sp. <i>Avena barbata</i> <i>Eriogonum fasciculatum</i> <i>Solanum xantii</i> <i>Lupinus hirsutissimus</i> <i>Achnatherum coronatum</i> <i>Yucca whipplei</i> <i>Mirabilis californica</i>	Small tree on side of slope growing into the framework of Tower 7-5.	Tower replacement, vehicular traffic	Loss of canopy, root zone disturbance	
26	<i>Quercus agrifolia</i>	Coast live oak	25"	358318.81, 3802212.75	Epicormic growth on charred trunk from previous fire event. Tree is recovering.	oak-walnut woodland.	<i>Eucrypta minutiflora</i> <i>Marah macrocarpa</i> <i>Ribes aureum</i> <i>Claytonia</i> sp. <i>Galium aparine</i> <i>Galium officinal</i> <i>Silybum marianum</i> <i>Rhus ovata</i> <i>Bromus</i> sp.	Canopy reaches into Tower 14-3	Tower replacement	Loss of canopy, root zone disturbance	

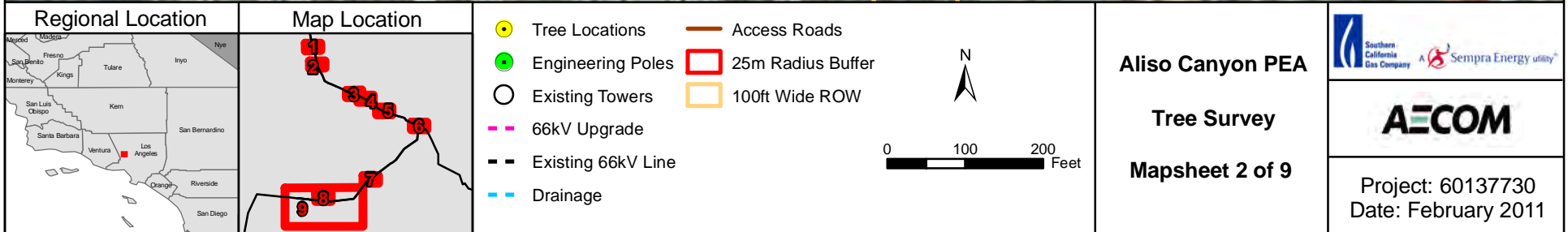
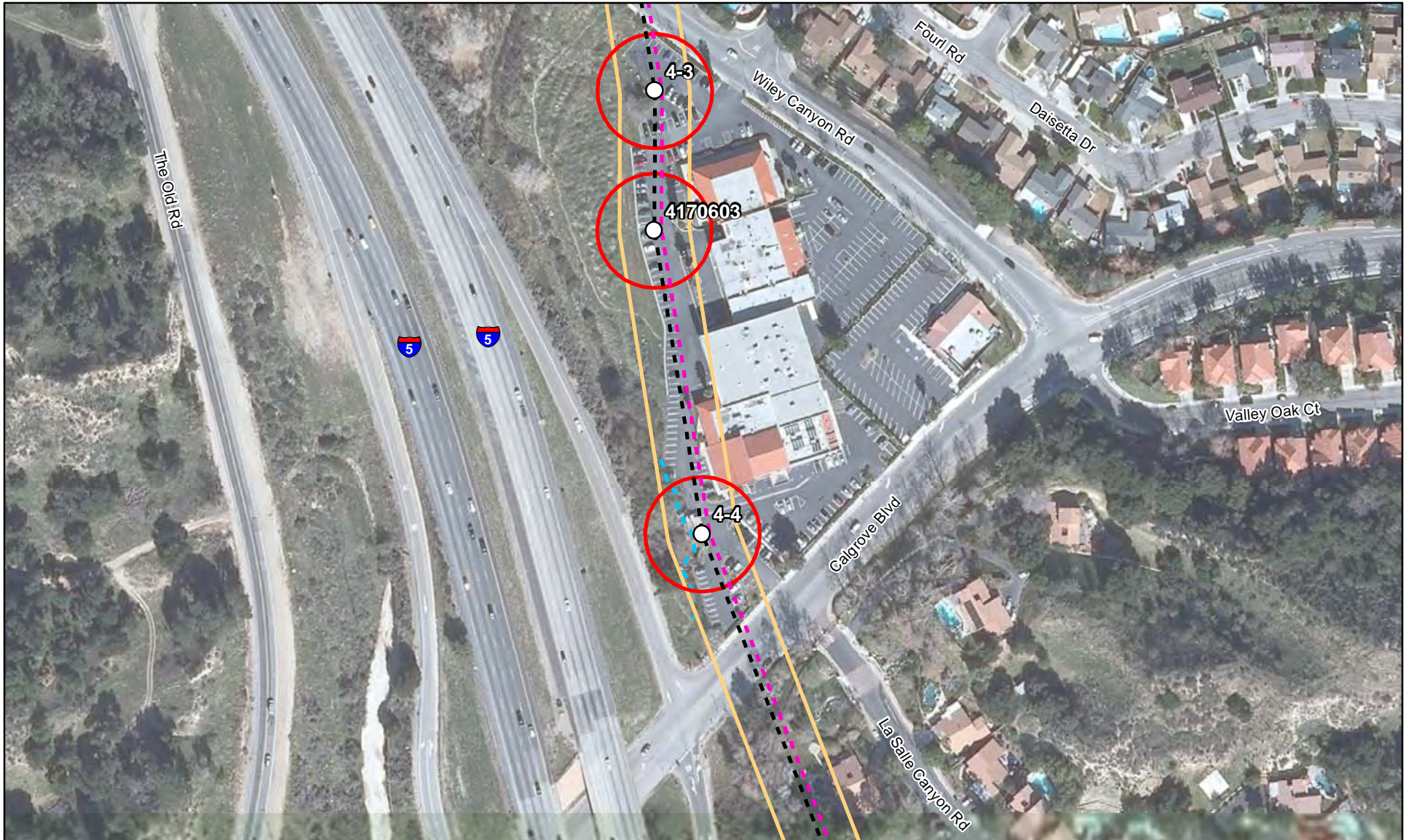
TAG NO	SCIENTIFIC NAME	COMMON NAME	DBH	UTM COORDINATES	GENERAL HEALTH NOTES	ASSOCIATED HABITAT	UNDERSTORY SPECIES	GENERAL NOTES	PROJECT ACTIVITY	POTENTIAL IMPACT	PHOTO
27	<i>Quercus agrifolia</i>	Coast live oak	10"	358313.09, 3802219.50	Partially suppressed by tree no. 26. Previous fire damage has spurred epicormic growth along scaffolds, branches, and the trunk.	oak-walnut woodland.	<i>Galium aparine</i> <i>Galium angustifolium</i> <i>Rhus ovata</i> <i>Claytonia</i> sp. <i>Marah macrocarpa</i> <i>Bromus</i> sp. <i>Eucrypta minutiflora</i>	Along with Tree 26, this oak forms part of a larger oak-walnut woodland along the ravine southward towards the 5 fwy interchange.	Tower replacement	Loss of canopy, root zone disturbance	
28	<i>Quercus agrifolia</i>	Coast live oak	21"	357155.69, 3797309.75	Heavily impacted by fire. Epicormic growth on trunk and scaffolds as it recovers.	Oak woodland-chaparral	<i>Melica imperfecta</i> <i>Rhapinus saetivus</i> <i>Phacelia imbricata</i> <i>Rhus ovata</i> <i>Bromus</i> sp. <i>Galium angustifolium</i>	Canopy formerly grew into the frame of Tower 14-1. Fire impacted.	Tower replacement, grading, vehicular traffic	Loss of canopy, root zone disturbance	
29	<i>Quercus agrifolia</i>	Coast live oak	23"	357164.16, 3797311.25	Healthy taper. Dense canopy.	Oak woodland adjacent to disturbed (mobile home park).	Oak duffus layer with intermittent <i>Marah macrocarpa</i>	Canopy growing into Tower 5-7 on north facing slope.	Tower replacement, grading, vehicular traffic	Loss of canopy	

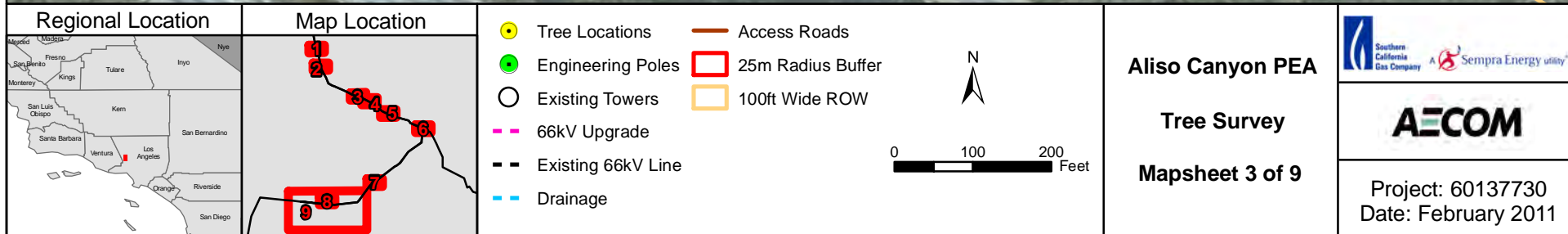
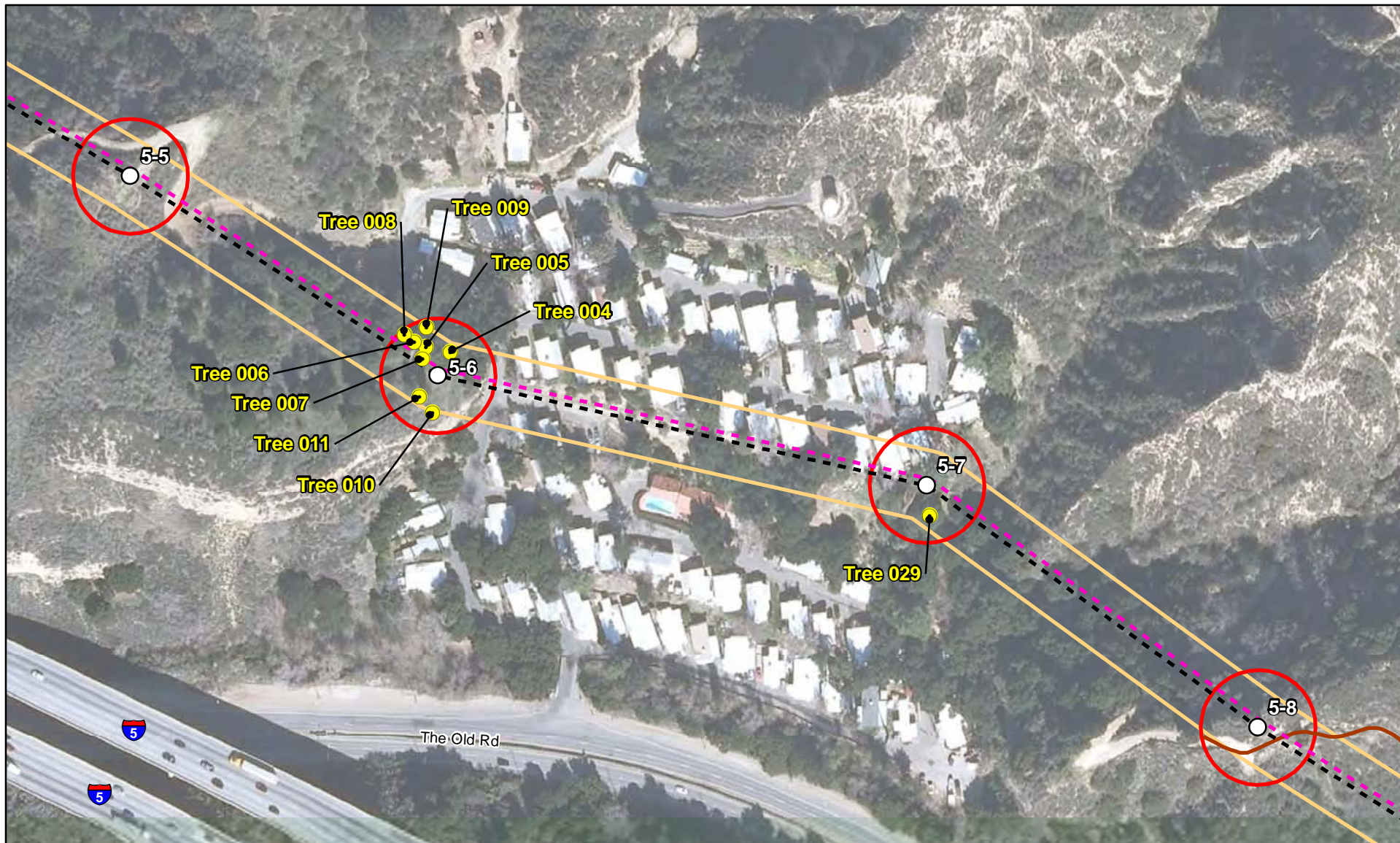
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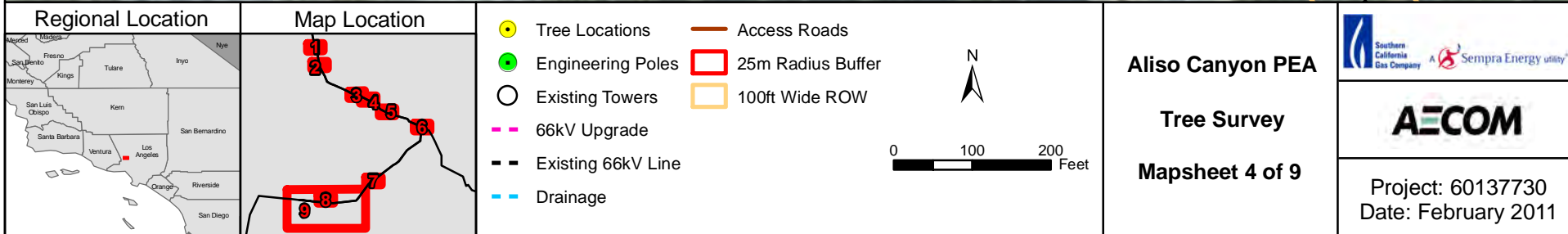
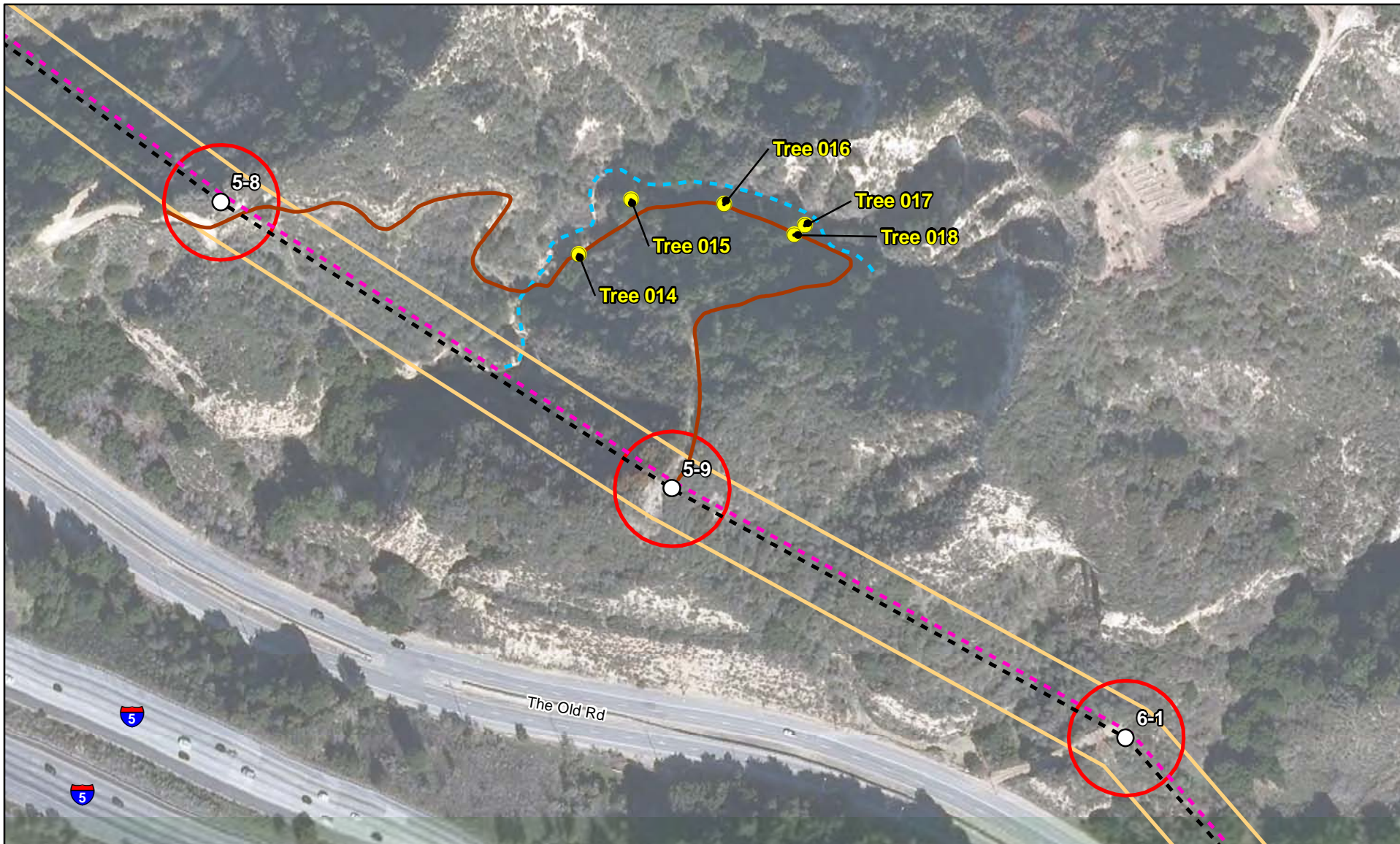
Appendix C

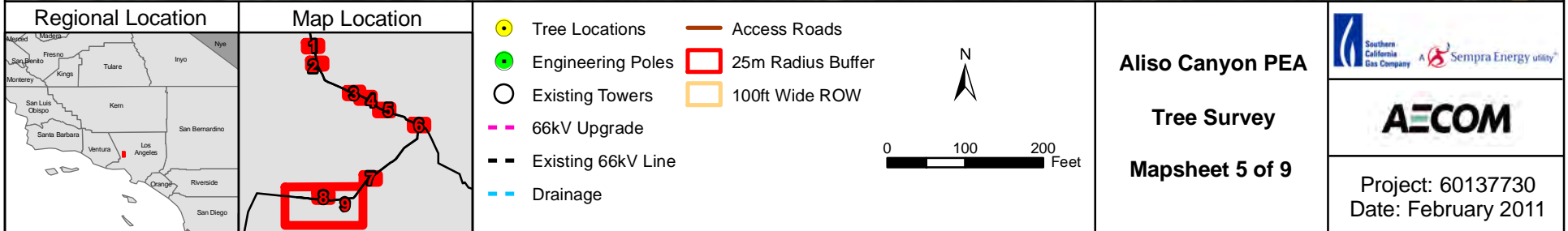
Map of Surveyed Trees

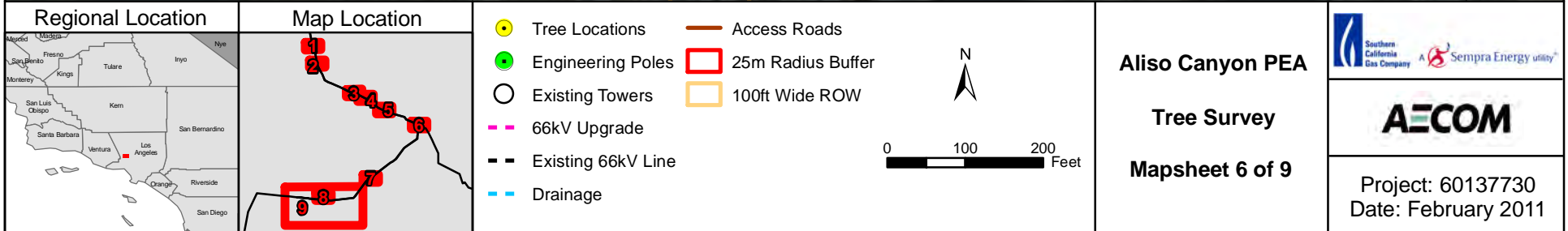


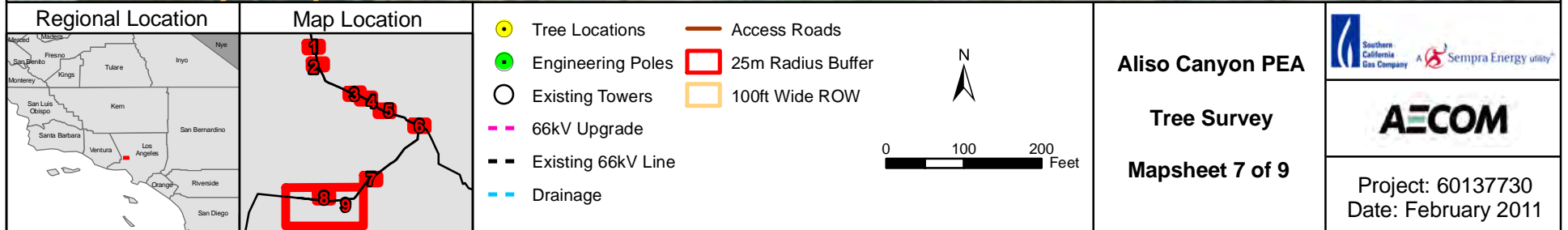


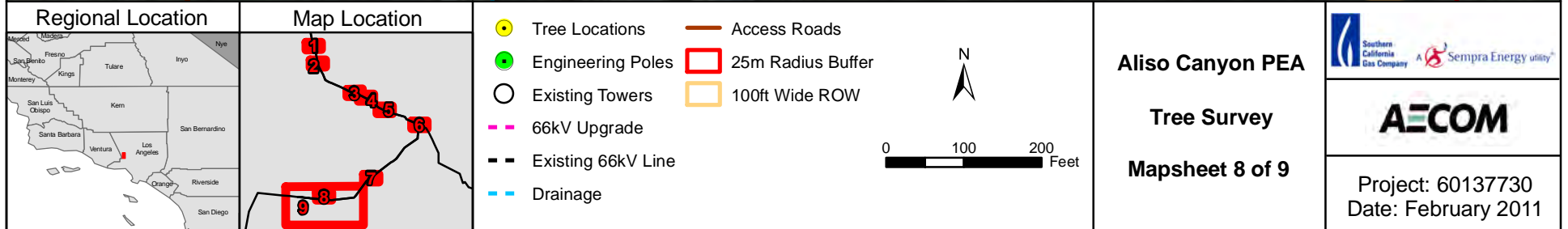


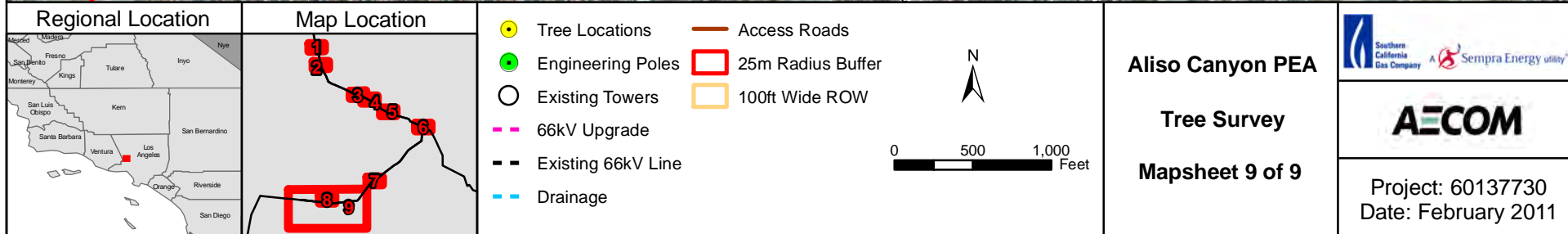
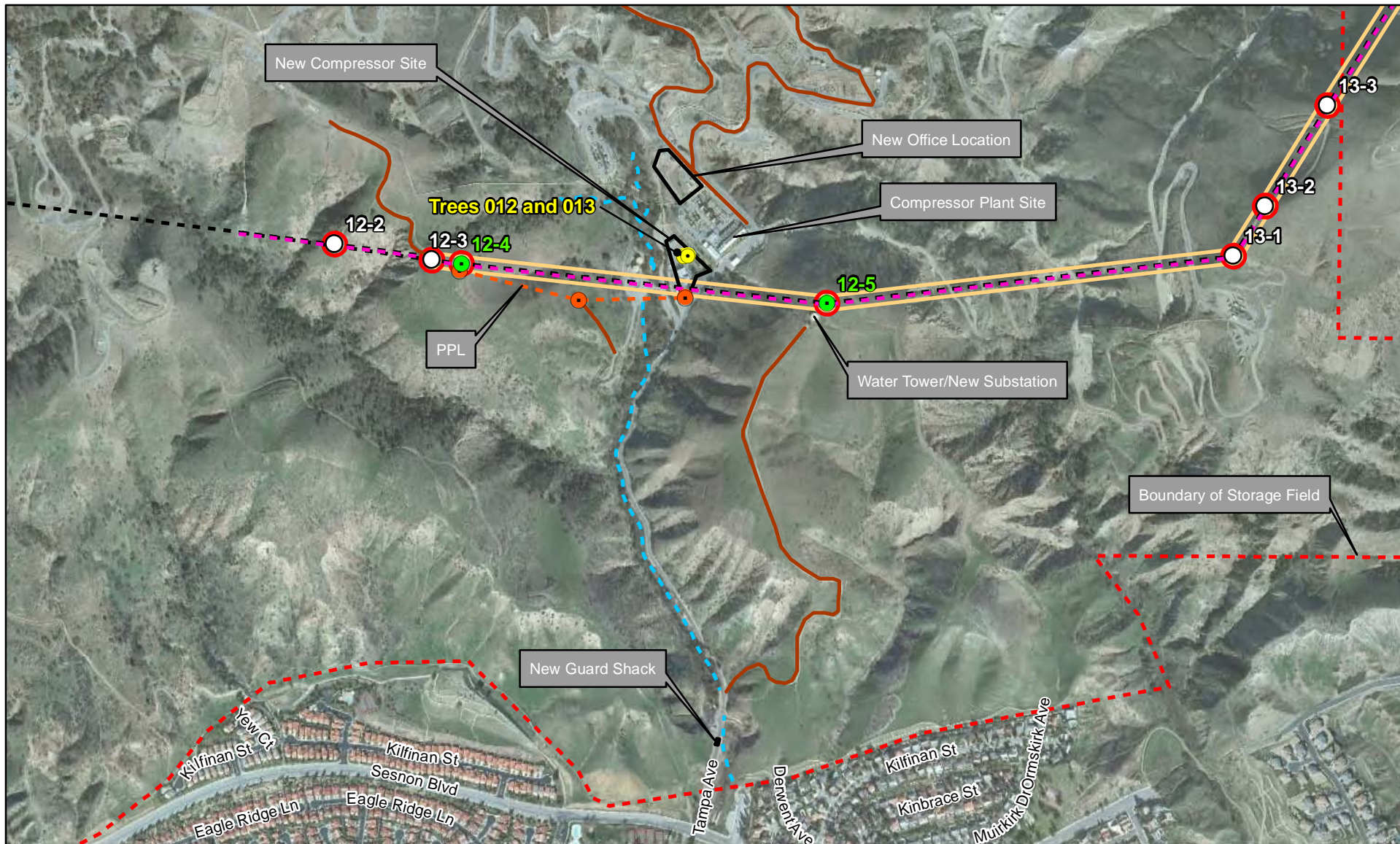












Appendix D

Los Angeles Oak Tree Ordinance

COUNTY OF LOS ANGELES OAK TREE ORDINANCE

22.56.2050 Established -- Purpose.

The oak tree permit is established (a) to recognize oak trees as significant historical, aesthetic and ecological resources, and as one of the most picturesque trees in Los Angeles County, lending beauty and charm to the natural and manmade landscape, enhancing the value of property, and the character of the communities in which they exist; and (b) to create favorable conditions for the preservation and propagation of this unique, threatened plant heritage, particularly those trees which may be classified as heritage oak trees, for the benefit of current and future residents of Los Angeles County. It is the intent of the oak tree permit to maintain and enhance the general health, safety and welfare by assisting in counteracting air pollution and in minimizing soil erosion and other related environmental damage. The oak tree permit is also intended to preserve and enhance property values by conserving and adding to the distinctive and unique aesthetic character of many areas of Los Angeles County in which oak trees are indigenous. The stated objective of the oak tree permit is to preserve and maintain healthy oak trees in the development process. (Ord. 88-0157 § 1, 1988: Ord. 82-0168 § 2 (part), 1982.)

22.56.2060 Damaging or removing oak trees prohibited -- Permit requirements.

- A. Except as otherwise provided in Section 22.56.2070, a person shall not cut, destroy, remove, relocate, inflict damage or encroach into a protected zone of any tree of the oak genus which is (a) 25 inches or more in circumference (eight inches in diameter) as measured four and one-half feet above mean natural grade; in the case of an oak with more than one trunk, whose combined circumference of any two trunks is at least 38 inches (12 inches in diameter) as measured four and one half feet above mean natural grade, on any lot or parcel of land within the unincorporated area of Los Angeles County, or (b) any tree that has been provided as a replacement tree, pursuant to Section 22.56.2180, on any lot or parcel of land within the unincorporated area of Los Angeles County, unless an oak tree permit is first obtained as provided by this Part 16.
- B. "Damage," as used in this Part 16, includes any act causing or tending to cause injury to the root system or other parts of a tree, including, but not limited to, burning, application of toxic substances, operation of equipment or machinery, or by paving, changing the natural grade, trenching or excavating within the protected zone of an oak tree.
- C. "Protected zone," as used in this Part 16, shall mean that area within the dripline of an oak tree and extending therefrom to a point at least five feet outside the dripline, or 15 feet from the trunks of a tree, whichever distance is greater. (Ord. 88-0157 § 2, 1988: Ord. 82-0168 § 2 (part), 1982.)

22.56.2070 Exemptions from Part 16 applicability.

The provisions of this Part 16 shall not apply to:

- A. Any permit, variance or tentative map for a subdivision, including a minor land division,
approved prior to the effective date of the ordinance codified in this Part 16 by the board of supervisors, regional planning commission or the planning director;
- B. Cases of emergency caused by an oak tree being in a hazardous or dangerous condition, or being irretrievably damaged or destroyed through flood, fire, wind or lightning, as determined after visual inspection by a licensed forester with the department of forestry

and fire warden;

- C. Emergency or routine maintenance by a public utility necessary to protect or maintain an electric power or communication line or other property of a public utility;
- D. Tree maintenance, limited to medium pruning of branches not to exceed two inches in diameter in accordance with guidelines published by the National Arborists Association, (see Class II), intended to insure the continued health of a protected tree;
- E. Trees planted, grown and/or held for sale by a licensed nursery;
- F. Trees within existing road rights-of-way where pruning is necessary to obtain adequate line-of-sight distances and/or to keep street and sidewalk easements clear of obstructions, or to remove or relocate trees causing damage to roadway improvements or other public facilities and infrastructure within existing road rights-of-way, as required by the Director of Public Works. (Ord. 93-0018 § 1, 1993; Ord. 88-0157 § 3, 1988; Ord. 82-0168 § 2 (part), 1982.)

22.56.2080 Application -- Filing -- Repeated filings.

Any person desiring an oak tree permit, as provided for in this Title 22, may file an application with the director, except that no application shall be filed or accepted if final action has been taken within one year prior thereto by the hearing officer or director or the commission on an application requesting the same or substantially the same permit. (Ord. 85-0195 § 12 (part), 1985; Ord. 82-0168 § 2 (part), 1982.)

22.56.2090 Application -- Information and documents required.

An application for an oak tree permit shall include the following information and documents:

- A. The name and address of the applicant and of all persons owning any or all of the property proposed to be used;
- B. Evidence that the applicant:
 - 1. Is the owner of the premises involved, or
 - 2. Has written permission of the owner or owners to make such application;
- C. Location of subject property (address or vicinity);
- D. Legal description of the property involved;
- E.
 - 1. A site plan drawn to a scale satisfactory to, and in the number of copies prescribed by the director, indicating the location and dimension of all of the following existing and proposed features on the subject property:
 - a. Lot lines,
 - b. Streets, highways, access and other major public or private easements,
 - c. Buildings and/or structures, delineating roof and other projections,
 - d. Yards,
 - e. Walls and fences,
 - f. Parking and other paved areas,
 - g. Proposed areas to be landscaped and/or irrigated,
 - h. Proposed construction, excavation, grading and/or landfill. Where a change in grade is proposed, the change in grade within the protected zone of each plotted tree shall be specified,
 - i. The location of all oak trees subject to this Part 16 proposed to be removed and/or relocated, or within 200 feet of proposed construction,

grading, landfill or other activity. Each tree shall be assigned an identification number on the plan, and a corresponding permanent identifying tag shall be affixed to the north side of each tree in the manner prescribed by Section 22.56.2180. These identifications shall be utilized in the oak tree report and for physical identification on the property where required. The protected zone shall be shown for each plotted tree,

- j. Location and size of all proposed replacement trees,
 - k. Proposed and existing land uses,
 - l. Location of all surface drainage systems,
 - m. Other development features which the director deems necessary to process the application,
- 2. Where a concurrent application for a permit, variance, zone change, tentative map for a subdivision, including a minor land division or other approval, is filed providing the information required by this subsection E, the director may waive such site plan where he deems it unnecessary to process the application;
- F. 1. An oak tree report, prepared by an individual with expertise acceptable to the director and county forester and fire warden, and certified to be true and correct, which is acceptable to the director and county forester and fire warden, of each tree shown on the site plan required by subsection E of this section, which shall contain the following information:
- a. The name, address and telephone number during business hours of the preparer,
 - b. Evaluation of the physical structure of each tree as follows:
 - i. The circumference and diameter of the trunk, measured four and one-half feet above natural grade,
 - ii. The diameter of the tree's canopy, plus five feet, establishing the protected zone,
 - iii. Aesthetic assessment of the tree, considering factors such as but not limited to symmetry, broken branches, unbalanced crown, excessive horizontal branching,
 - iv. Recommendations to remedy structural problems where required,
 - c. Evaluation of the health of each tree as follows:
 - i. Evidence of disease, such as slime flux, heart rot, crown rot, armillaria root fungus, exfoliation, leaf scorch and exudations,
 - ii. Identification of insect pests, such as galls, twig girdler, borers, termites, pit scale and plant parasites,
 - iii. Evaluation of vigor, such as new tip growth, leaf color, abnormal bark, deadwood and thinning of crown,
 - iv. Health rating based on the archetype tree of the same species,
 - v. Recommendations to improve tree health, such as insect or disease control, pruning and fertilization,
 - d. Evaluation of the applicant's proposal as it impacts each tree shown on the site plan, including suggested mitigating and/ or future maintenance measures where required and the anticipated effectiveness thereof,
 - e. Identification of those trees shown on the site plan which may be classified as heritage oak trees. Heritage oak trees are either of the following: any oak tree measuring 36 inches or more in diameter,

- measured four and one-half feet above the natural grade; any oak tree having significant historical or cultural importance to the community, notwithstanding that the tree diameter is less than 36 inches,
- f. Identification of any oak tree officially identified by a county resource conservation district.
- 2. The requirement for an oak tree report may be waived by the director where a single tree is proposed for removal in conjunction with the use of a single-family residence listed as a permitted use in the zone, and/or such information is deemed unnecessary for processing the applications;
- G. The applicant shall provide an oak tree information manual prepared by and available from the forester and fire warden to the purchasers and any homeowners' association. (Ord. 88-0157 § 4, 1988; Ord. 82-0168 § 2 (part), 1982.)

22.56.2100 Application -- Burden of proof.

- A. In addition to the information required in the application by Section 22.56.2090, the application shall substantiate to the satisfaction of the director the following facts:
 - 1. That the proposed construction of proposed use will be accomplished without endangering the health of the remaining trees subject to this Part 16, if any, on the subject property; and
 - 2. That the removal or relocation of the oak tree(s) proposed will not result in soil erosion through the diversion or increased flow of surface waters which cannot be satisfactorily mitigated; and
 - 3. That in addition to the above facts, at least one of the following findings apply:
 - a. That the removal or relocation of the oak tree(s) proposed is necessary as continued existence at present location(s) frustrates the planned improvement or proposed use of the subject property to such an extent that:
 - i. Alternative development plans cannot achieve the same permitted density or that the cost of such alternative would be prohibitive, or
 - ii. Placement of such tree(s) precludes the reasonable and efficient use of such property for a use otherwise authorized, or
 - b. That the oak tree(s) proposed for removal or relocation interferes with utility services or streets and highways, either within or outside of the subject property, and no reasonable alternative to such interference exists other than removal of the tree(s), or
 - c. That the condition of the oak tree(s) proposed for removal with reference to seriously debilitating disease or danger or falling is such that it cannot be remedied through reasonable preservation procedures

and practices;

4. That the removal of the oak tree(s) proposed will not be contrary to or be in substantial conflict with the intent and purpose of the oak tree permit procedure;

- B. For purposes of interpreting this section, it shall be specified that while relocation is not prohibited by this Part 16, it is a voluntary alternative offering sufficient potential danger to the health of a tree as to require the same findings as removal. (Ord. 88-0157 § 5, 1988; Ord. 82-0168 § 2 (part), 1982.)

22.56.2110 Application -- Filing fee.

When an application for an oak tree permit is filed, it shall be accompanied by the filing fee as required in Section 22.60.100. (Ord. 82-0168 § 2 (part), 1982.)

22.56.2120 Application -- Denial for lack of information.

The director may deny without further action an application requesting an oak tree permit if such application does not contain the information required by this Part 16. The director may permit the applicant to amend the application. (Ord. 82-1068 § 2 (part), 1982.)

22.56.2130 Application -- Notice requirements.

Notification pertaining to an application for an oak tree permit shall be provided as follows:

- A. Where an application for a permit, variance, zone change or tentative map for a subdivision, including a minor land division, is concurrently filed, notice that an oak tree permit will also be considered shall be included in required legal notices for such permit, variance, zone change or tentative subdivision map;
- B.
 1. Where no concurrent application is filed as provided in subsection A of this section and except as otherwise expressly provided in subsection C, the director not less than 20 days before the date of public hearing shall cause notice of such filing to be published once in a newspaper of general circulation in the county of Los Angeles available in the community in which such oak tree permit is proposed.
 2. Such notices shall include the statement: "Notice of Oak Tree Permit Filing." Also included shall be information indicating the location of the subject property (address or vicinity), legal description of the property involved, the applicant's request, and the time and place of the proposed public hearing. The notice shall also provide the address and telephone number of the department of regional planning, and state that the department may be contacted for further information;
- C. Notwithstanding the other provisions of this section, publishing shall not be required where removal or relocation of not more than one tree is proposed in conjunction with the use of a single-family residence listed as a permitted use in the zone. (Ord. 88-0157 § 6, 1988; Ord. 82-0168 § 2 (part), 1982.)

22.56.2140 Review of oak tree report by county forester and fire warden.

- A. On receipt of an application for an oak tree permit, the director shall refer a copy of the applicant's oak tree report as required by Section 22.56.2090 to the county forester and fire warden. The county forester and fire warden shall review said report for the accuracy of statements contained therein, and shall make inspections on the project site. Such inspections shall determine the health of all such trees on the project site and such other factors as may be necessary and proper to complete his review, a copy of which shall be submitted in writing to the director and/or commission within 15 days after receipt from the director;
- B. The county forester and fire warden may at his option also suggest conditions for use by the hearing officer or the director or commission pursuant to Section 22.56.2180.
- C. When the county forester determines that replacement or relocation on the project site of oak trees proposed for removal is inappropriate, the forester may recommend that the applicant pay into the oak forests special fund the amount equivalent to the oak resource value of the trees described in the oak tree report. The oak resource value shall be calculated by the applicant and approved by the county forester according to the most current edition of the International Society of Arboriculture's "Guide to Establishing Values for Trees and Shrubs."
- D. Funds collected shall be used for the following purposes:
 - 1. Establishing and planting new trees on public lands;
 - 2. Maintaining existing oak trees on public lands;
 - 3. Purchasing prime oak woodlands;
 - 4. Purchasing sensitive oak trees of cultural or historic significance.
- E. Not more than seven percent of the funds collected may be used to study and identify appropriate programs for accomplishing the preceding four purposes. (Ord. 93-0017 § 1, 1993; Ord. 88-0157 § 7, 1988; Ord. 85-0195 § 12 (part), 1985; Ord. 82-0168 § 2 (part), 1982.)

22.56.2150 Application -- Commission consideration when concurrently filed.

When an application for a permit, variance, zone change or tentative map for a subdivision, including a minor land division, is concurrently filed with an application for an oak tree permit as provided by this Title 22, the hearing officer or the commission shall consider and approve such application for an oak tree permit concurrently with such other approvals. The hearing officer or the commission, in making their findings, shall consider each case individually as if separately filed. (Ord. 85-0195 § 10 (part), 1985; Ord. 82-0168 § 2 (part), 1982.)

22.56.2160 Application -- Public hearing required when.

Where no concurrent consideration is conducted by the hearing officer or the commission pursuant to Section 22.56.2150, the director shall conduct a public hearing subject to the notice requirements of subsection B of Section 22.56.2130; provided, however, that no hearing shall be required for a filing in conjunction with the use of a single-family residence when publishing is not required by said subsection

C of Section 22.56.2130. (Ord. 85-0195 § 10 (part), 1985; Ord. 82-0168 § 2 (part), 1982.)

22.56.2170 Application -- Grant or denial conditions.

The hearing officer or the director or commission shall approve an application for an oak tree permit where the information submitted by the applicant and/or brought to their attention during public hearing, including the report of the county forester and fire warden, substantiates that the burden of proof set forth in Section 22.56.2100 has been met. The hearing officer or the director or commission shall deny such application where the information submitted fails to substantiate such findings. (Ord. 85-0195 § 12 (part), 1985; Ord. 82-0168 § 2 (part), 1982.)

22.56.2180 Additional conditions imposed when.

The hearing officer or the director or commission, in approving an application for an oak tree permit, shall impose such conditions as are deemed necessary to insure that the permit will be in accord with the findings required by Section 22.56.2100. These conditions may involve, but are not limited to, the following:

- A. The replacement of oak trees proposed for removal or relocation with trees of a suitable type, size, number, location and date of planting. In determining whether replacement should be required, the hearing officer or the director or commission shall consider but is not limited to the following factors:
 - 1. The vegetative character of the surrounding area,
 - 2. The number of oak trees subject to this Part 16 which are proposed to be removed in relation to the number of such trees currently existing on the subject property,
 - 3. The anticipated effectiveness of the replacement of oak trees, as determined by the oak tree report submitted by the applicant and evaluated by the county forester and fire warden,
 - 4. The development plans submitted by the applicant for the proposed construction or the proposed use of the subject property,
 - 5. The relocation of trees approved for removal shall not be deemed a mitigating factor in determining the need for replacement trees,
 - 6.
 - a. Required replacement trees shall consist exclusively of indigenous oak trees and shall be in the ratio of at least two to one. Each replacement tree shall be at least a 15-gallon size specimen and measure at least one inch in diameter one foot above the base. The hearing officer, director or commission may, in lieu of this requirement, require the substitution of one larger container specimen for each oak tree to be replaced, where, in its opinion, the substitution is feasible and conditions warrant such greater substitution,
 - b. Replacement trees shall be properly cared for and maintained for a period of two years and replaced by the applicant or permittee if

mortality occurs within that period,

- c. Where feasible replacement trees should consist exclusively of indigenous oak trees and certified as being grown from a seed source collected in Los Angeles or Ventura Counties,
 - d. Replacement trees shall be planted and maintained on the subject property and, if feasible, in the same general area where the trees were removed. The process of replacement of oak trees shall be supervised in the field by a person who, in the opinion of the county forester and fire warden, has expertise in the planting, care and maintenance of oak trees;
- B. A plan for protecting oak trees on the subject property during and after development, such as, but not limited to, the following requirements:
- 1. The installation of chain link fencing not less than four feet in height around the protected zone of trees shown on the site plan. Said fencing shall be in place and inspected by the forester and fire warden prior to commencement of any activity on the subject property. Said fencing shall remain in place throughout the entire period of development and shall not be removed without written authorization from the director or the forester and fire warden,
 - 2. Where grading or any other similar activity is specifically approved within the protected zone, the applicant shall provide an individual with special expertise acceptable to the director to supervise all excavation or grading proposed within the protected zones and to further supervise, monitor and certify to the county forester and fire warden the implementation of all conditions imposed in connection with the applicant's oak tree permit,
 - 3. That any excavation or grading allowed within the protected zone or within 15 feet of the trunk of a tree, whichever distance is greater, be limited to hand tools or small hand-power equipment,
 - 4. That trees on other portions of the subject property not included within the site plan also be protected with chain link fencing thus restricting storage, machinery storage or access during construction,
 - 5. That the trees on the site plan be physically identified by number on a tag affixed to the north side of the tree in a manner preserving the health and viability of the tree. The tag shall be composed of a non-corrosive all-weather material and shall be permanently affixed to the tree. The tree shall be similarly designated on the site plan in a manner acceptable to the director,
 - 6. That corrective measures for trees noted on the oak tree report as requiring remedial action be taken, including pest control, pruning, fertilizing and similar actions,

7. That, to the extent feasible as determined by the director, utility trenching shall avoid encroaching into the protected zone on its path to and from any structure,
8. At the start of grading operations and throughout the entire period of development, no person shall perform any work for which an oak tree permit is required unless a copy of the oak tree report, location map, fencing plans, and approved oak tree permit and conditions are in the possession of a responsible person and also available at the site. (Ord. 93-0018 § 2, 1993; Ord. 88-0157 § 8, 1988; Ord. 85-0195 § 12 (part), 1985; Ord. 82-0168 § 2 (part), 1982.)

22.56.2190 Notice of action -- Method of service.

A. The director shall serve notice of action upon:

1. The applicant, as required by law for the service of summons or by registered or certified mail, postage prepaid, return receipt requested; and
2. All protestants testifying at the public hearing who have provided a mailing address, by first class mail, postage prepaid.

B. Where the hearing officer or the commission has concurrently considered a permit, variance, zone change or tentative map for a subdivision, including a minor land division, notice shall be included in the notice of action required for such concurrent actions. (Ord. 85-0195 § 10 (part), 1985; Ord. 82-0168 § 2 (part), 1982.)

22.56.2200 Appeal -- From director's decision -- Procedures.

Any person dissatisfied with the action of the director may file an appeal of such action with the secretary of the commission within 15 calendar days after notice of such action is received by the applicant. Such appeal shall contain the following information:

- A. The administrative file number (case number) identifying the matter which is being appealed; and
- B. The street address of the premises included in the action of the director or, if no street address, the legal description of the premises; and
- C. Whether the appeal is:
 1. An appeal on the denial of such application,
 2. An appeal on the approval of such application,
 3. An appeal of a condition or conditions of an approval (specifying the particular condition or conditions);
- D. No other information shall be included in the notice of appeal;
- E. An appeal fee shall accompany the filing in an amount determined pursuant to subsection A of Section 22.60.230. (Ord. 96-0026 § 8, 1996; Ord. 82-0168 § 2 (part),

1982.)

22.56.2210 Appeal -- Action by commission -- Procedures.

A. Upon receiving a notice of appeal the commission shall take one of the following actions:

1. Affirm the action of the director, or
2. Refer the matter back to the director for further review with or without instructions, or
3. Set the matter for public hearing before itself. In such case, the commission's decision may cover all phases of the matter, including the addition, modification or deletion of any condition.

B. In rendering its decision, the commission shall not hear or consider any argument or evidence of any kind other than the record of the matter received from the director, unless it is itself conducting a public hearing on the matter.

C. Where the commission sets the matter for public hearing, it shall approve or deny the appeal based on the findings required by Section 22.56.2100. (Ord. 82-0168 § 2 (part), 1982.)

22.56.2220 Appeal -- Hearing procedures.

In all cases where the commission sets the matter for public hearing, it shall be held pursuant to the procedure provided for public hearings in Part 4 of Chapter 22.60. (Ord. 85-0195 § 46, 1985; Ord. 82-0168 § 2 (part), 1982.)

22.56.2230 Appeal -- Notice of commission action.

The commission shall serve notice of its action on an appeal filed pursuant to Section 22.56.2200 in the manner specified by Section 20.60.190. (Ord. 82-0168 § 2 (part), 1982.)

22.56.2240 Effective dates of decisions.

The decision of:

- A. The director shall become final and effective 15 calendar days after receipt of notice of action by the applicant, provided no appeal has been filed with the commission pursuant to Section 22.56.2200;
- B. The commission shall be final and effective on the date of decision. Where an oak tree permit is concurrently considered with a permit, variance, zone change or tentative map for a subdivision, including a minor land division, such permit shall be appealable only as a part of the concurrent action. (Ord. 82-0168 § 2 (part), 1982.)

22.56.2250 Expiration date for unused permits.

An approved oak tree permit which is not used within the time specified in the approval or, if no time is specified, within one year after the granting of such approval, becomes null and void and of no effect; except that, where an application requesting an extension is filed prior to such expiration date, the director may extend such time for a period of not to exceed one year. (Ord. 82-0168 § 2 (part), 1982.)

22.56.2260 Enforcement.

In interpreting the provisions of Section 22.04.090 as they apply to this Part 16, each individual tree cut, destroyed, removed, relocated or damaged in violation of these provisions shall be deemed a separate offense. (Ord. 82-0168 § 2(part), 1982.)

Appendix E5
Wetland Characterization Report

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Environment

Prepared for:
Southern California Gas Company

Prepared by:
AECOM
60137730
February 2011

Wetland Characterization Report

Aliso Canyon Turbine Replacement Project
Los Angeles County, California

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List of Appendices

Appendix A Drainages with Associated Vegetation

Appendix B Map of Drainages (and Surveyed Oak Tree)

1.0 Introduction

Pursuant to the requests of the California Public Utilities Commission (CPUC), AECOM completed a detailed survey of hydrologic features within the Aliso Canyon Turbine Replacement Project (ACTR) area, as defined in the Proponent's Environmental Assessment (PEA). The hydrologic features survey covered areas associated with Limekiln Canyon as well as seasonal drainages elsewhere in the project.

1.1 Survey Methodology

Hydrologic features surveyed included areas associated with Limekiln Canyon as well as seasonal drainages elsewhere in the project. Potential impacts to these areas could include trimming of the riparian canopy, discharge of soil within the bed and banks of the watercourse, and storm water runoff from construction activities

1.2 Survey Area

The survey area covered all wetlands included Limekiln Canyon and drainages (seasonal) along access roads and near existing tower locations.

1.3 Survey Schedule

Field surveys were conducted between January 31, 2011 and February 3, 2011.

1.4 Field Data Collection

ACTR Project areas were accessed via vehicle and then surveyed on foot by AECOM biologists. Riparian areas within the Aliso Canyon Storage Facility, along the 66 kV alignment access roads, and within the tower buffer zones were assessed to determine what level of impact may result during implementation of the Project. Data recorded at each riparian area included the following:

- Project area location
- Drainage name (if known)
- Drainage size (average width of bed, bank and channel and/or width of riparian canopy)
- Flow regime
- Associated plant species
- Potential impact
- General notes

1.5 Documentation

Field maps which document tower locations and access roads were utilized as field reference documents. General information regarding each riparian area was recorded for the wetlands survey.

2.0 Survey Results

The drainages were surveyed for the purpose of determining those areas, including seasonal drainages, which have the potential to be impacted by project activities. A description of drainages is provided in **Appendix A**; including location, canopy, and ordinary high water mark (OHWM). A map of all drainages is provided in **Appendix B**.

3.0 Conclusion

Limekiln Canyon, the South Fork of the Santa Clara River, and two unnamed seasonal drainages were identified in the survey. These drainages may be impacted by minor trimming of riparian canopy. In one case, for pole replacement at Tower 4-4, soil has the potential to enter the concrete culvert unless a protective measure is installed to retain the soil during pole replacement. If work within the tower pad is determined to impact the Santa Clara River, consultation and protective measures would be required pursuant to the terms of the jurisdictional authority.

Appendix A

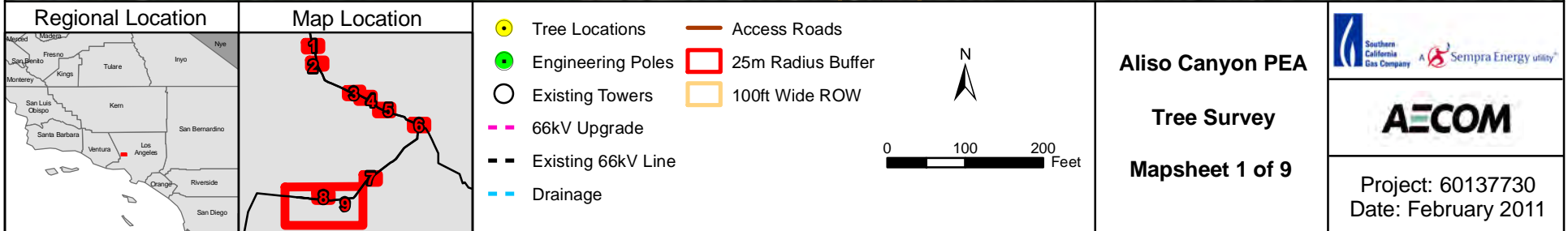
Drainages with Associated Vegetation

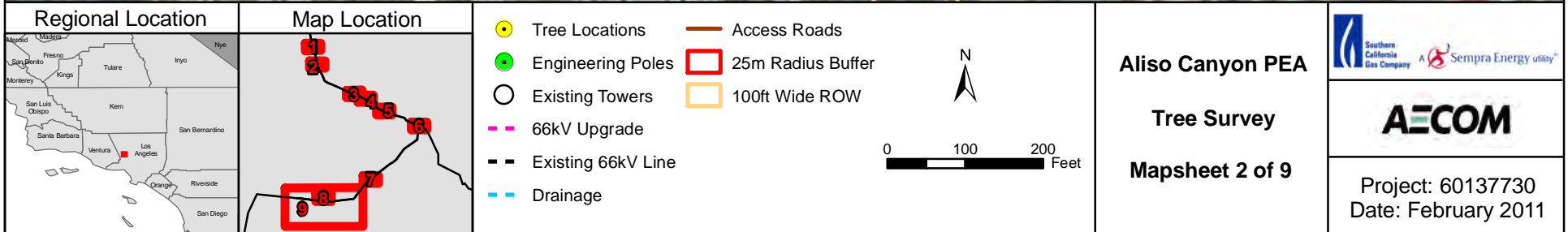
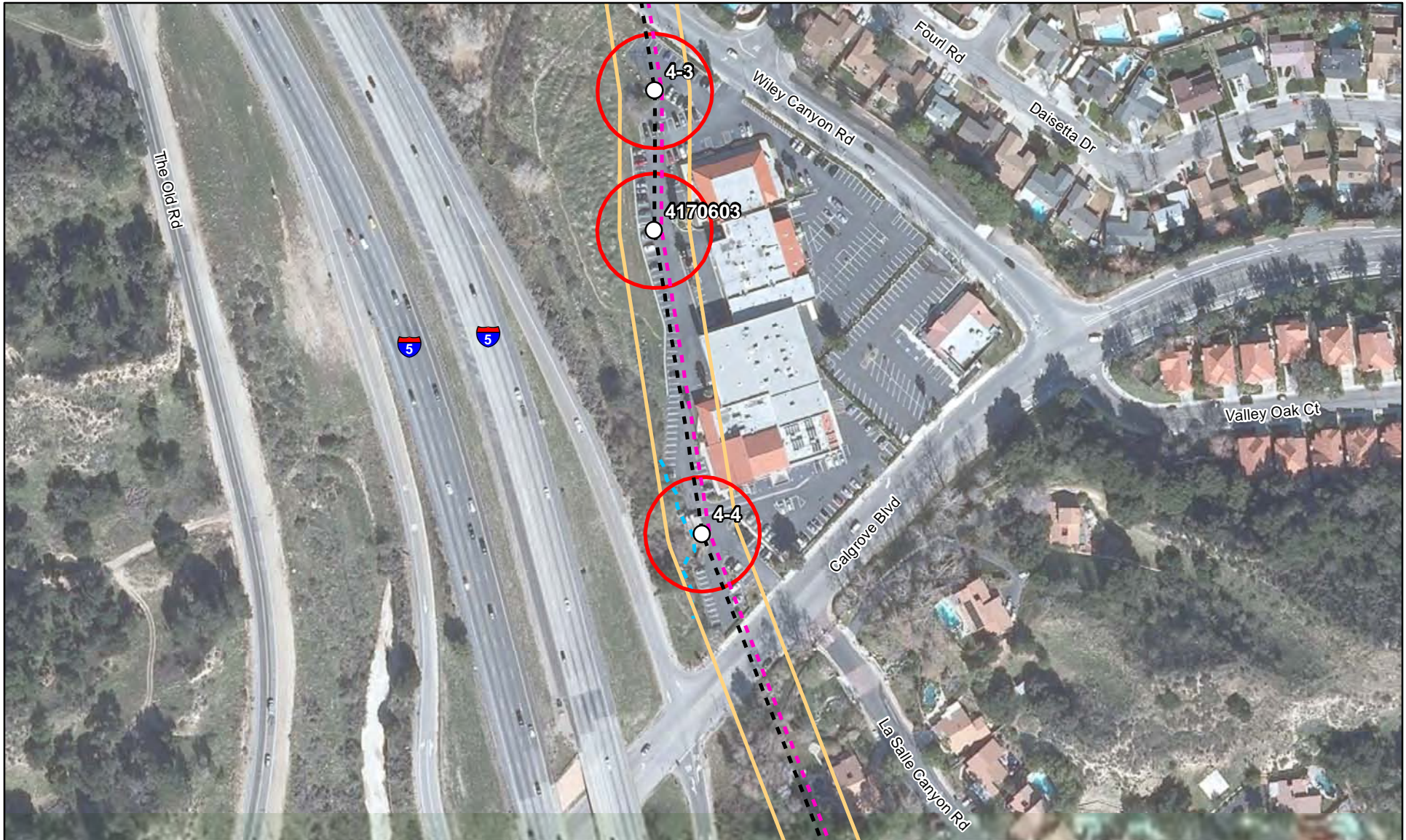
Drainages with Associated Vegetation and Potential Impacts

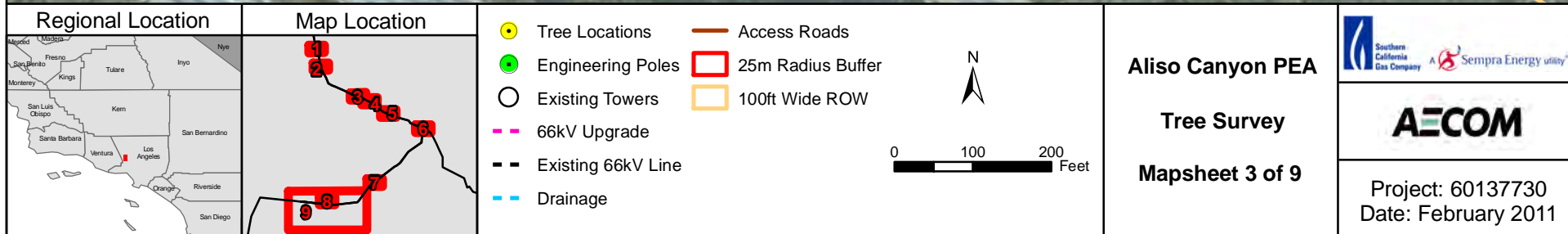
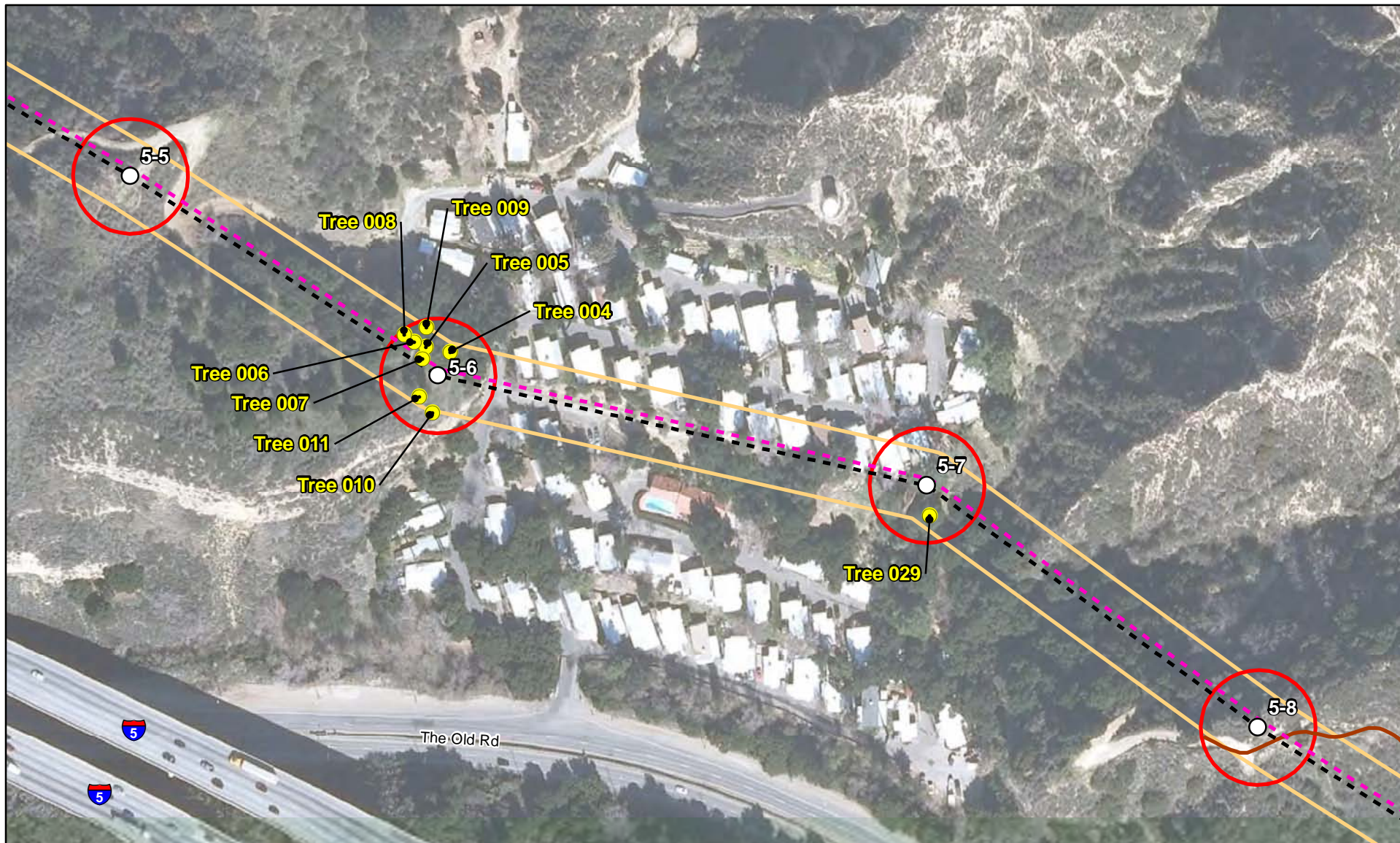
Location	Drainage Name	Average Drainage Size (feet)		Vegetation Characteristics	Potential Impacts	Notes
		Riparian Canopy	Ordinary High Water Mark (OHWM)			
Tower 3-8	Unnamed seasonal drainage	~10	~3	No riparian vegetation. Near tower, coast live oak (<i>Quercus agrifolia</i>) overstory comprises riparian canopy.	With standard BMPs, none expected.	Drainage situated at base of hill on which tower is located. Concrete v-ditch drains small area of surrounding hillsides, emptying onto Old Wiley Canyon Rd. below tower.
Tower 4-4	South Fork Santa Clara River	~40	~3	Southern Willow Scrub: primarily willow species (<i>Salix</i> spp.), w/emergent Fremont cottonwood (<i>Populus fremontii</i>) and mulefat (<i>Baccharis salicifolia</i>).	Minor trimming of riparian canopy (arroyo willow). Soil discharge into channel.	Tower is located immediately adjacent to the drainage channel and a parking lot. Drainage enters a box culvert under the parking lot immediately downstream of the tower.
Access Road between Tower 5-8 and 5-9	Unnamed seasonal drainage	~13-40	~13	No riparian vegetation. Species composition consists of mulefat, California sagebrush (<i>Artemisia californica</i>), California buckwheat (<i>Eriogonum fasciculatum</i>), and black sage (<i>Salvia mellifera</i>). Areas w/oak overstory also present.	Re-engineering of access road will require installation of crossing and/or culvert in the bottom of the canyon, filling of small channel w/in road boundary.	Access road not maintained and washed out in bottom of canyon. Approximately 100' upstream from washout, where road paralleled drainage channel, flow has breached road edge creating a small channel (approx. 8"wide x 6"deep) within approx. 100' of the roadway.
Aliso Canyon Storage Field – New Office Location and New Compressor Site	Limekiln Canyon	~100-200	~6	Southern Cottonwood – Willow/Coast Live Oak Riparian Forest: overstory of coast live oak, willow, and some California sycamore and Fremont cottonwood; in areas where the tree canopy is not as dense, understory consists of sage scrub species such as California sagebrush and white sage (<i>Salvia apiana</i>).	Minor trimming of riparian canopy.	Facility infrastructure in the vicinity of drainage includes Porter 42 Staging Area, New Office Trailer Location, and New Compressor Station Location. Construction will be limited to upland areas and with standard construction BMPs in place, impacts to riparian areas will be minimal, likely consisting of minor trimming of overhanging branches.
Aliso Canyon Storage Field – New Guard Shack Location	Limekiln Canyon	~75	~30	Recently burned California Walnut Woodland: primarily California walnut (<i>Juglans californica</i>) w/California sycamore (<i>Platanus racemosa</i>), and arroyo willow; understory consists of mulefat, giant wild rye (<i>Leymus condensatus</i>), castor bean (<i>Ricinus communis</i>).	With standard BMPs, none expected.	Main facility access road parallels drainage channel. Construction of the guard shack will occur primarily within the existing roadway and will likely not impact the adjacent riparian area.

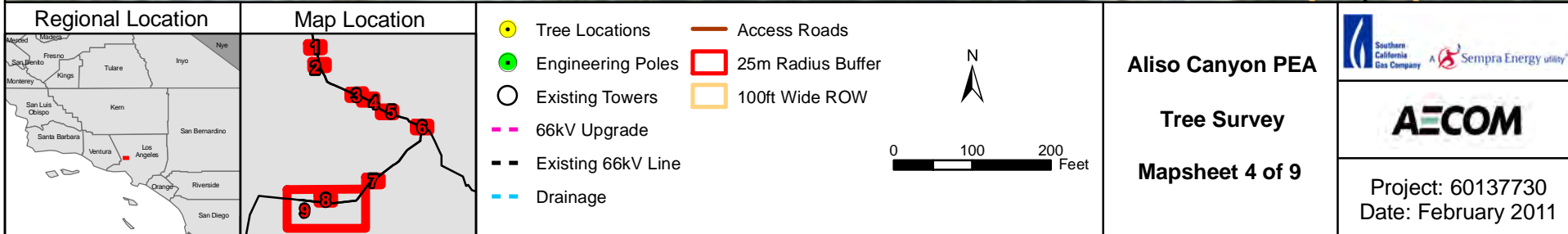
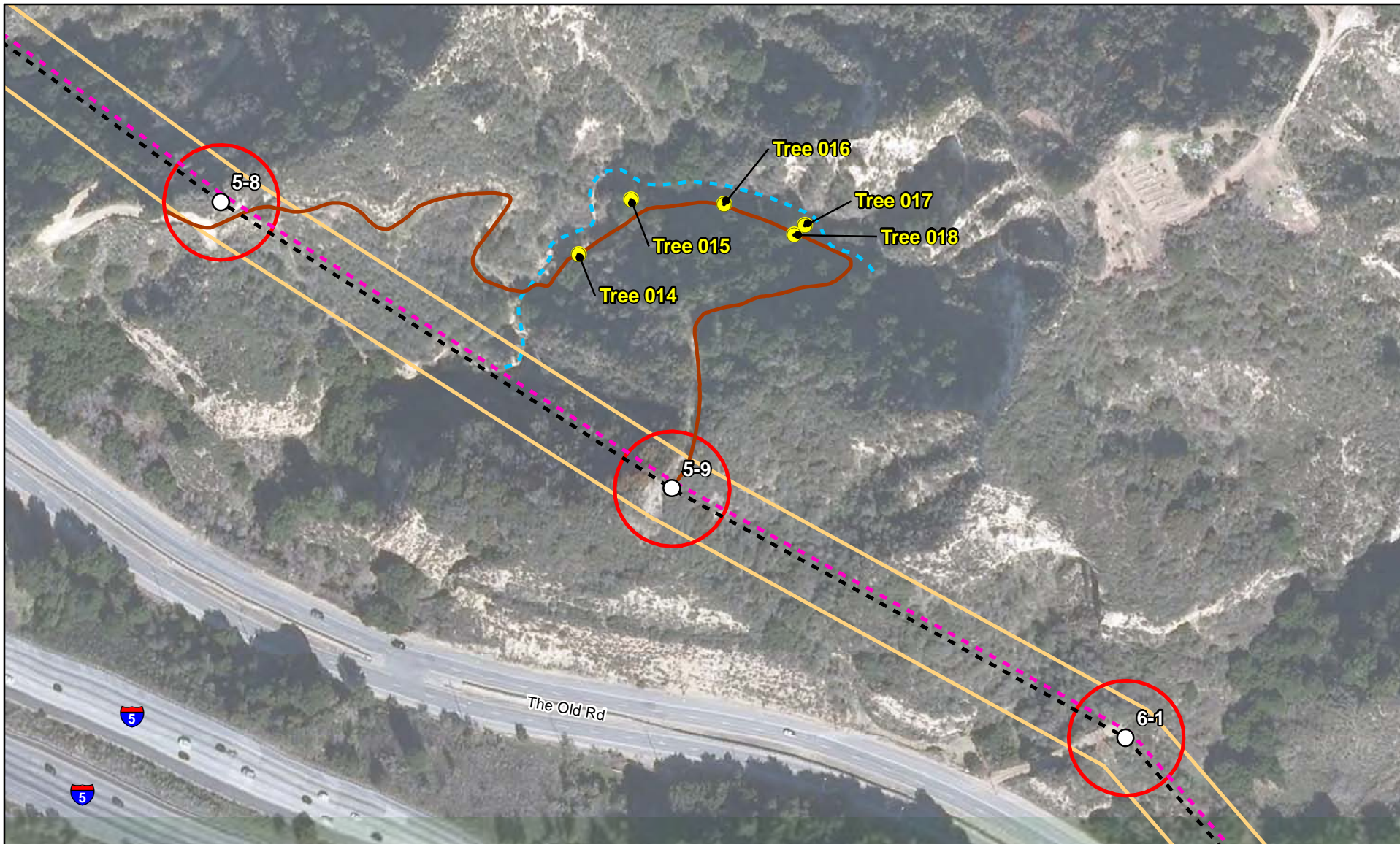
Appendix B

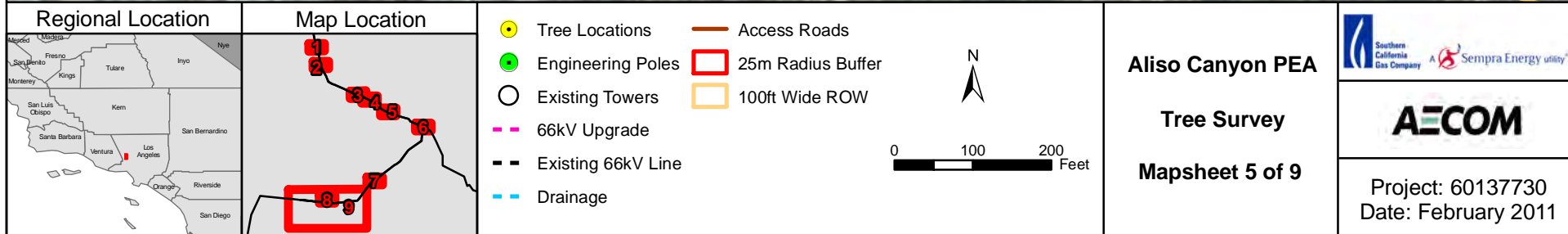
Map of Drainages (and Surveyed Oak Tree)

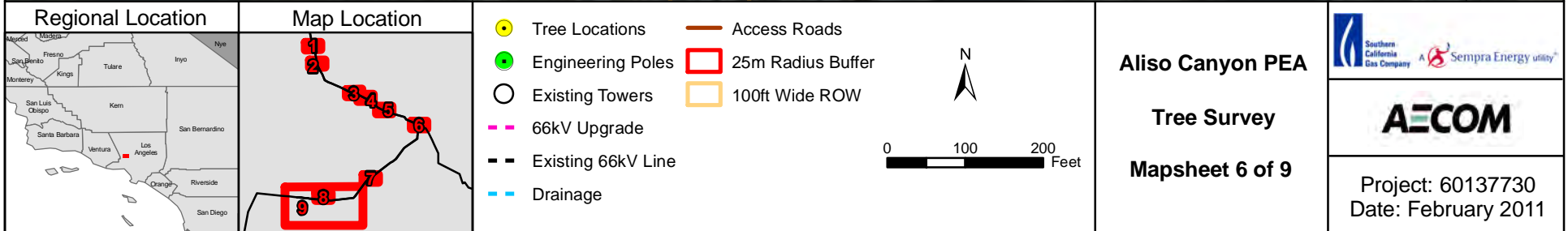


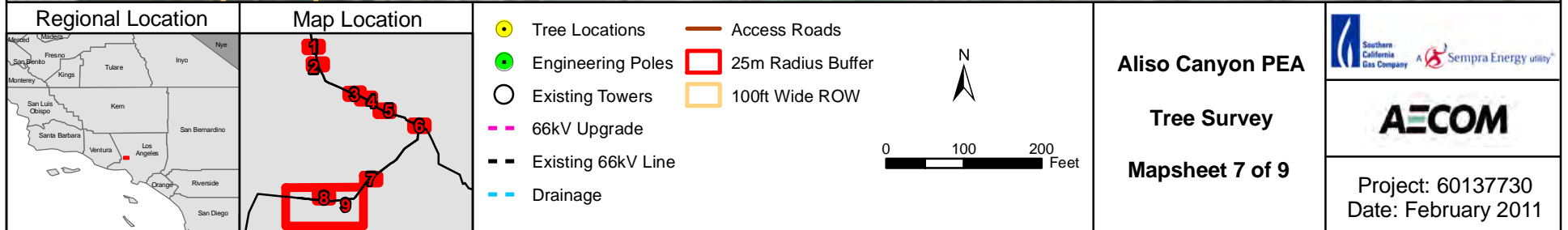


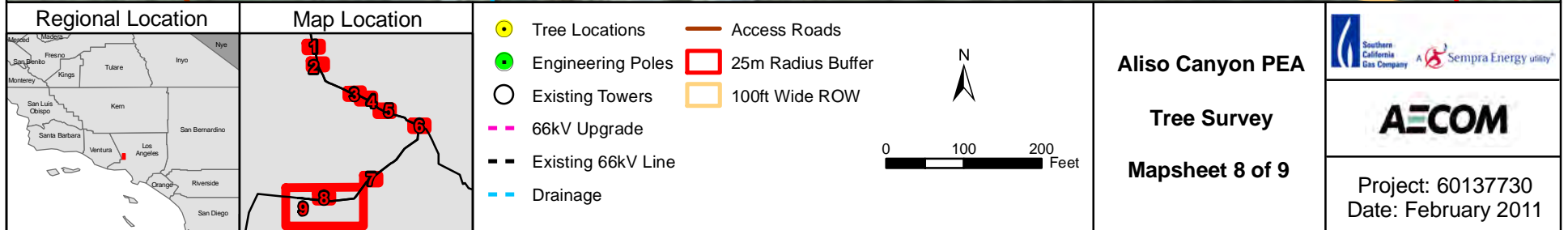
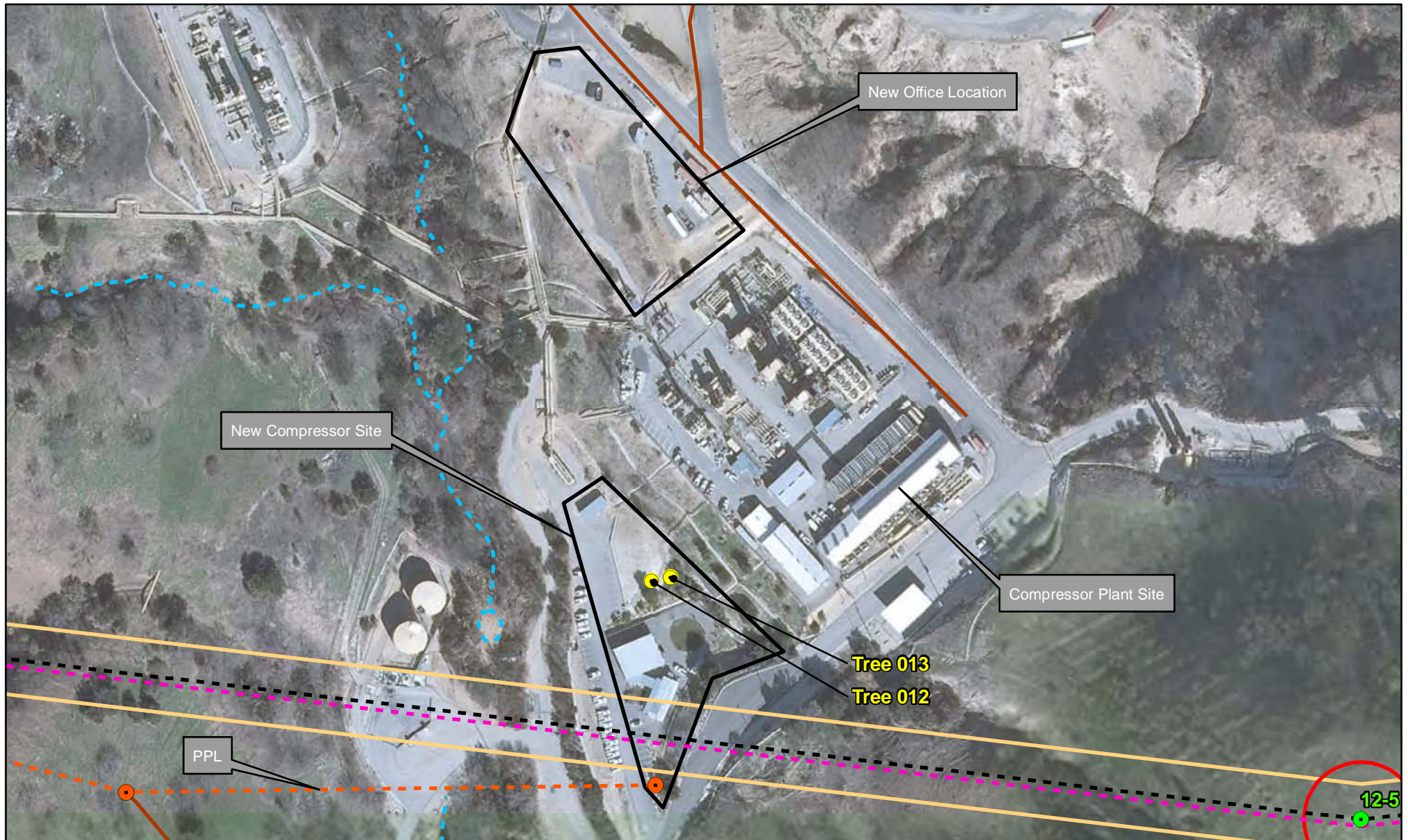


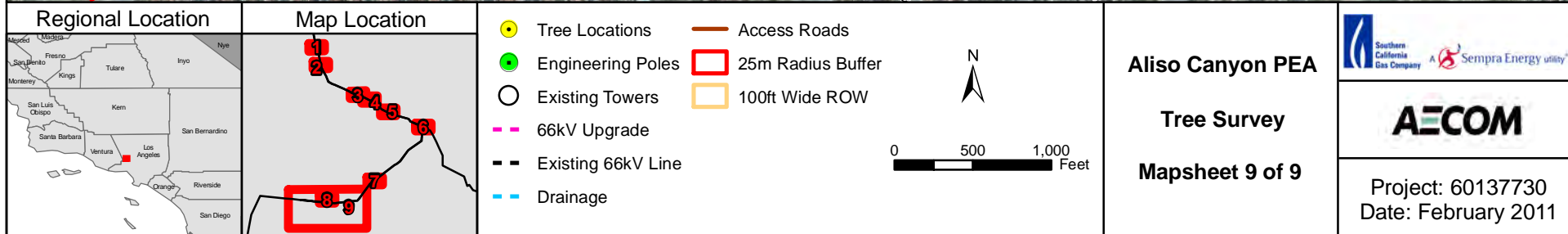
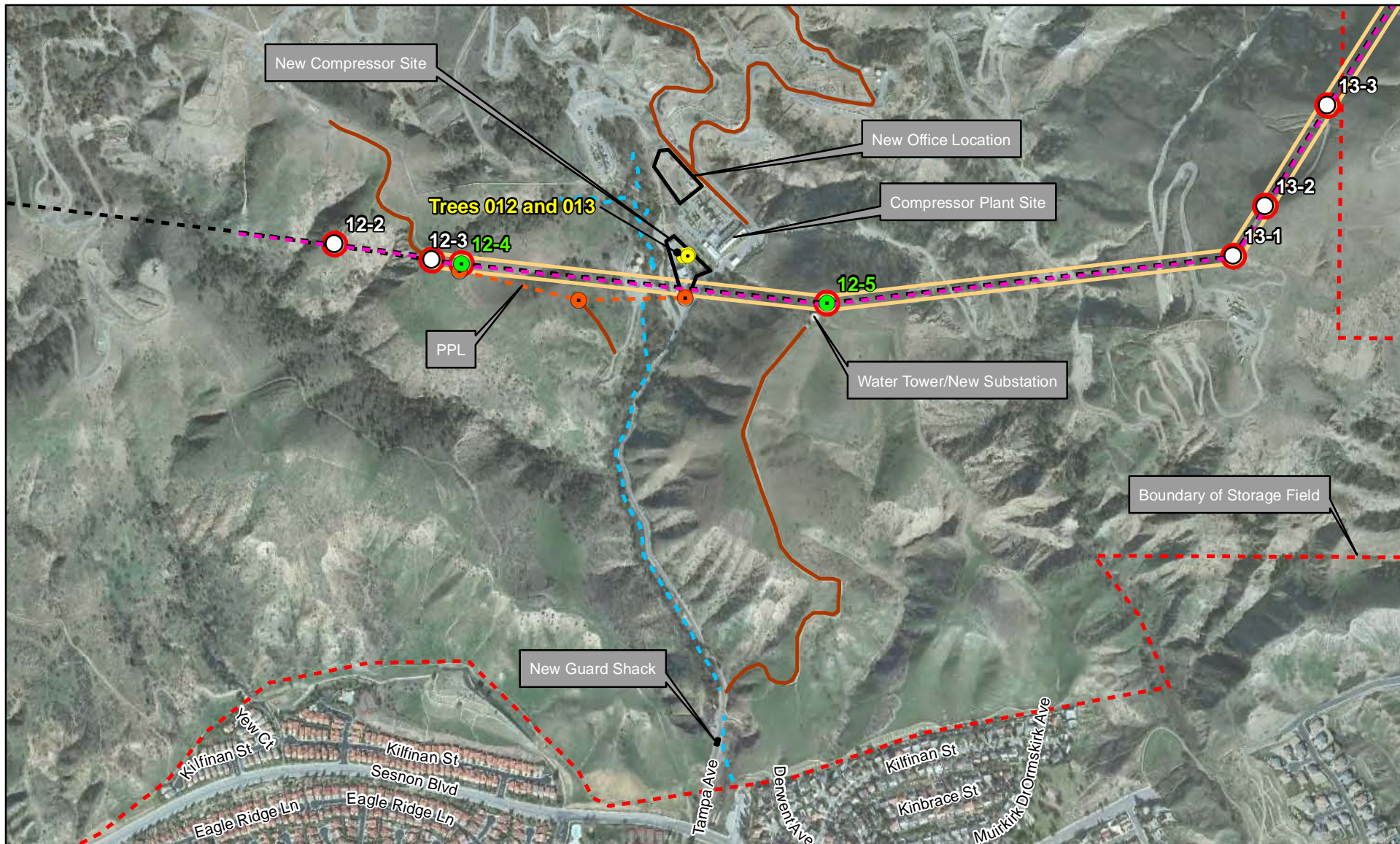












Appendix E6
Biological Resources Survey Plan – Telecom Line

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Environment

Prepared for:
Southern California Gas Company

Prepared by:
AECOM
60137730
April 2011

Biological Resources Survey Plan – Telecom Line

Aliso Canyon Turbine Replacement Project
Los Angeles County, California

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2.0 Results of the Desk-Top Review	4
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2.2 CNDDDB and CNPS Database Queries	4
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Appendix A Figures

Appendix B General Ecological and Biological Survey Plan – Telecom Line

1.0 Introduction

Pursuant to the requests of the California Public Utilities Commission (CPUC), AECOM completed a desk-top review of biological resources along the telecom line associated with the Aliso Canyon Turbine Replacement Project (ACTR). Upgrades to relay equipment at the Chatsworth and San Fernando Substations will require SCE to install telecommunication wiring (telecom) along an existing distribution service line. Installing telecom involves mounting a lightweight fiber optic cable on existing poles and using a truck-mounted tensioner to string the cable between poles. The telecom line consists of the Chatsworth and San Fernando Taps.

This Biological Resources Survey Plan is prepared as an initial step in the evaluation of potential impacts to biological resources due to activities associated with installation of the telecom line. The plan includes a brief description of the methodology used to conduct the desk-top review of existing biological resources, results of database searches, maps and figures, and a proposed schedule for conducting the biological surveys based on the results of our desk-top review.

1.1 Telecom Line Description

The Chatsworth (CH) Tap is approximately 9.8 miles long and runs from the existing Chatsworth Substation east to the Aliso Canyon Storage Field. The CH Tap loops above the storage field and runs roughly along the northern boundary of the site, entering the plant from the north to connect to the proposed Natural Substation. The entire run of the CH Tap is an existing distribution route from the Chatsworth Substation to the point where the telecom line enters the storage field to connect with the Natural Substation. A linear distance of approximately 1,600 feet of telecom will be installed on the storage field property. This segment of line will be installed primarily on existing plant power distribution lines that run throughout the storage field. The few hundred feet of line into the proposed Natural Substation will be installed underground. The majority of the CH Tap runs through relatively undeveloped natural terrain, gaining elevation to the east as it moves across the 118 freeway and into the foothills of the Santa Susana Mountains.

The San Fernando Tap (SF) Tap is approximately 2.4 miles long and runs from Tap Location M6-T4 to the San Fernando Substation. The SF Tap does not enter the storage field and is located in an urban area across relatively flat geography.

To better manage the length, variation in the terrain, and potential biological resources represented by the CH Tap and SF Tap, the telecom line was parsed into five segments based on geographic or functional differences. The primary purpose of developing segments for this desk-top review of biological resources was to allow for future survey requirements to be proposed based on their specific potential impacts. Because of its length and routing through more complex terrain, the CH Tap has been broken down into four separate segments, CH-1 through CH-4. The SF Tap is represented as just one segment because of its relatively uniform construction through an urban environment. **Figure 1** in Appendix A shows the CH Tap and SF Tap telecom lines and associated segmentation.

1.2 Survey Plan Methodology

Desk-top analyses of biological resources were evaluated using publicly available information for the area within a 5-mile radius of the telecom route. This includes queries of the California Natural Diversity Database (CNDDDB) and California Native Plant Society (CNPS) databases for habitat, flora,

and fauna records. The desk-top review also evaluated US Fish and Wildlife Service (USFWS) critical habitat designation maps and high resolution aerial photographs. **Figure 2** in Appendix A maps results of the USFWS critical habitat designations database query. **Figures 3 through 5** in Appendix A maps the combined results of CNDDDB and CNPS database queries for habitat, plants, and animals, respectively.

1.3 Survey Area

As indicated above, the area evaluated in the desk-top review encompassed a 5-mile radius around the entire telecom line (all segments). Although the activities associated with installing the telecom line are largely non-ground disturbing and short-term in nature (with the exception of the few hundred feet immediately adjacent to the Natural Substation), this extent of study area is consistent with best practices for evaluating the potential for species to occur within a localized area and allows a degree of confidence in our ability to identify sensitive resources along the telecom route.

2.0 Results of the Desk-Top Review

2.1 Designated Critical Habitat

As shown in **Figure 2**, results of the desk-top review shows that four species have identified critical habitat within a 5-miles radius of the telecom line. These include the Branton's milk-vetch (*Astragalus brauntonii*), the California red-legged frog (CRLF) (*Rana draytonii*), the coastal California gnatcatcher (CAGN) (*Poliophtila californica californica*), and the Santa Ana sucker (*Catostomus santaanae*). However, of these four species, only the CAGN has designated critical habitat along the telecom line. The Branton's milk-vetch and the CRLF are shown to have habitat to the west of the Chatsworth substation, where no activity associated with the telecom line is expected. Similarly, the critical habitat designated for the Santa Ana sucker is identified 3 miles away from the San Fernando substation separated by dense urban areas to the east.

The coastal California gnatcatcher critical habitat encompasses segment CH-2 of the telecom line. Protocol-level CAGN survey were conducted for the entire length of the sub-transmission portion of the ACTR Project, which includes designated critical habitat, and no birds were identified. In fact, although this area is designated as critical habitat for the CAGN, the species typically is found closer to the coast in more open, flat environments. Based on this information it is reasonable to assume that the California gnatcatcher is the only species with designated critical habitat within the study area that may be impacted by the activities associated with telecom line installation.

2.2 CNDDDB and CNPS Database Queries

As shown in **Figure 3**, the available information shows the area along segment CH-2 of the telecom line to be at least partially characterized by oak woodland and mixed riparian forest. Information on habitat is not readily available for the other portions of the telecom line via public databases; however review of the aerial photographs of the remaining areas of the CH Tap suggests the presence of various native scrub habitats such as sage, riparian, and willow scrub, along with grasslands. The SF Tap by contrast is shown to be in an urban setting with no native environments.

Figure 4 shows that there have been several observations of special status plant species along the CH-1 and CH-3 segments of the telecom line, including Plummer's mariposa-lilly (*Calochortus plummerae*), Branton's milk-vetch, and Santa Susana tarplant (*Deinandra minthornii*). No observations of special status plants have been recorded along the SF Tap, which is consistent with its characterization as an urban environment. The closest identified occurrence of a special status plant species to the SF Tap is of California Orcutt grass (*Orcuttia californica*) and Davidson's bush-mallow (*Malacothamnus davidsonii*), each located approximately 0.5 miles from the SF tap and away from any area expected to be impacted by work on the telecom line.

Figure 5 shows the recorded observations of two bat species, the western mastiff bat (*Eumops perotis californicus*) and the California leaf-nosed bat (*Macrotus californicus*) along the CH-1 and CH-2 portions of the telecom line. In addition, the database searches identified one observation of the western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) along the SF Tap. However, this observation was recorded in 1893 and this species is presumed to be extirpated from the area, particularly in heavily urbanized environments such as those through which the SF Tap travels.

Results of the plant, animal, and habitat desk-top database queries indicate that the telecom line encompasses a range of habitats. These habitats are similar to those encountered during the

surveys and evaluation of biological impacts for the pole replacement work associated with the sub-transmission alignment. An example of this is the similarity in oak woodland and mixed riparian forest habitats shown along the western segments of the telecom line and the wetland drainages identified and surveyed along the sub-transmission alignment from the Newhall Substation to where the line crosses Interstate 5 (already completed).

Based on these results it appears that the highest concentration of observations of special status plants and animals is in the CH-1, CH-2, and CH-3 segments of the telecom line, whereas fewer observations have been recorded in the vicinity of CH-4 and the SF Tap, likely because the site are already quite disturbed. Telecom line installation is, as discussed above, a much less disturbing activity than pole replacement with little to no ground disturbance.

2.3 Biological Surveys

Based on the desk-top review described in the sections above, and an analysis of type and content of biological surveys previously conducted for the ACTR Project, each segment of the telecom line route was evaluated for the potential need to conduct the following biological and/or ecological surveys to establish the potential for impacts to biological resources due to activities associated with installation of telecom line:

General Surveys

- Habitat Suitability Assessment
- Drainage/Wetland Characterization
- Pre-construction Survey

Plants

- Rare Plants
- Oaks and Other Trees

Wildlife

- CAGN
- Stick Nests (i.e., Raptors and Large Corvids)

The segments of the telecom line with the highest potential impact area are summarized in the General Ecological and Biological Survey Plan – Telecom Line – ACTR Project, provided in **Appendix B**.

2.4 Survey Schedule

The general surveys for habitat suitability and drainage characterization can be conducted together along with collecting data on rare plants and oaks and other trees for evaluating future survey needs. These ecological surveys will be conducted during the first two weeks in May 2011 and is to include all areas of the telecom line. Following the ecological survey, a rare plant survey for spring blooming species may be scheduled for the latter part of May should the ecological surveys demonstrate the need for a focused assessment based on the presence of rare plant populations, the potential for presence based on suitable habitat, or other ecological conditions that would suggest the need for a detailed survey of rare flowering plants. If a rare plant survey is conducted, it may be limited to just those segments of the telecom line that are identified during the ecological survey as needing such a detailed assessment. Due to the historic presence of late blooming sensitive plants in the vicinity of

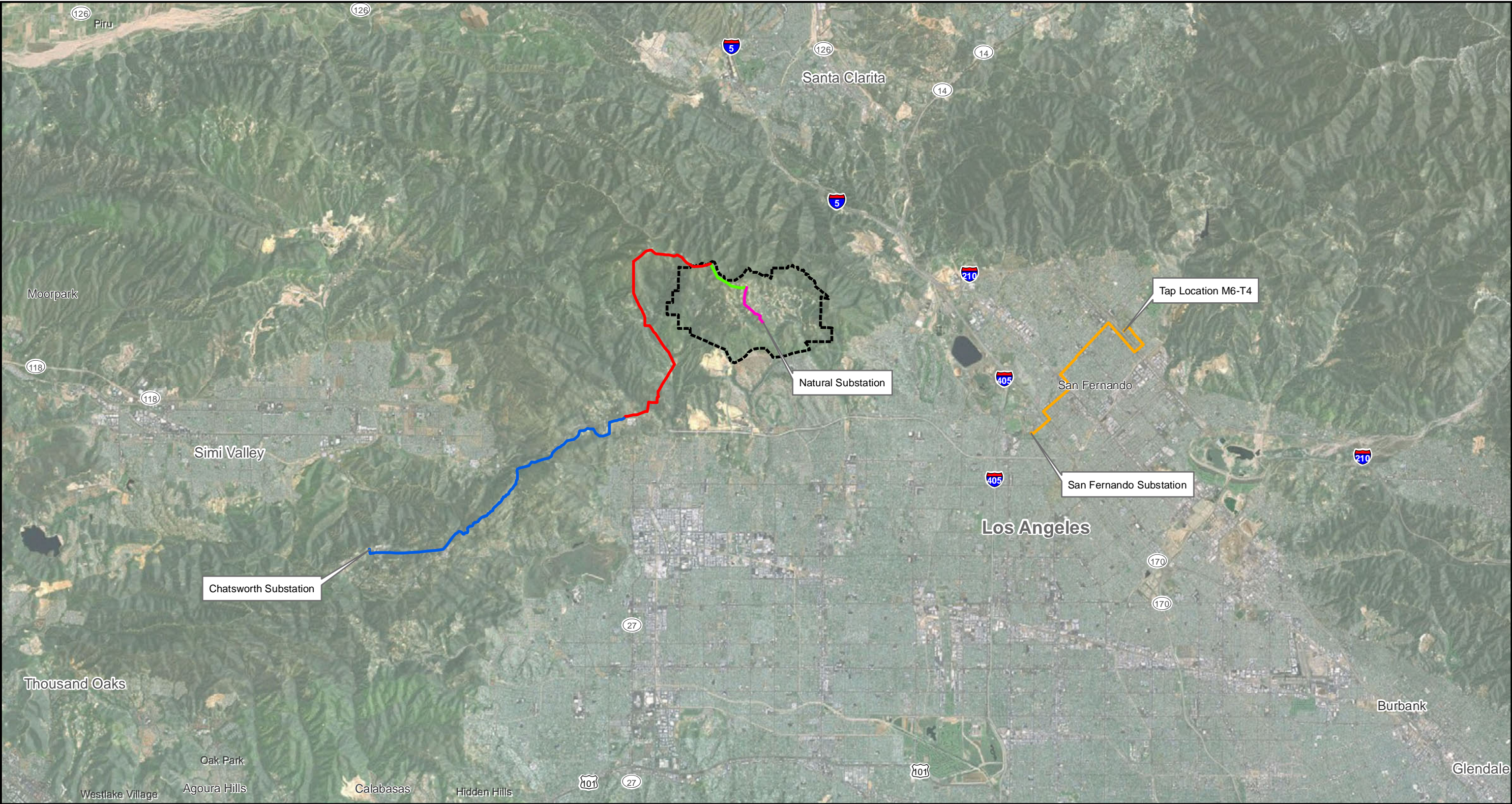
the proposed telecom alignment, the results of the ecological survey will similarly determine the need for a late season (summer) rare plant survey.

At this time it is not certain what segments of the telecom line will require protocol-level CAGN survey. Notwithstanding the presence of designated critical habitat, most of the area of the telecom line is in areas of low suitability habitat. Defining the need and extent to conduct a protocol-level CAGN survey will be one of the key objectives of the ecological survey.

Appendix A

Figures

XX-X

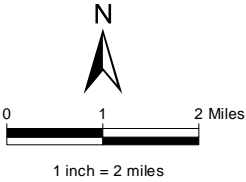


- CH-1

CH-2
- CH-3

CH-4
- SF

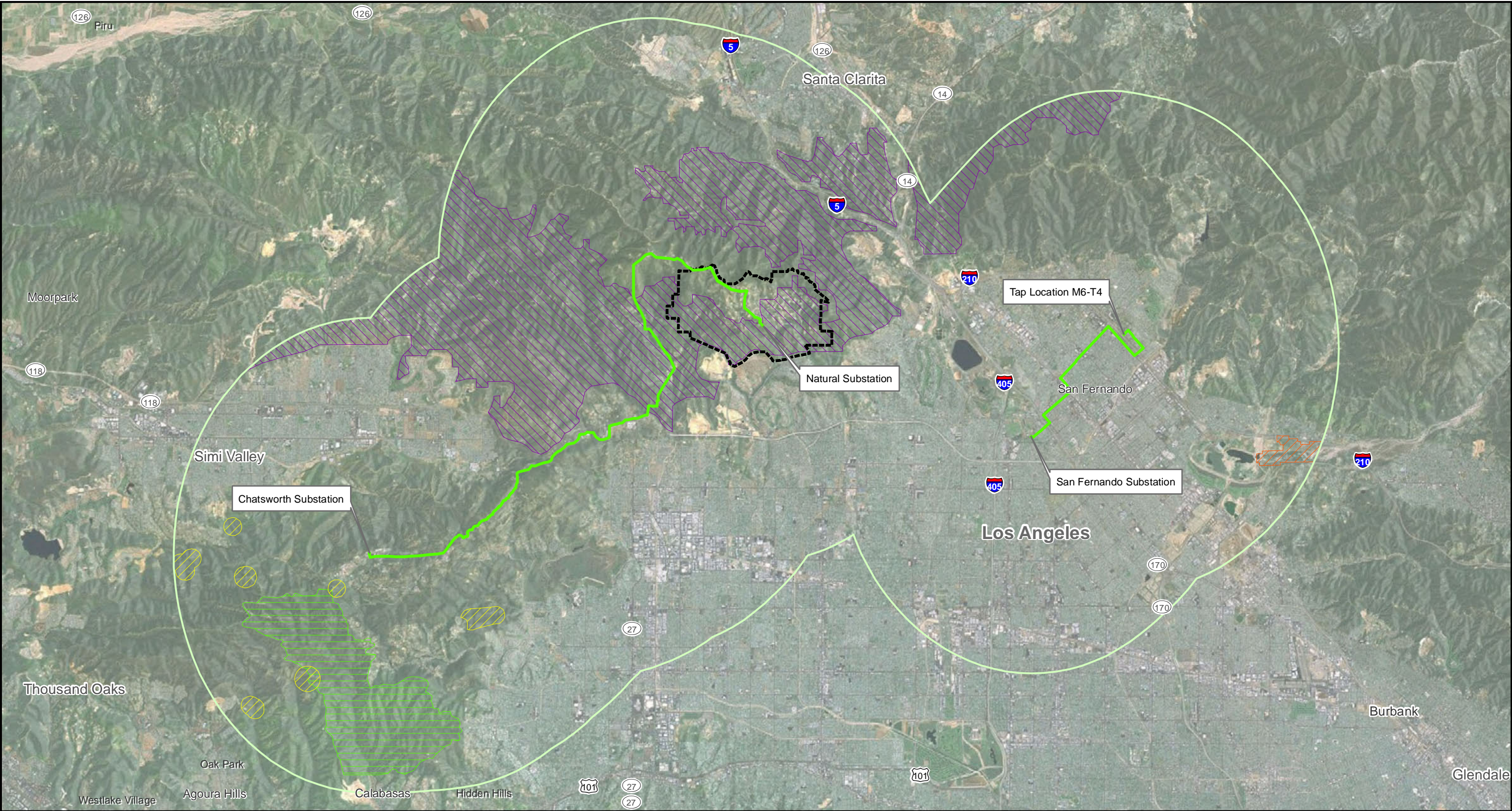
Storage Field Boundary



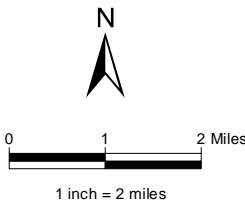
Telecom Line Segments

Date	04-11	Aliso Canyon PEA Survey Plan	Figure 1 of 5
Project No.	60137730		

XX-X



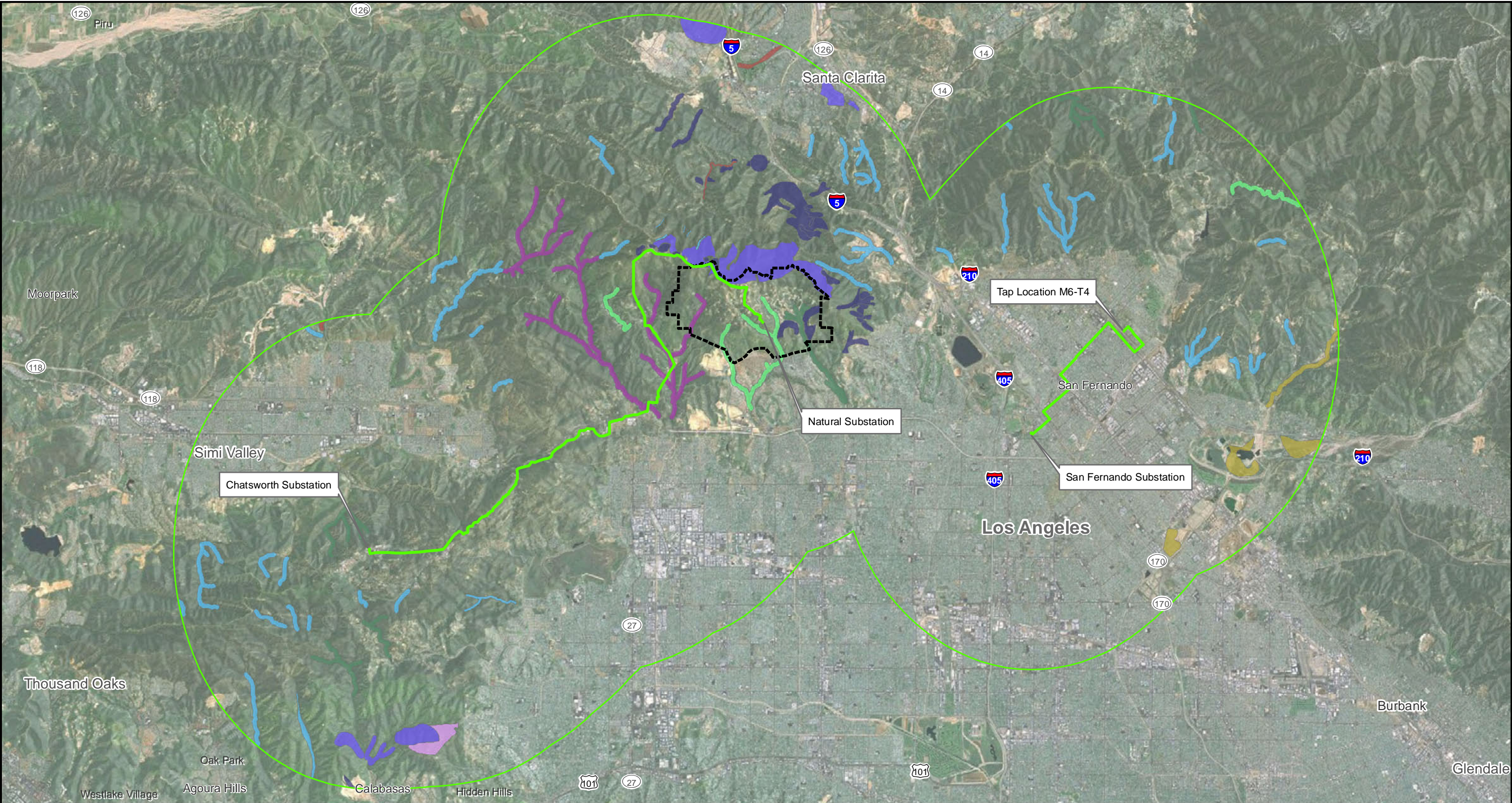
- Telecom Line
- Five-Mile Radius
- Storage Field Boundary
- Braunton's milk-vetch
- California red-legged frog
- Coastal California gnatcatcher
- Santa Ana sucker



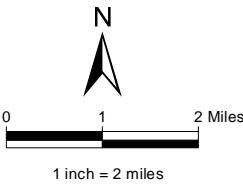
USFWS Critical Habitat Designation
within Five Miles of Telecom Line

Date	04-11	Aliso Canyon PEA Survey Plan	Figure 2 of 5
Project No.	60137730		

XX-X



- | | | | |
|--|---|---|------------------------------|
| Telecom Line | California Walnut Woodland | Southern Mixed Riparian Forest | Valley Needleglass Grassland |
| Five-Mile Radius | Riversidian Alluvial Fan Sage Scrub | Southern Riparian Scrub | Valley Oak Woodland |
| Storage Field Boundary | Southern Coast Live Oak Riparian Forest | Southern Sycamore Alder Riparian Woodland | |
| Southern Cottonwood Willow Riparian Forest | Southern Willow Scrub | | |



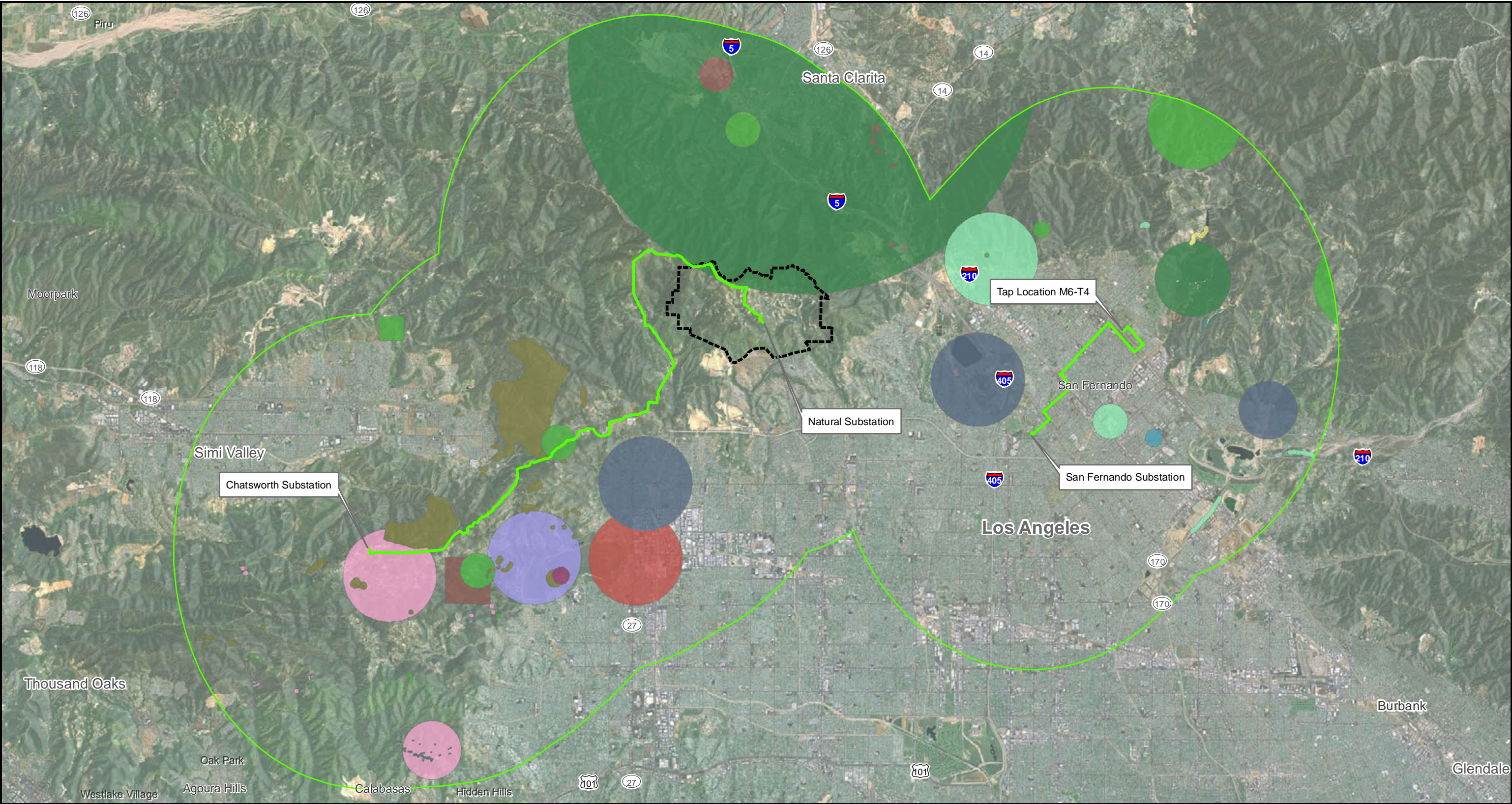
CNDDDB Records within a
Five-Mile Radius of Telecom Line:
Habitat

Date 04-11
Project No.
60137730

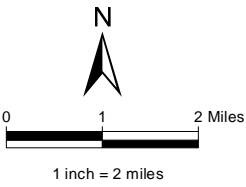
Aliso Canyon PEA
Survey Plan

Figure
3 of 5

XX-X



- | | | | | |
|------------------------|-------------------------|------------------------|---------------------------------|----------------------------|
| Telecom Line | Blochman's dudleya | Davidson's bush-mallow | Plummer's mariposa-lily | many-stemmed dudleya |
| Five-Mile Radius | Braunton's milk-vetch | Greata's aster | San Fernando Valley spineflower | slender mariposa-lily |
| Storage Field Boundary | California Orcutt grass | Nevin's barberry | Santa Susana tarplant | slender-horned spineflower |
| | Coulter's goldfields | Palmer's grapplinghook | chaparral nolina | |



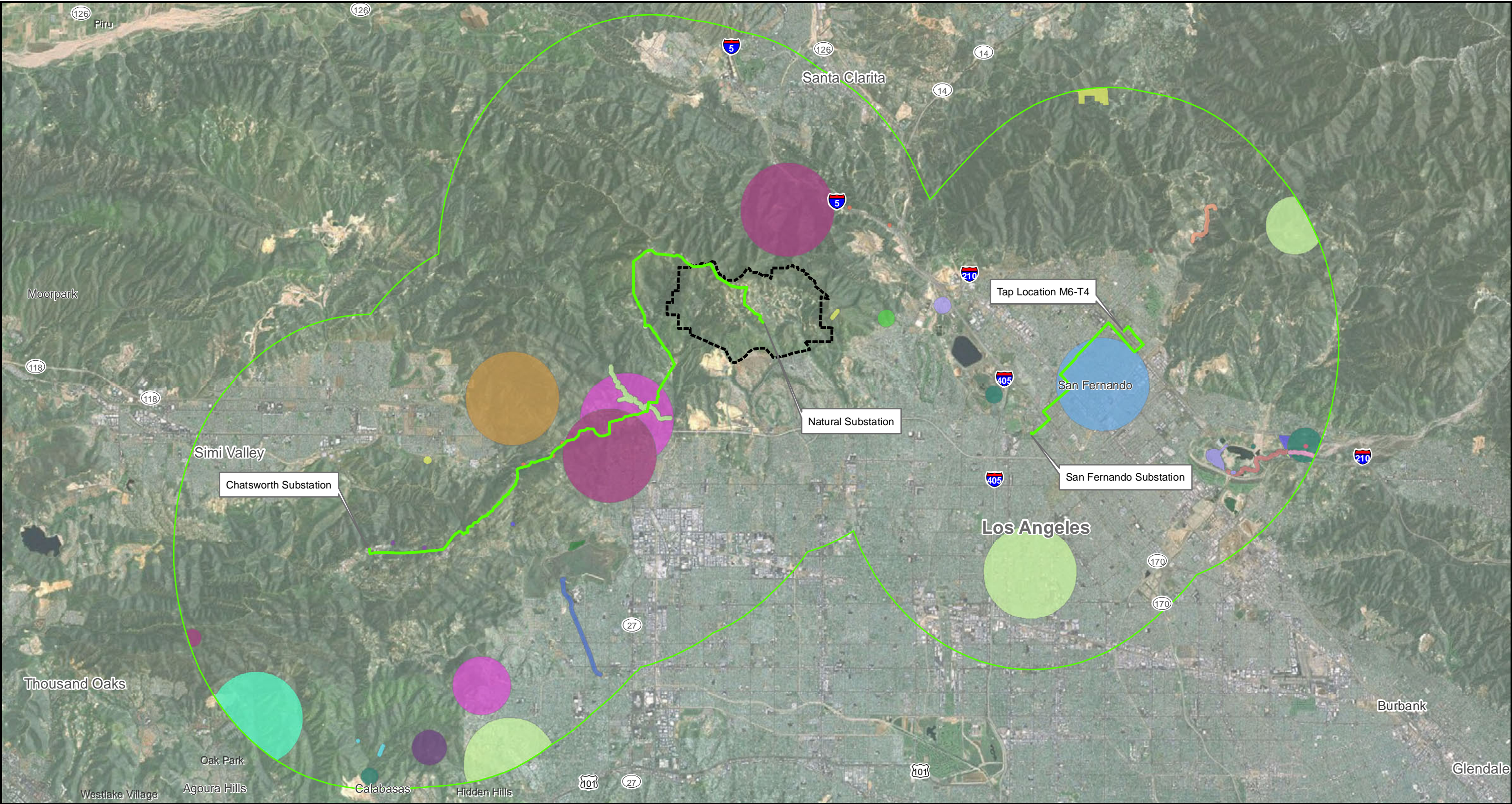
CNDDDB Records within a
Five-Mile Radius of Telecom Line:
Plant Species

Date 04-11
Project No.
60137730

Aliso Canyon PEA
Survey Plan

Figure
4 of 5

XX-X



<ul style="list-style-type: none">Telecom LineFive-Mile RadiusStorage Field BoundaryCalifornia leaf-nosed batCalifornia red-legged frog	<ul style="list-style-type: none">San Diego black-tailed jackrabbitSan Diego desert woodratSanta Ana speckled daceSanta Ana suckerSierra Madre yellow-legged frog	<ul style="list-style-type: none">arroyo chubarroyo toadburrowing owlcoast horned lizardcoastal California gnatcatcher	<ul style="list-style-type: none">coastal whiptailgolden eaglehoary batleast Bell's vireomonarch butterfly	<ul style="list-style-type: none">pallid batsilvery legless lizardsouthern California rufous-crowned sparrowtricolored blackbirdtwo-striped garter snake	<ul style="list-style-type: none">western mastiff batwestern pond turtlewestern small-footed myotiswestern spadefootwestern yellow-billed cuckoo
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0 1 2 Miles

1 inch = 2 miles

CNDDDB Records within a Five-Mile Radius of Telecom Line: Animal Species

Date	04-11
Project No.	60137730

Aliso Canyon PEA Survey Plan

Figure

5 of 5

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Appendix B

General Ecological and Biological Survey Plan – Telecom Line

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Appendix B

General Ecological and Biological Survey Plan – Telecom Line – ACTR Project

Survey Component	Affected Telecom Line Segment(s)	Desk-top survey Results and Survey Requirement	Survey Protocol	Survey Buffer	Survey Schedule
General Surveys					
Habitat Assessment	CH-1 CH-2 CH-3 CH-4 SF	<p>All segments are included here because these segments had either little information available on the habitat of the area or that the desk-top review identified potential presence of species and/or habitat.</p> <p>A general survey of the habitat throughout the alignment will be conducted to determine areas in which more focused surveys would be required.</p>	<p>A biologist will survey the majority of the alignment and access roads by vehicle. In areas of localized disturbance or where otherwise deemed appropriate, this “windshield survey” may be supplemented by a walking survey to gather additional information (i.e., to map habitat communities).</p> <p>The surveyors will also make incidental wildlife observations during this assessment, including looking for those species that may not necessitate a specific survey protocol, such as coast horned lizard (<i>Phrynosoma blainvillii</i>).</p> <p>Data gathered during this survey will be used to help determine where additional focused surveys may be required and to begin development of avoidance and/or mitigation strategies.</p>	Within 25 meters of alignment and other work areas.	<p>Can be conducted at any time of year, but will be conducted in conjunction with an initial ecological survey.</p> <p>Proposed timing is the first two weeks in may 2011.</p>
Drainage/Wetland Characterization	CH-1 CH-2 CH-3	Based on a desk-top review and aerial photos, these segments of the Chatsworth alignment appears to traverse a number of drainages. It is possible that some work will take place in or near one or more of these areas. Though not anticipated, significant impacts to drainages or wetlands may trigger regulatory jurisdiction from the U.S. Army Corps of Engineers, California Department of Fish and Game (CDFG), and/or the Los Angeles Regional Water Quality Control Board.	<p>Drainages and or wetlands that may be impacted by the implementation of the project will be surveyed on foot by a biologist familiar with jurisdictional waters. Physical characteristics of each water body; such as flow regime, vegetation type(s), width of Ordinary High Water Mark (OHWM), top of bank, and riparian canopy; will be recorded and a description of potential impacts will be provided.</p> <p>It is important to note that this survey would not constitute a formal jurisdictional delineation.</p>	In drainage or wetland areas within 25 meters of alignment and other work areas.	Can be conducted at any time of year, but will be conducted in conjunction with the initial ecological survey proposed for early May 2011.
Pre-construction Survey	CH-1 CH-2 CH-3 CH-4 SF	Biological surveys are required in an area immediately prior to the commencement of work to determine whether conditions have changed since prior surveys. Depending on their level of mobility, sensitive wildlife and, to a lesser extent, plants can appear in areas in which they formerly did not occur. A pre-construction survey confirms the state of a work area immediately prior to the start of work. If sensitive biological resources (such as nesting birds) are encountered during these surveys, the work plan can be modified to avoid or mitigate impacts.	Within 24 hours of the start of work in an area a biologist will survey that area on foot to determine the presence of special-status species or other sensitive biological resources such as nesting birds. This survey may also serve to assess and/or adjust avoidance and mitigation strategies.	Within 25 meters of alignment and other work areas.	Surveys will be conducted within 24 hours of the start of work in a given area. Can be conducted at any time of year; however survey targets will vary somewhat based on the time of year.
Plants					
Rare Plants	CH-1 CH-3	<p>Queries of the California Natural Diversity Database (CNDDDB) and California Native Plant Society (CNPS) databases indicate that several rare plants have historically been observed in the vicinity of the Chatsworth alignment. These species include Branton’s milk-vetch (<i>Astragalus brauntonii</i>), two mariposa lilies (<i>Calochortus</i> spp.), Santa Susana tarplant (<i>Deinandra minthornii</i>), and several dudleyas (<i>Dudleya</i> spp.). Suitable habitat for some of these species occurs within the project area.</p> <p>Work or access may result in impacts to one of these rare plants.</p>	<p>Surveys will be conducted in accordance with the techniques described in the CDFG’s guidance document, <i>Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities</i> (California Natural Resources Agency - CDFG, November 2009).</p> <p>A qualified botanist will survey areas in the vicinity of ground disturbance, determining the specific field techniques necessary to conduct the survey based on the physical characteristics of the area, including topography and vegetation density and structural complexity. Surveys will be designed to ensure thorough coverage of the entire site and be floristic in nature, meaning that all plants observed will be identified to the taxonomic level necessary to determine rarity and listing status.</p> <p>When possible, reference sites, in which target plants are known to occur in the same type of habitat present in the project area, will be visited to determine whether that species will be identifiable at the time of the survey and to make note of other characteristics important in identifying that species. Observations of special status plants will be photo documented and their locations recorded via GPS. Other characteristics, including the size of the population and associated habitat, will also be recorded.</p>	Within 25 meters of areas of disturbance.	<p>Initial survey of rare plants will be performed in conjunction with the ecological surveys that define habitat and drainage/wetland characterizations.</p> <p>Should a detailed rare plant survey be required for specific segments of the telecom line, the survey should be conducted at the time of year when target species are evident and identifiable, usually when flowering or fruiting. For this project, due to the variations in blooming periods for the target species, any detailed rare plant surveys will be conducted early to mid spring (mid May) and early summer (late August).</p>
Oaks and Other Trees	CH-2 CH-3 CH-4	Based on a desktop review of aerial photos, it appears that portions of the northern half of the alignment will travel through oak woodlands and/or may be located near solitary oaks (<i>Quercus</i> spp.) or other protected trees such as California walnut (<i>Juglans californica</i>). Work or access may require trimming of branches or other impacts to protected trees.	Once the project design has been finalized, a biologist will survey those areas along the alignment that may pass near protected trees. The biologist will record the location of each tree potentially impacted, general condition of the tree(s), and catalog the extent of potential impacts.	Within work areas and access roads where impacts to protected trees may occur.	Initial survey of oaks and other trees will be performed with the ecological surveys that define habitat and drainage/wetland. Should a detailed oak tree survey be required for specific telecom line segments, these can be conducted at any time of year.

Appendix B

General Ecological and Biological Survey Plan – Telecom Line – ACTR Project

Wildlife					
Coastal California Gnatcatcher <i>Polioptila californica californica</i>	CH-3 CH-4	<p>The northern portion of the alignment travels through coastal California gnatcatcher (CAGN) critical habitat. Based on a desktop review of aerial photos, portions of the alignment likely pass through suitable sage scrub habitat.</p> <p>According to a CNDDDB query, the nearest observation of CAGN is approximately 5 miles from the eastern terminus of the telecom alignment.</p>	<p>Per the US Fish and Wildlife Service's (USFWS) <i>Coastal California Gnatcatcher</i> (<i>Polioptila californica californica</i>) <i>Presence/Absence Survey Guidelines</i> – February 28, 1997:</p> <ul style="list-style-type: none">• Areas of suitable habitat (typically larger patches of sage scrub on moderate slopes) and intermixed and/or adjacent habitat will be surveyed by a permitted biologist. Depending on the time of year, either 6 (March 15-June 30) or 9 (July 1-March 14) individual surveys, at least two weeks apart, will be conducted at each area of suitable habitat. Surveys will be conducted between 6 AM and 12 PM during fair weather.• Taped CAGN vocalizations will be played while slowly walking survey routes adjacent to, through, or around potential habitat.• No more than 80 acres per biologist will be surveyed per day.	Within 25 meters of work areas or areas expected to experience significantly more disturbance, such as heavily utilized access roads.	<p>Areas of designated critical habitat and other areas of potential suitable habitat will be evaluated during the initial ecological surveys. At this time only a portion of the CH-2 segment of the telecom line runs through designated critical habitat and this is in steep areas that have a very low likelihood of hosting any populations of CAGN, as evidenced by our previous CAGN survey for the sub-transmission portion of the ACTR project. The need and extent of any CAGN survey will be determined based on the ecological survey, in consultation with the CAGN-permitted biologist, and any necessary surveys can be conducted at any time of the year. Methodology varies based on timing of survey.</p>
Stick Nests i.e., Raptors and Large Corvids	CH-1 CH-2 CH-3 CH-4 SF	<p>Raptors and ravens (<i>Corvus corax</i>) have been known to nest on man-made structures such as transmission line tower and communications towers. Construction and other abnormal human activity in the vicinity (generally 500 feet) of these larger nests may disturb nesting activity resulting in parents abandoning eggs or chicks or other nesting failure.</p>	<p>Surveys for stick nests will be conducted concurrently with the rare plant surveys since these will occur along the entire length of the alignment. Biologists will observe tower structures for existing nests and/or nesting activity. Existing nests will be observed to determine whether they are occupied. Nest locations will be recorded via GPS.</p>	Tower structures within 500 feet of proposed work areas.	<p>Initial survey of stick nests and raptors will be performed in conjunction with the ecological surveys and can be conducted any time of year though determination of whether the nest is occupied is critical during the nesting season (February 15 through September 15).</p> <p>If required, nest surveys will be incorporated into the pre-construction surveys to be completed immediately prior to starting work in a given area of the telecom line.</p>

Appendix E7
Telecom Line – Habitat Assessment Report

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Environment

Prepared for:
Southern California Gas Company

Prepared by:
AECOM
60137730
May 2011

Telecom Line – Biological Habitat Assessment Report

Aliso Canyon Turbine Replacement Project
Los Angeles County, California

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Appendix A Figures

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1.0 Introduction

Pursuant to the requests of the California Public Utilities Commission (CPUC), in May 2011 AECOM completed a desk-top review of biological resources along the telecom lines associated with the Southern California Gas Company (SoCalGas) Aliso Canyon Turbine Replacement Project (ACTR). Upgrades to relay equipment at the Chatsworth and San Fernando Substations will require SCE to install telecommunication wiring (telecom) along existing distribution service lines, known as the Chatsworth and San Fernando Taps (Project area). Installing telecom involves mounting a lightweight fiber optic cable on existing poles and using a truck-mounted tensioner to string the cable between poles.

The desk-top review demonstrated that several special status plant and animal species have been previously documented in the vicinity of the Project area. Based on a review of aerial photography of the project site, it was determined that there may be suitable habitat for one or more of these special-status species along portions of these proposed telecom routes. To further evaluate the degree of suitability of the habitat along the alignments for special status species and to determine the need for focused surveys, AECOM conducted a reconnaissance-level initial habitat assessment of the Project area.

This Biological Habitat Assessment Report has been prepared to evaluate potential impacts to biological resources due to activities associated with installation of the telecom line. The report includes a description of the methodology used to conduct the surveys, results of the assessment, maps and figures, and recommendations regarding additional focused surveys.

1.1 Telecom Line Description

The Chatsworth (CH) Tap is approximately 15.3 miles long and runs from the existing Chatsworth Substation, within Boeing's Santa Susana facility, northeast to the Aliso Canyon Storage Field. The CH Tap loops above the storage field and runs roughly along the northern boundary of the site, entering the plant from the north to connect to the proposed Natural Substation. The entire run of the CH Tap is an existing distribution route from the Chatsworth Substation to the point where the telecom line enters the storage field to connect with the Natural Substation. A linear distance of approximately 1,600 feet of telecom will be installed on the storage field property. This segment of line will be installed primarily on existing plant power distribution lines that run throughout the storage field. The few hundred feet of line into the proposed Natural Substation will be installed underground. The majority of the CH Tap runs through relatively undeveloped natural terrain, gaining elevation to the east as it moves across the 118 freeway and into the foothills of the Santa Susana Mountains.

The San Fernando Tap (SF) Tap is approximately 2.4 miles long and runs from Tap Location M6-T4 to the San Fernando Substation. The SF Tap does not enter the storage field and is located in an urban area across relatively flat topography.

For the purpose of the desk-top review, to better manage the length, variation in the terrain, and potential biological resources represented by the CH Tap and SF Tap, the telecom line was parsed into five segments based on geographic or functional differences. Because of its length and routing through more complex terrain, the CH Tap has been broken down into four separate segments, CH-1 through CH-4. The SF Tap is represented as a single segment because of its relatively uniform construction through an urban environment. **Figure 1 in Appendix A** shows the CH Tap and SF Tap

telecom lines and associated segmentation. **Appendix B** is a photographic log which demonstrates representative conditions from each segment.

1.2 Survey Methodology

AECOM's biologist conducted a survey of the CH-3 and CH-4 portions of the Chatsworth Tap and the entire length of the San Fernando Tap on April 28, 2011; and the remainder of the Chatsworth Tap (CH-1 and CH-2) on May 5, 2011. During the survey of the Chatsworth Tap, one or more Southern California Edison representatives accompanied AECOM's biologist to delineate the proposed alignment path and discuss the methods of implementing the work. The assessment was conducted primarily by vehicle via existing access roads, with several stops to closer investigate portions of the alignment on foot and take photographs. The survey was designed to document general physical and habitat characteristics of each segment to assist in determining where focused surveys will be required. The assessment of each segment consisted of the general identification of vegetation types, observations of potential jurisdictional resources such as wetlands and/or drainages, and the determination of the potential for the presence of special-status plant and wildlife species in the Project area. Biologists recorded general habitat conditions in field notes or on aerial photographs. Photographs and/or Global Positioning System (GPS) points were taken of representative site conditions and of biological resources of note.

1.3 Survey Area

As indicated above, all segments of the Chatsworth and San Fernando Taps were surveyed from existing access roads. While AECOM did observe each existing pole location, not all were accessed directly. This type of investigation has generated the level of data sufficient to determine the areas where pre-construction surveys and other avoidance and minimization measures should be implemented.

2.0 Results of the Habitat Survey

2.1 Chatsworth Tap

Section CH-1

This approximately 7.2-mile section of the telecom alignment begins at the Chatsworth Substation, within Boeing's Santa Susana facility, travels east through the facility and exits adjacent to Black Canyon Road. It follows Black Canyon Road for a short distance before being diverted into an existing underground conduit along the length of the North American Cutoff. At Box Canyon Road, the alignment daylights onto existing poles and traverses downhill to Santa Susana Pass Road, then generally follows that road to the point at which it crosses the 118 Freeway.

Within the Boeing facility, vegetation covering the hilly topography is comprised primarily of varying densities of coastal sage scrub (CSS) interspersed with patches of coast live oak (*Quercus agrifolia*) woodland and disturbed facility infrastructure, which is generally populated by non-native annual grasses and other non-native forbs. This area of rocky, shallow soils ranges in elevation from approximately 1,750 to 1,900 feet above mean sea level (MSL). Two sensitive plant species are known to occur on or in the vicinity of the Boeing facility, Braunton's milk vetch (*Astragalus brauntonii*) and Santa Susana tarplant (*Deinandra minthornii*).

As the alignment leaves the Boeing facility, it travels adjacent to Black Canyon Road, which is flanked by several mature eucalyptus trees (*Eucalyptus* sp.), before being directed underground at the North American Cutoff. This area is characterized by steep, rocky terrain between approximately 1,725 and 2,025 feet above MSL. Vegetation consists of relatively dense CSS along the slopes adjacent to the road, with sparse non-native grasses and forbs on the road margins. While the line travels underground along the length of this partially paved, but mostly dirt, road, crews will use the road to access several manholes in order to pull the telecom through existing conduit.

As the telecom line daylights at the end of the North American Cutoff at Box Canyon road, it travels near Box Canyon Road over some steep areas of CSS and coast live oak to Santa Susana Pass Road. Here the line will be affixed to existing poles that are within the road's disturbed margins. Adjacent to the road, vegetation consists primarily of CSS, with occasional occurrences of coast live oak.

Section CH-2

This approximately 6.1-mile long section of the telecom alignment begins where the Chatsworth Tap crosses the 118 Freeway, approximately ¼ mile west of Topanga Canyon Road, and extends northward into the Santa Susana Mountains. After crossing the freeway at approximately 1,300 feet above MSL, the line travels over a hill with sparse residential development, descends into Brown's Canyon, and generally follows the canyon to Oat Mountain, the highest elevation of the segment at approximately 3,700 feet above MSL. From there, the line trends east along the ridge before entering into the SoCalGas Aliso Canyon Storage Facility. As noted in the Biological Resources Survey Plan prepared by AECOM in April 2011, virtually the entire length of the CH-2 segment occurs in designated coastal California gnatcatcher (*Poliioptila californica californica*) (CAGN) designated critical habitat.

Vegetation along the lower portions of the CH-2 segment consists primarily of CSS and coast live oak woodland, particularly along the bottom of Brown's Canyon where this woodland may also be punctuated by other trees such as California walnut (*Juglans californica*) and willow (*Salix* spp.). As the line ascends to higher elevations up to Oat Mountain, the vegetation transitions to nearly monotypic non-native grassland interspersed with coast live oak woodlands in ravines or depressions.

Section CH-3

This approximately 1-mile section begins near the point at which the telecom alignment enters the northeast corner of the SoCalGas Aliso Canyon Facility and extends southeast along the ridge to the point at which the line sharply turns south to descend into the proposed Natural Substation. Elevation ranges from 3,050 to 3,450 feet above MSL.

The majority of this section of the alignment passes almost exclusively through non-native grassland. Oak woodlands are prominent on the upper ridge's north-facing slope.

Section CH-4

This approximately 1-mile section within the SoCalGas Aliso Canyon Facility runs from the ridgeline south into the location of the proposed Natural Substation. Elevation ranges from 3,050 to 2,400 feet above MSL.

As with section CH-3, vegetation along this segment of the telecom alignment consists primarily of non-native grassland with sparse CSS or chamise chaparral components that characterize much of the SoCalGas facility.

2.2 San Fernando Tap

The entire length of the San Fernando Tap runs through the developed San Fernando Valley. The topography is relatively flat, ranging in elevation from approximately 975 to 1,300 feet above MSL. Vegetation consists of urban landscaping and an occasional ruderal area populated by non-native grasses and forbs.

2.3 Vegetation Descriptions

Coastal Sage Scrub

The CSS vegetation type observed along the telecom route is comprised of low, mostly soft-woody, drought deciduous shrubs between 1.5 feet to 6 feet tall and occurs generally in dry areas with shallow soil. Cover can vary in density, but understory vegetation is usually sparse and may consist primarily of non-native annual grasses. Along the telecom route, the quality of this type of habitat varies, from undisturbed areas vegetated with dense stands of native shrubs to areas disturbed by fire and/or human interaction in which non-native grasses and forbs dominate, sparsely interspersed with sage scrub species.

California sagebrush (*Artemisia californica*) is universal as a co-dominant species in this habitat with other prominent components varying based on location. These co-dominants include purple sage (*Salvia leucophylla*), black sage (*S. mellifera*), white sage (*S. apiana*), bush monkey flower (*Mimulus aurantiacus*), bush mallow (*Malacothamnus fasciculatus*), and California buckwheat (*Eriogonum fasciculatum*). Sub dominants also varied based on each location and included thick-leaved yerba

santa (*Eriodictyon crassifolium*), chaparral yucca (*Yucca whipplei*), deerweed (*Lotus scoparius*), and larger shrubs/trees such as toyon (*Heteromeles arbutifolia*), sugarbush (*Rhus ovata*), and blue elderberry (*Sambucus nigra* ssp. *caerulea*). While these stands are generally dense with little herbaceous understory, annuals such as blue dicks (*Dichelostemma capitatum*), California poppy (*Eschscholzia californica*), morning glory (*Calystegia* sp.), wild cucumber (*Marah macrocarpus*), gallium (*Gallium* spp.) and Indian paintbrush (*Castilleja* sp.) may be found in openings in the scrub and at the margins of disturbed areas.

Chamise Chaparral

This plant community, which occurs within the SoCalGas Aliso Canyon Facility, is dominated by chamise (*Adenostoma fasciculatum*) and is interspersed with other scrub species such as California sagebrush, thick-leaved yerba santa, and black sage, and larger, sometimes arborescent shrubs including toyon, sugarbush, ceanothus (*Ceanothus* sp.) and blue elderberry. This vegetation type is typically found in dry, exposed areas and is adapted to a regular fire regime by stump sprouting. This community is usually very dense with little understory or litter below the shrub layer, which ranges from 3 feet to 10 feet in height.

Oak Woodlands

The most prominent woodland community along the telecom alignment is coast live oak woodland, which typically occurs on north facing slopes and shaded ravines. This habitat is dominated by coast live oak (*Quercus agrifolia*) varying in height from 30 feet to 75 feet, though valley oak (*Quercus lobata*) and California walnut may also be present as a smaller component. A developed shrub layer is generally lacking in this plant community except at its margins where it may intergrade with scrub habitat. In these areas, shrubs may consist of toyon, sugarbush, and blue elderberry. An herbaceous understory is likewise usually sparse due to the heavy accumulation of leaf litter from the dense oak overstory, but is generally limited to non-native grasses such as ripgut brome (*Bromus diandrus*) and wild oat (*Avena fatua*).

Some areas of oak woodlands, particularly along the north-facing slopes of the upper ridgeline above the SoCalGas Aliso Canyon Facility, are composed almost exclusively of valley oaks. Non-native grasses are the primary understory species at these upper elevations.

Non-native Grassland/Disturbed

This habitat type features prominently in the upper elevations of segment CH-2 and throughout CH-3 and CH-4. Areas occupied by this plant community have generally been previously disturbed, allowing opportunistic non-native grasses such as bromes, oats, and fescue (*Vulpia microstachys*) to dominate. In some areas, perennial natives including purple needle grass (*Nassella pulchra*) and California aster (*Lessingia filaginifolia*) may be present to some degree. Also prominent are several native annual 'wildflowers', including phacelia (*Phacelia* spp.), lupine (*Lupinus* spp.), and California poppy.

Developed/Urban Landscaping/Roads

Portions of the CH-1 and CH-2 segments and the entire length of the SF Tap occur in urban areas, better described not as a plant community, but as land use. These areas include urban development such as housing and commercial areas and associated non-native landscaped areas, and paved roads.

2.4 Drainages

One area along the telecom line in which a jurisdictional drainage may occur is Brown's Canyon in segment CH-2. Vegetation in this canyon is indicative of an elevated moisture regime and, pending a jurisdictional determination, this area may be under the purview of the U.S. Army Corps of Engineers and/or the California Department of Fish and Game (CDFG).

It is important to note, however, that most, if not all, of the work required to install this telecom line will be conducted on existing poles, which are generally located outside of drainage areas. AECOM does not anticipate impacts to this or any other drainage during this phase of this project. Once final plans are in place to implement the work, this drainage should be re-evaluated to determine exactly what, if any, impacts will occur due to the project.

2.5 Stick Nests

No large stick nests were observed in any of the tower or pole structures along the telecom routes. However, these areas should be re-evaluated prior to construction to verify conditions at that time.

3.0 Impact Assessment

Biological conditions observed along the Chatsworth and San Fernando Taps are similar to those documented in the areas which were surveyed during the initial biological assessment of the ACTR Project, which included portions of the SoCalGas Aliso Canyon facility and the length of the 66 kV sub-transmission line travelling from the Newhall Substation in Santa Clarita to the Central Compressor Station within the SoCalGas facility.

Throughout these areas of proposed work on the sub-transmission alignment, AECOM conducted a habitat assessment, and subsequently focused surveys for rare plants and CAGN as well as a general characterization of potentially affected drainages and oak trees, the results of which have been described in the Proponent's Environmental Assessment and subsequent reports submitted to the CPUC. The surveys did not indicate the presence of CAGN, but did identify two sensitive plant species, slender mariposa lily (*Calochortus clavatus* var. *gracilis*) and Plummer's mariposa lily (*Calochortus plummerai*), both listed as 1B.2 in the CNPS Inventory of Rare and Endangered Plants, and some areas in which oak trees and drainages may experience impacts from project activities. Because the ACTR Project along the section of the sub-transmission alignment involves the replacement of buildings and infrastructure in areas that have been previously disturbed during the original development of these facilities, and that the focused surveys did not result in the identification of any threatened or endangered species, our analysis concludes that with the implementation of the Applicant Proposed Measures (APMs) described in the Biological Resources section of the Proponent's Environmental Assessment (PEA) and summarized below, impacts to these resources are expected to be less than significant.

Similarly, based on the habitat types and other physical conditions observed during our assessment of the telecom survey area, we anticipate that a comparable level of biological resources will occur in this area of the project. Moreover, because the work along the telecom alignment will be considerably less invasive overall than the work proposed along the sub-transmission areas mentioned above, impacts to biological resources are expected to be negligible, particularly with the implementation of the APMs described below.

Beyond the minor ground disturbance resulting from crews accessing each pole location to affix the telecom line, the only other anticipated impacts to biological resources would potentially be to oak trees, which occur in several locations throughout the length of the Chatsworth Tap. Impacts to oak trees would likely be limited to the minor trimming of branches and no significant impacts to individual oak trees or to oak woodlands are anticipated.

4.0 Avoidance and Minimization Measures

The PEA proposed to implement several APMs to assure that impacts to biological resources would be less than significant. Since the nature of the work required to install the telecom line along the Chatsworth and San Fernando Taps will result in only minimal impacts to biological resources, these impacts will also be less than significant. Nevertheless, the following APMs will be implemented during telecom installation activities.

APM-BR-01: Pre-construction surveys will be conducted for nesting birds and other sensitive biological resources (including special-status wildlife and special-status plant species);

APM-BR-02: Protocol-level, focused pre-construction surveys for gnatcatcher where suitable habitat exists;

APM-BR-03: Exclusionary fencing will be installed around work and laydown/staging areas, where necessary, to prevent inadvertent encroachment into the native habitat adjacent to the required areas of impact. Protective construction fencing and silt fencing will be erected surrounding the work area where it abuts native habitat prior to the start of construction and/or demolition;

APM-BR-04: Biological monitoring will be conducted during construction work in areas in close proximity to native habitat to assure project compliance with all APMs and Mitigation Measures;

APM-BR-05: Prior to construction, a field survey shall be conducted by a qualified biologist to detect if active nests of bird species protected by the MBTA and/or the California Fish and Game Code are present in the construction zone or within 100 feet (300 feet for raptors) of the construction zone. If detected, a minimum 50-foot exclusionary buffer will be established by temporary flagging or fencing (this distance may be greater depending on the bird species and construction activity, as determined by the biologist) between the nest site and construction activities. Clearing and construction within the fenced area shall be postponed or halted (except for vehicle traffic on existing roads), at the discretion of the biological monitor, until the nest is vacated and juveniles have fledged. The biologist shall serve as a construction monitor during those periods when construction activities occur near active nest areas to ensure that no inadvertent impacts on these nests will occur;

APM-BR-06: Special-status wildlife in harm's way may be relocated to native habitat near the work area but outside the impact zone in order to avoid injury or mortality;

APM-BR-07: Pursuant to city of Santa Clarita/Los Angeles County ordinance guidelines, loss or impacts to all native oak trees via trimming or ground disturbance within the dripline shall be avoided using specific measures and/or agency guidance; if impacts cannot be avoided, SoCalGas must submit an Oak Tree Permit Application (including an Oak Tree Report) to Los Angeles County and obtain an Oak Tree Permit prior to construction; and

APM-BR-08: If substantial impacts to areas in which Plummer's mariposa lily are located are unavoidable, the Proponent shall consult the CDFG to determine appropriate mitigation procedures and monitoring requirements. However, it is important to note that under Section 1913(B) of the California Fish and Game Code, actions undertaken by an agency or publicly

or privately owned public utility to fulfill its obligation to provide service to the public are exempted from take prohibitions under the Native Plant Protection Act.

5.0 Conclusions

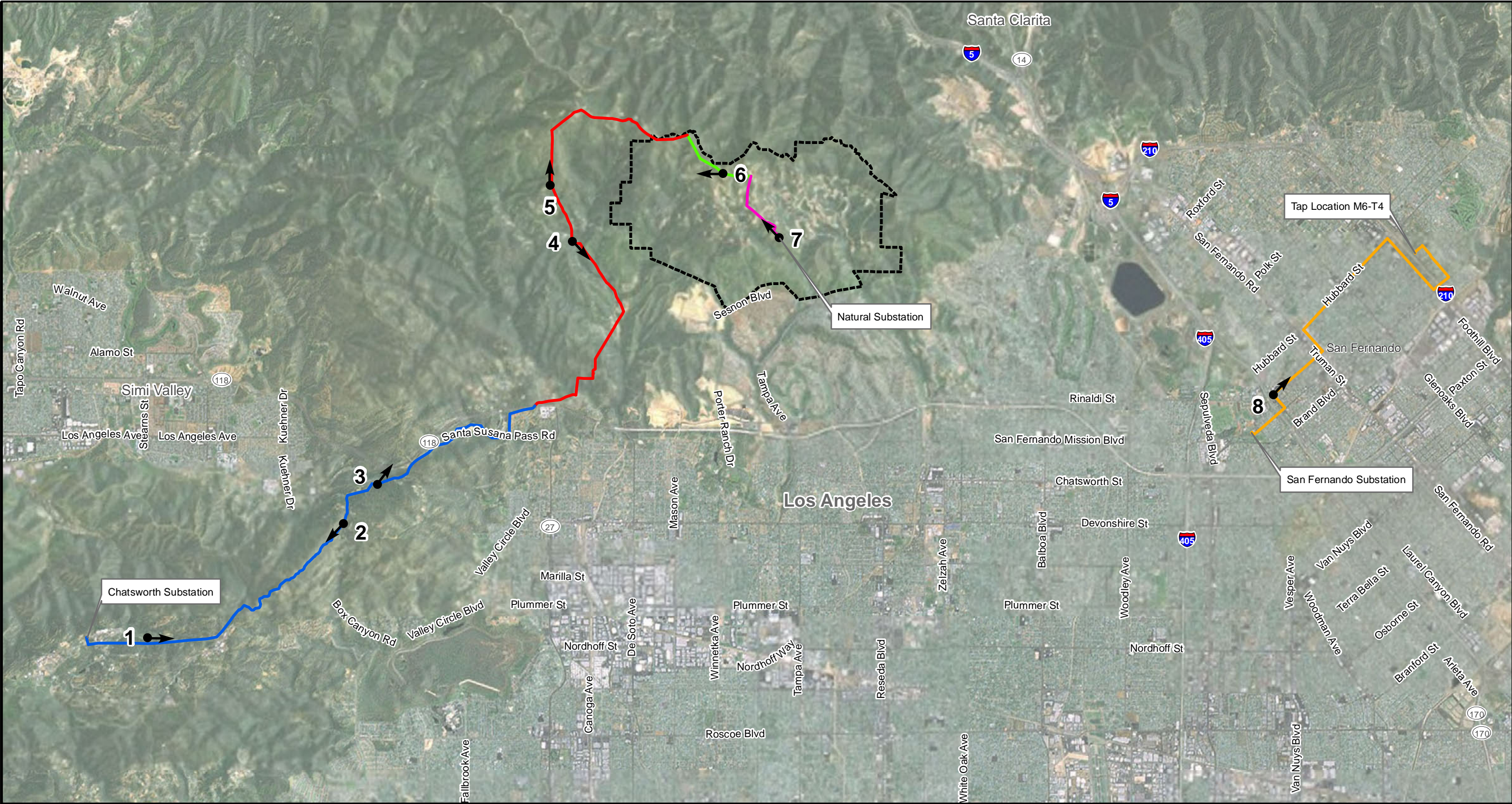
As described above, impacts to biological resources resulting from the installation of the telecom line are expected to be minimal. Based on the anticipated level of disturbance, the APMs proposed above will be sufficient to ensure the protection of the biological resources along the alignment and no additional APMs or mitigation measures are recommended.

Appendix A

Figures

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XX-X



- Photo Locations
- CH-1
- CH-2
- CH-3
- CH-4
- SF
- Storage Field Boundary

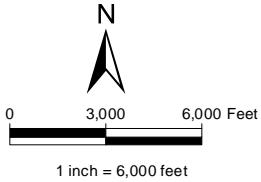


Figure 1: Photo Locations

Date	05-11	Aliso Canyon Turbine Replacement Project: Telecom Line Habitat Assessment	Figure 1
Project No.	60137730		

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Appendix B

Photographic Log

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PHOTOGRAPHIC LOG

Client Name:
SCG

Site Location:
Chatsworth/Porter Ranch/San Fernando, California

Project No.
60137730

Photo No.
1

Date:
5/5/11

**Direction Photo
Taken: East**
East

Description:
Portion of CH-1 inside
Boeing Santa Susana
facility.
Note – Coastal Sage
Scrub (CSS) habitat and
coast live oak trees.



Photo No.
2



Date:
5/5/11

**Direction Photo
Taken:**
Southwest



Description:
Portion of CH-1 near
northern end of the
North American Cutoff.
Note – steep
topography and CSS
habitat.





PHOTOGRAPHIC LOG

Client Name: SCG		Site Location: Chatsworth/Porter Ranch/San Fernando, California		Project No. 60137730	
Photo No. 3	Date: 5/5/11				
Direction Photo Taken: Northeast					
Description: Portion of CH-1 along Santa Susana Pass Road. Note – CSS habitat and coast live oak trees.					
Photo No. 4	Date: 5/5/11				
Direction Photo Taken: Southeast					
Description: From Brown's Canyon Road looking down Brown's Canyon at a portion of CH-2. Note – CSS habitat on hillsides and coast live oak woodland along bottom of canyon.					

PHOTOGRAPHIC LOG

Client Name: SCG		Site Location: Chatsworth/Porter Ranch/San Fernando, California	Project No. 60137730
Photo No. <div style="text-align: center; font-size: 1.2em; font-weight: bold;">5</div>	Date: <div style="text-align: center;">5/5/11</div>		
Direction Photo Taken: North			
Description: From Oat Mountain Highway looking at CH-2 as it ascends hillside to Oat Mountain. Note – Non-native Annual Grassland (NNAG) habitat with coast live oak trees in lower areas.			
Photo No. <div style="text-align: center; font-size: 1.2em; font-weight: bold;">6</div>	Date: <div style="text-align: center;">4/15/11</div>		
Direction Photo Taken: West			
Description: Portion of CH-3 inside SCG Aliso Canyon Storage Facility – looking along ridgeline towards Oat Mountain. Note – monotypic NNAG habitat.			

PHOTOGRAPHIC LOG

Client Name: SCG		Site Location: Chatsworth/Porter Ranch/San Fernando, California	Project No. 60137730
Photo No. 7	Date: 4/15/11		
Direction Photo Taken: Northwest			
Description: From proposed Natural Substation site looking at portion of CH-4 that will enter the substation. Note – NNAG habitat.			
Photo No. 8	Date: 4/28/11		
Direction Photo Taken: Northeast			
Description: Portion of SF line along Workman Street in San Fernando Valley. Note – urban setting.			

Appendix E8
Habitat Assessment of the Northern PPL Route

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Memorandum

To	Southern California Gas Company	Page 1
From	Rocky Brown	
Subject	Aliso Canyon Gas Storage Field PPL Access Road – Results of Biological Survey	
CC	Greg Wolffe (AECOM)	
Date	August 18, 2011	

This memo describes the methodology and results of the habitat-level biological survey conducted of the proposed northern route of the Power Plant Line (PPL) and access road on the Southern California Gas (SoCalGas) Aliso Canyon Gas Storage Field property (facility). The PPL would be installed to provide distribution-level power from the proposed Natural Substation to the new Central Compressor Station (CCS) as part of the Aliso Canyon Turbine Replacement (ACTR) Project.

The PPL will consist of approximately 1,200 feet of new distribution-level service from the substation eastward to the CCS and will travel along a line offset from the existing overhead 66kV sub-transmission line. To achieve the offset distance the PPL may travel to the north (northern route) or south (southern route) of the existing sub-transmission line. To ensure that the northern route is fully evaluated for biological resources, a supplemental habitat assessment for this segment, including the access road to install the central pole for the PPL, was conducted.

While both the northern and southern potential PPL access routes were surveyed, this memo only describes the biological resources associated with the pole location and access road associated with the northern route since the southern route had been surveyed previously as part of the initial project design.

This memo includes a brief description of the methodology, the biological resources identified, and conclusions of the assessment. This survey was conducted by an AECOM biologist that also conducted or assisted in the ACTR project initial habitat assessment, the early and late bloom rare plant species surveys, the California gnatcatcher survey, and the access road tree and drainage surveys.

Methodology

Prior to conducting the survey, AECOM reviewed the California Natural Diversity Database and California Native Plant Society online database to identify special status plant and animal species that have been previously recorded in the vicinity of the proposed project.

AECOM surveyed the southern and northern potential routes for the PPL access road on hillsides to the west of the existing office location at the facility. The survey was conducted between 2:30 and 4:30 PM on July 28, 2011. The weather during the survey was clear, with a light breeze and temperatures of approximately 89 degrees Fahrenheit. The survey consisted of walking the proposed access road routes and making observations of biological resources, including mapping vegetation communities and noting all animal species encountered. Vegetation communities were mapped and photographed within 25 meters of the northern access road.

Biological Resources Surveyed

The survey assessed vegetation communities, sensitive plants, wildlife, and trees, consistent with biological resource surveys conducted for other components of the ACTR project. Assessment of these resources for the northern PPL route is described below

Vegetation Communities

The plant communities described below were generally classified using the nomenclature described in Robert F. Holland's *Preliminary Descriptions of the Terrestrial Natural Communities of California*. However, due to the geographic and climatic transitional nature of the region, habitats in the area can likewise be transitional with many subtle intergradations between plant communities. Where applicable, the communities observed in the field were named to their closest counterpart in the Holland classification system and, where intergrades of habitat types were encountered, the nomenclature was modified to accurately describe the field observations.

Five types of plant communities were observed along the northern access road. These include Non-Native Annual Grassland, Venturan Coastal Sage Scrub, Coast Live Oak Woodland, Southern Cottonwood-Willow/Coast Live Oak Riparian Forest, and Ruderal. Mapping of these communities is presented in Figure 1A of this memo. A Photographic Log of the survey is presented at the end of this memo following the vegetation communities figure. The following describes these plant communities as they were surveyed in the area of the northern PPL route:

Non-native Annual Grassland – The dominant species in this community is wild oat (*Avena fatua*), with sub dominants being comprised of doveweed (*Croton setigerus*), ripgut brome (*Bromus diandrus*), tocalote (*Centaurea melitensis*), Italian thistle (*Carduus pycnocephalus*), and black mustard (*Brassica nigra*). On the hillsides surveyed this plant community intergrades with the other plant communities. As a result, the grassland, where it abuts sage scrub habitat, was interspersed with sage scrub species such as sawtooth goldenbush (*Hazardia squarrosa*), cudweed (*Pseudognaphalium* sp.), and giant wild rye (*Leymus condensatus*). This community also forms the understory of tree-dominated habitats.

Venturan Coastal Sage Scrub – In the vicinity of the proposed northern access road, the dominant species in this community is California sagebrush (*Artemisia californica*). Co-dominants include deerweed (*Lotus scoparius*) and white sage (*salvia apiana*). Other species present in varying densities are bush monkey flower (*Mimulus aurantiacus*), sawtooth goldenbush, black sage (*Salvia mellifera*), California buckwheat (*Eriogonum fasciculatum*), and sugar bush (*Rhus ovata*).

Coast Live Oak Woodland – In the region surrounding the facility, this community typically occurs on north facing slopes and in shaded ravines. In the vicinity of the proposed north access road, this habitat is dominated by coast live oak trees (*Quercus agrifolia*) varying in height from 30 feet to 50 feet, though California walnut (*Juglans californica*) and blue elderberry (*Sambucus nigra* ssp. *caerulea*) are also present, interspersed throughout the oaks. A developed shrub layer is generally lacking in this plant community except at its margins where it intergrades with scrub habitat. The herbaceous understory is likewise sparse due to the heavy accumulation of leaf litter from the dense oak overstory, but is generally limited to non-native grasses such as wild oat and ripgut brome. This plant community is considered sensitive by the California Department of Fish and Game (CDFG).

Southern Cottonwood-Willow/Coast Live Oak Riparian Forest – This habitat, which occurs in the Limekiln Canyon Wash to the east of the proposed northern access road, is actually a mixture of two Holland plant communities, Southern Cottonwood – Willow Riparian Forest and Southern Coast Live Oak Riparian Forest. The vegetation in this riparian area is dominated by coast live oaks along the upper banks and tree willows interspersed with Fremont cottonwood (*Populus fremontii*) lower in the drainage. Historically, areas dominated by these communities are within perennial drainages with frequent flooding. However, as with most streams throughout southern California, improvements to the Aliso Canyon Wash have drastically reduced this flooding regime and changed the natural succession of this habitat. Due to this type of physical alteration and the pressures of development throughout southern California, both the Southern Cottonwood – Willow Riparian Forest and Southern Coast Live Oak Riparian Forest plant communities are considered sensitive by the CDFG.

Ruderal – Vegetation within the disturbed lower portion of the proposed northern access road is comprised of non-native grasses and weedy herbaceous species. These include primarily wild oat and black mustard.

Sensitive Plants

Although a focused special status plant survey could not be conducted due to the seasonal timing of this survey (i.e., outside the blooming period for most sensitive plants that may occur in the vicinity of the project), the area was surveyed for evidence of their presence, such as dried flower stalks. During this survey, no such evidence was observed. It should be noted however that the Venturan Coastal Sage Scrub habitat in the vicinity of the proposed northern access road is similar to that in which two species of mariposa lily (*Calochortus* spp.), each California listed species, were observed elsewhere within the facility.

Wildlife

Wildlife recorded included side-blotched lizards (*Uta stansburiana*) and western fence lizards (*Sceloporous occidentalis*). I also observed coyote (*Canis latrans*) scat and numerous small burrows likely occupied by California ground squirrel (*Spermophilus beecheyi*) or other common small rodents. No sensitive wildlife was observed during the survey. It should be noted that overall faunal activity during the survey was minimal, most likely due to the time of day during which the survey was conducted (afternoon).

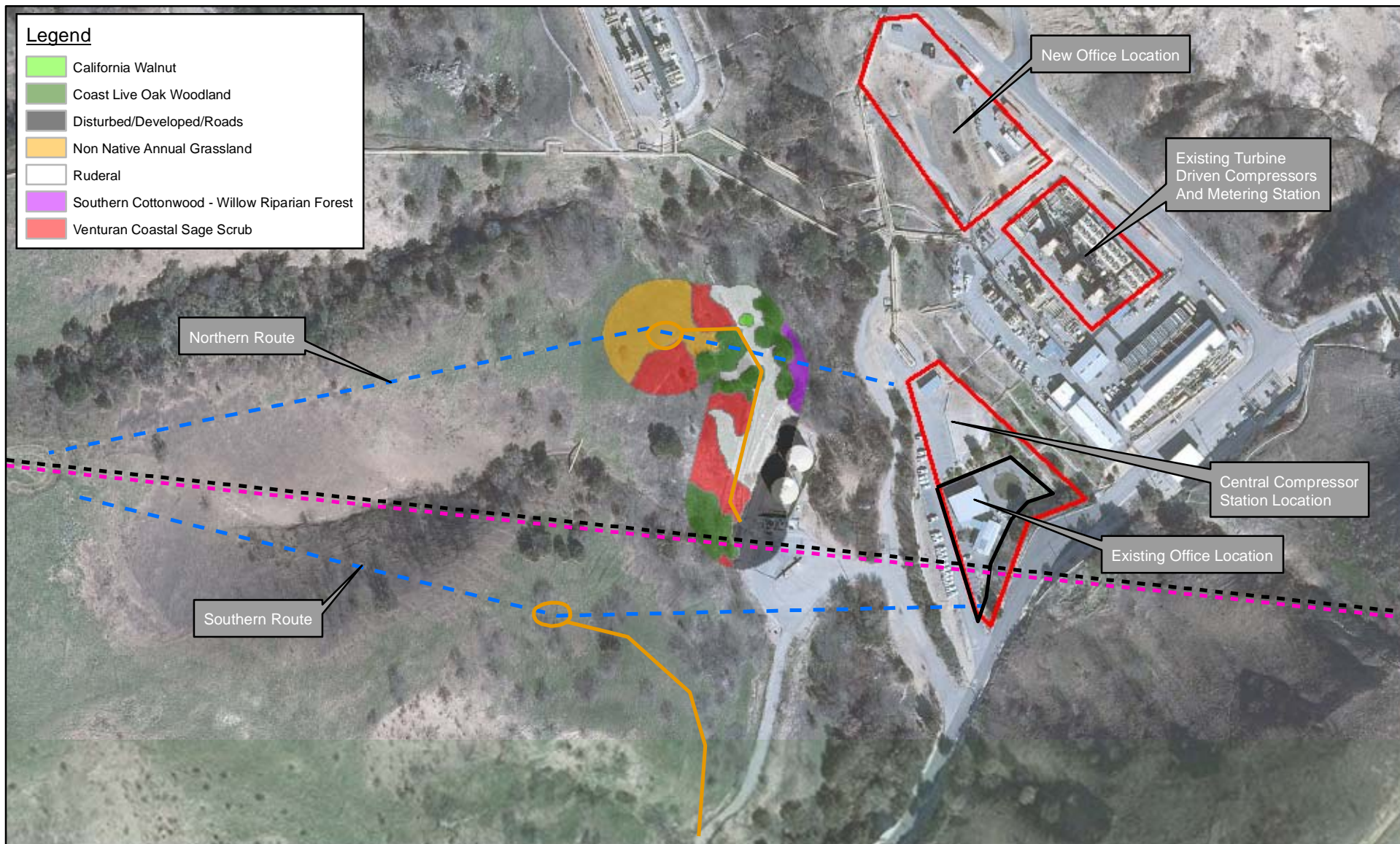
Trees

As depicted in Figure 1A and illustrated in the photographic log, the proposed northern access road is situated directly adjacent to a grove of coast live oak. While it appears that no trees will be required to be completely removed, one or more oak trees may be required to be trimmed upon construction of the road. This action will not significantly impact the coast live oak woodland vegetation community in the vicinity of the proposed road. Similar to measures adopted regarding trees surveyed along the 66 kV portion of the ACTR project, any impact to these trees would be managed through the issuance of and compliance with applicable tree ordinance permits.

Conclusion

The proposed northern access road route travels through primarily non-native and disturbed habitat, which is of minimal value to sensitive biological resources. The area along this route is directly

comparable to other areas on the Storage Field that have been surveyed previously; no new vegetation communities or other biological species were identified during this habitat assessment. While some minor trimming of at least one oak tree is likely to be required, construction of the access road along this route will not result in a significant impact to biological resources.



- Legend**
- Proposed SCE 66 kV Modification
 - Existing SCE 66 kV Alignment
 - Proposed Plant Power Line (PPL)
 - Access Roads

1 inch = 250 feet

0 250 500 Feet





**Figure 1A
Power Plant
Line Options**





AECOM

Project: 60137730
Date: August 2011



PHOTOGRAPHIC LOG

Client Name: Southern California Gas Company		Site Location: Aliso Canyon Gas Storage Facility	Project No. 60137730
Photo No. 1	Date: 7/28/11		
Direction Photo Taken: Looking west			
Description: Looking toward hillside on which proposed PPL and access road will be built.			
Photo No. 2	Date: 7/28/11		
Direction Photo Taken: Looking north			
Description: Beginning of proposed PPL access road. The overhead lines in the photo are part of the existing Storage Field 16kV loop.			

PHOTOGRAPHIC LOG

Client Name: Southern California Gas Company		Site Location: Aliso Canyon Gas Storage Facility	Project No. 60137730
Photo No. 3	Date: 7/28/11		
Direction Photo Taken: Looking south			
Description: Lower portion of proposed PPL access road.			
Photo No. 4	Date: 7/28/11	 <div data-bbox="831 1581 1109 1663">Location from which Photo 5 was taken.</div>	
Direction Photo Taken: Looking northwest			
Description: Lower portion of proposed PPL access road, looking toward grove of coast live oak next to which the road will pass.			

PHOTOGRAPHIC LOG

Client Name: Southern California Gas Company		Site Location: Aliso Canyon Gas Storage Facility	Project No. 60137730
Photo No. 5	Date: 7/28/11		
Direction Photo Taken: Looking northwest			
Description: Middle portion of proposed PPL access road. Photograph taken adjacent to coast live oak (left edge of frame) next to which road will pass.			
Photo No. 6	Date: 7/28/11		
Direction Photo Taken: Looking east			
Description: Upper portion of proposed PPL access road, looking downhill toward coast live oak grove next to which road will pass.			

PHOTOGRAPHIC LOG

Client Name:
Southern California Gas Company

Site Location:
Aliso Canyon Gas Storage Facility

Project No.
60137730

Photo No.
7

Date:
7/28/11

**Direction Photo
Taken:**
Looking west

Description:
Upper portion of proposed
PPL access road, looking
uphill toward proposed
tower location/road
turnaround.



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