

ATTACHMENT C: PHOTOGRAPHS OF IMPACTED WATER FEATURES

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Photograph 1:
Overview of ephemeral
drainage 7-39-S-5, facing
upstream/east.



Photograph 2:
Overview of ephemeral
drainage 7-39-S-5, facing
downstream/west.



Photograph 3:
Ephemeral drainage 7-39-S-5, facing upstream/east.



Photograph 4:
Ephemeral drainage 7-39-S-5, facing downstream/west.



Photograph 5:
Ephemeral drainage 11-94-S-5, facing downstream/west.



Photograph 6:
Ephemeral drainage 11-94-S-5, facing south.



Photograph 7:
Ephemeral drainage 11-138-S-100, western portion facing upstream/north.



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Photograph 10:
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Photograph 11:
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Photograph 12:
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facing downstream/west.



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portion of ephemeral
drainage 11-136-S-100,
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Photograph 31:
Intermittent drainage 7-
39-S-11 (Rio Hondo),
facing
downstream/southwest.

ATTACHMENT D: PROTOCOL SURVEYS FOR COASTAL CALIFORNIA GNATCATCHER



June 2, 2015

U.S. Fish and Wildlife Service
Attn: Stacey Love
Carlsbad Fish and Wildlife Office
2177 Salk Avenue, Suite 250
Carlsbad, California 92008

Subject: 45-day Report for Protocol Coastal California Gnatcatcher Surveys for the Proposed Southern California Edison Mesa 500 kilovolt Substation Project, Los Angeles County, California

Ms. Love:

This letter presents the 45-Day Report for U.S. Fish and Wildlife Service (USFWS) protocol breeding season surveys for the coastal California gnatcatcher (CAGN; *Polioptila californica californica*). Surveys were conducted for the proposed Southern California Edison (SCE) Mesa 500 kilovolt (kV) Substation Project (project) in Los Angeles County, California. Rocks Biological Consulting (RBC) performed the surveys described in this report under contract to Insignia Environmental.

The project is located primarily in the City of Monterey Park, with other project features within unincorporated areas of Los Angeles County and Montebello, Rosemead, South El Monte, Commerce, Bell Gardens, and Pasadena, California. The project is within the El Monte and Los Angeles U.S. Geological Survey (USGS) 7.5-minute series quadrangle maps (Figure 1). These surveys were performed in support of a Biological Assessment (BA) for a formal Section 7 consultation with the USFWS.

The 2015 CAGN survey area was determined by creating a 150-foot buffer around all project features using a Geographic Information System (GIS) and surveying all suitable CAGN habitat within the buffer. Suitable CAGN habitat observed within or immediately adjacent to the buffer area included moderate and high quality coastal sage scrub (CSS), disturbed/fragmented CSS, revegetated CSS, and ruderal, weedy areas in close proximity to CSS. The dominant species within suitable habitat included California sagebrush (*Artemisia californica*), coyote brush (*Baccharis pilularis*), California buckwheat (*Eriogonum fasciculatum*), black sage (*Salvia mellifera*), lemonadeberry (*Rhus integrifolia*), and laurel sumac (*Malosma laurina*).

Non-suitable habitats within the project area included developed areas, highly disturbed areas with low-growing annual vegetation, dirt roads, agricultural fields, and riparian habitat and ornamental vegetation that are not immediately adjacent to CSS.

Survey methodology followed the USFWS presence/absence survey protocol (1997) for non-NCCP areas, which requires six (6) protocol surveys be conducted during the CAGN breeding season (March 15 – June 30). Surveyors Lee Ripma (TE-221290-3.1) and Garrett Huffman (TE-20168A-0) conducted the surveys weekly across approximately 80 acres of suitable habitat at a rate of approximately 8 acres/hour. Taped vocalizations were used sparingly to elicit a CAGN response and were ceased upon hearing or observing a CAGN.

Please see Table 1 for survey dates, times, and conditions. The attached figures (1–3E) show the survey area, survey route, and location of observed CAGN. A list of the 56 bird species observed during the survey is included as Appendix A.

Table 1. Survey Conditions During California Gnatcatcher Surveys at the Proposed Southern California Edison Mesa 500 kilovolt Substation Project, Los Angeles County, California

CAGN Survey	Date	Surveyor	Time (Start-End)	Temp F (Start-End)	Cloud Cover (Start-End)	Wind Range in mph (Start-End)
#1	4/9/2015	Lee Ripma	0630-1155	52.7-78.7	20-0	0-1, 2-4
#1	4/10/2015	Lee Ripma	0640-1158	51.7-75.5	30-40	0-2, 1-3
#2	4/17/2015	Garrett Huffman	0600-1200	55-87	0-0	1-2, 1-3
#2	4/17/2015	Lee Ripma	0605-1105	54.8-72.4	0-0	1-3, 0-2
#3	4/23/2015	Garrett Huffman	0600-1200	57-73	70-60	0-2, 1-3
#3	4/24/2015	Lee Ripma	0550-1045	56.8-64.2	90-100	0-2, 1-3
#4	4/30/2015	Lee Ripma	0605-1145	57.8-95.5	5-30	0-2, 2-4
#4	5/1/2015	Lee Ripma	0610-1135	56.1-88.2	25-15	0-1, 2-4
#5	5/7/2015	Lee Ripma	0610-1150	60.5-71.3	95-90	0-1, 2-5
#5	5/8/2015	Lee Ripma	0615-1140	50.4-66.7	30-95	2-4, 0-2
#6	5/14/2015	Lee Ripma	0620-1155	59.6-71.2	60-100	0-1, 0-2
#6	5/15/2015	Lee Ripma	0610-1200	52.9-62.9	100-95	0-1, 2-4

Two pairs of CAGN were observed nesting within approximately 550 feet of each other at the Mesa Substation site (Figure 3A). During surveys 1–3, both pairs were observed in various stages of nest building, incubation, and/or caring for nestlings. During surveys 4–6, the two pairs were observed tending to their fledges. One pair had three fledges foraging with them and the other had two.

In addition CAGN were observed along the associated transmission, subtransmission, distribution, and telecommunications line areas (Figures 3B–3E). Four pairs of CAGN were consistently observed within the high quality CSS along the north side of Lincoln Avenue at the

base of the Montebello Hills oilfield (Figure 3C). The CSS in this area is USFWS-designated critical habitat for CAGN. These four CAGN pairs were observed on all six surveys in the same locations. Due to restricted access on private property, actual nests were not observed during surveys; however, all four CAGN pairs exhibited nesting behavior and three CAGN pairs were observed with fledges during later surveys. As such, three of these four pairs are mapped as CAGN nesting pairs with fledges and one is mapped as a nesting CAGN pair on Figure 3C.

In addition, one adult and one juvenile were observed foraging together south of N. Durfee Ave. during the final survey, but no nesting activity was observed during the first five surveys (Figure 3D). It is likely that these CAGN are primarily using the suitable habitat south of the survey area and occasionally forage in this area. This portion of the alignment is also within critical habitat for CAGN.

In summary, a total of six pairs of CAGN were observed nesting or exhibiting nesting behavior within the survey area during the 2015 breeding season surveys. One adult and one juvenile were also observed foraging within the survey area, but nesting behavior was not observed.

Please feel free to call me at (619) 508-3803 should you have any questions or concerns.

We certify that the information in this survey report and attached figures fully and accurately represent our work.

Sincerely,



Lee Ripma
TE-221290-3.1



Garrett Huffman
TE-20168A-0

Enclosures: Appendix A – Bird Species Observed
Figure 1 – USGS Quadrangle Map
Figure 2 – Coastal California Gnatcatcher Survey Area Overview
Figures 3A – 3E - Coastal California Gnatcatcher 2015 Survey Results

Appendix A. Bird Species Observed During Coastal California Gnatcatcher Protocol Surveys
at the Proposed Southern California Edison Mesa 500 kilovolt Substation Project, Los
Angeles County, California

Common Name	Scientific Name
Allen's hummingbird	<i>Selasphorus sasin</i>
American kestrel	<i>Falco sparverius</i>
Anna's hummingbird	<i>Calypte anna</i>
ash-throated flycatcher	<i>Myiarchus cinerascens</i>
Bewick's wren	<i>Thryomanes bewickii</i>
black phoebe	<i>Sayornis nigricans</i>
black-headed grosbeak	<i>Pheucticus melanocephalus</i>
blue grosbeak	<i>Passerina caerulea</i>
brown-headed cowbird*	<i>Molothrus ater</i>
bushtit	<i>Psaltirparus minimus</i>
cactus wren	<i>Campylorhynchus brunneicapilus</i>
coastal California gnatcatcher	<i>Poliophtila californica californica</i> (FT)
California quail	<i>Callipepla californica</i>
California thrasher	<i>Toxostoma redivivum</i>
California towhee	<i>Melozone crissalis</i>
Cassin's kingbird	<i>Tyrannus vociferans</i>
cedar waxwing	<i>Bombycilla cedrorum</i>
cliff swallow	<i>Petrochelidon pyrrhonota</i>
common raven	<i>Corvus corax</i>
common yellowthroat	<i>Geothlypis trichas</i>
Cooper's hawk	<i>Accipiter cooperii</i> (WL)
double-crested cormorant	<i>Phalacrocorax auritus</i>
European starling*	<i>Sturnus vulgaris</i>
great blue heron	<i>Ardea herodias</i>
great egret	<i>Ardea alba</i>
great-tailed grackle	<i>Quiscalus mexicanus</i>
hooded oriole	<i>Icterus cucullatus</i>
house finch	<i>Carpodacus mexicanus</i>
house wren	<i>Troglodytes aedon</i>
killdeer	<i>Charadrius vociferus</i>
Lazuli bunting	<i>Passerina amoena</i>
least Bell's vireo	<i>Vireo bellii pusillus</i> (FE, SE)
lesser goldfinch	<i>Spinus psaltria</i>
mallard	<i>Anas platyrhynchos</i>
mourning dove	<i>Zenaida macroura</i>
northern mockingbird	<i>Mimus polyglottos</i>
northern rough-winged swallow	<i>Stelgidopteryx serripennis</i>
Nuttall's woodpecker	<i>Picoides nuttallii</i>
orange-crowned warbler	<i>Oreothlypis celata</i>
pacific-slope flycatcher	<i>Empidonax difficilis</i>
phainopepla	<i>Phainopepla nitens</i>

red-tailed hawk	<i>Buteo jamaicensis</i>
rock pigeon*	<i>Columba livia</i>
rufous hummingbird	<i>Selasphorus rufus</i>
Say's phoebe	<i>Sayornis saya</i>
song sparrow	<i>Melospiza melodia</i>
spotted towhee	<i>Pipilo maculatus</i>
Swainson's thrush	<i>Catharus ustulatus</i>
warbling vireo	<i>Vireo gilvus</i>
western kingbird	<i>Tyrannus verticalis</i>
western scrub-jay	<i>Aphelocoma californica</i>
western tanager	<i>Piranga ludoviciana</i>
white-throated swift	<i>Aeronautes saxatalis</i>
Wilson's warbler	<i>Cardellina pusilla</i>
yellow warbler	<i>Setophaga petechia</i> (SSC)
yellow-breasted chat	<i>Icteria virens</i> (SSC)

FE: Listed as Endangered by USFWS

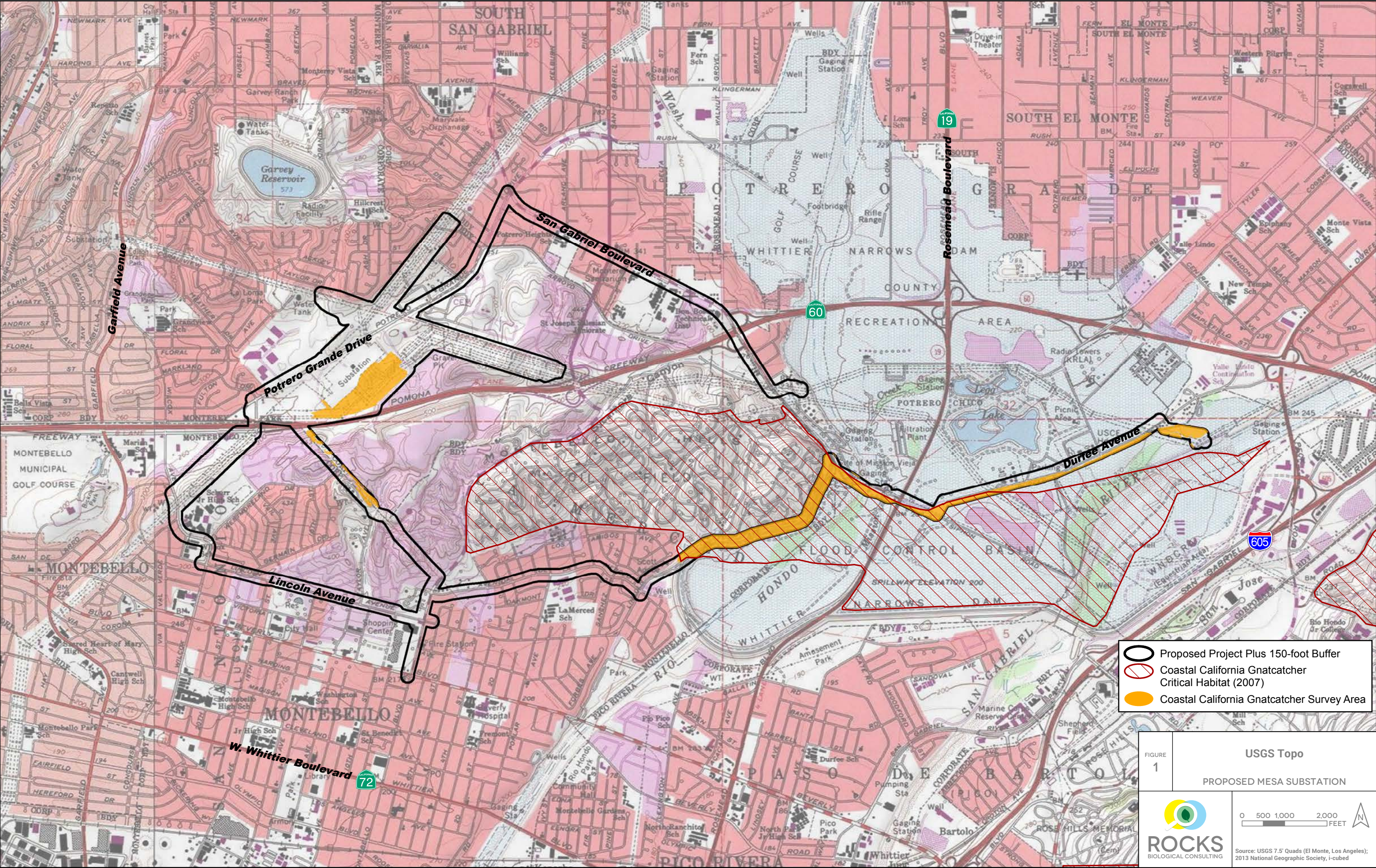
FT: Listed as Threatened by USFWS

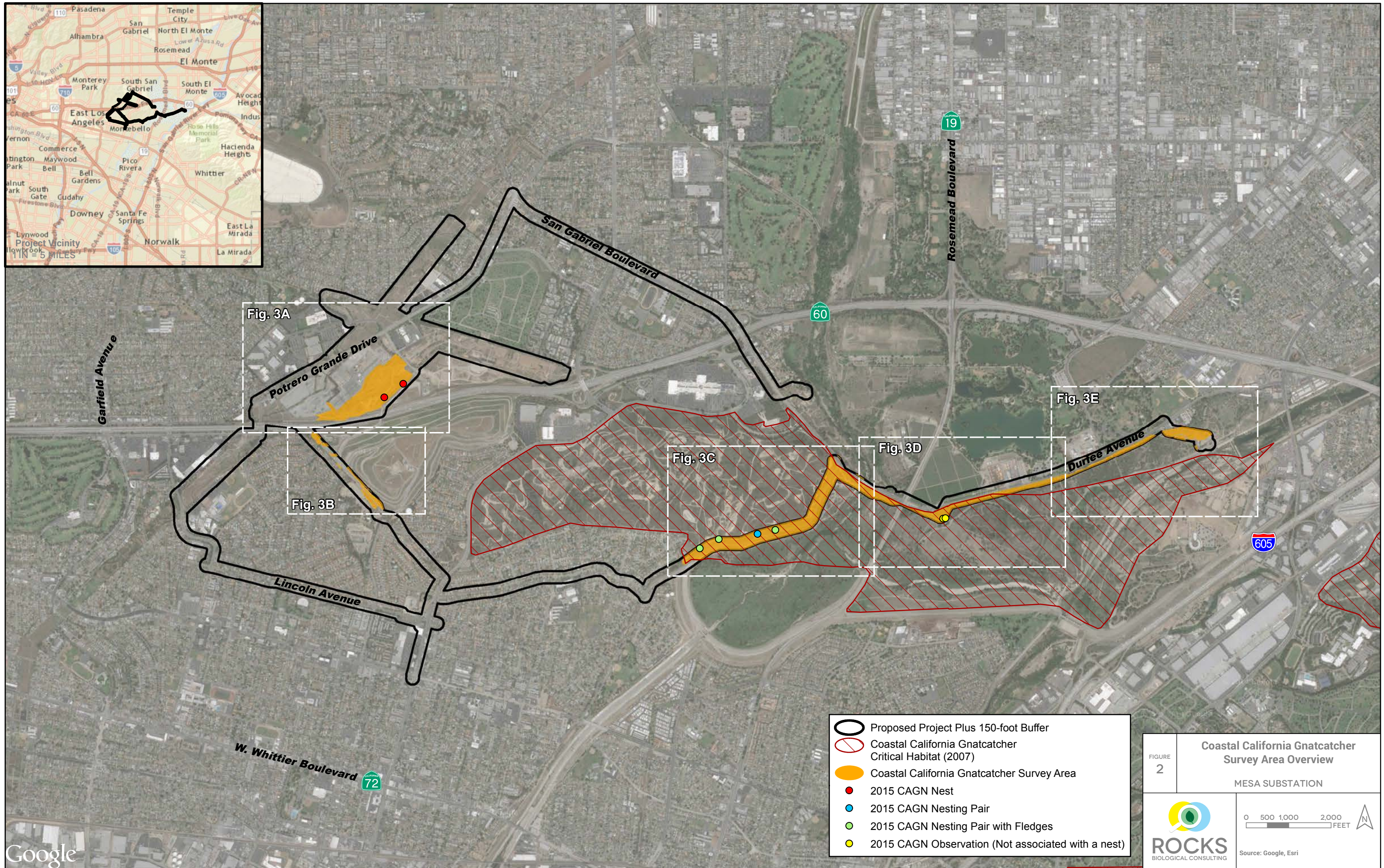
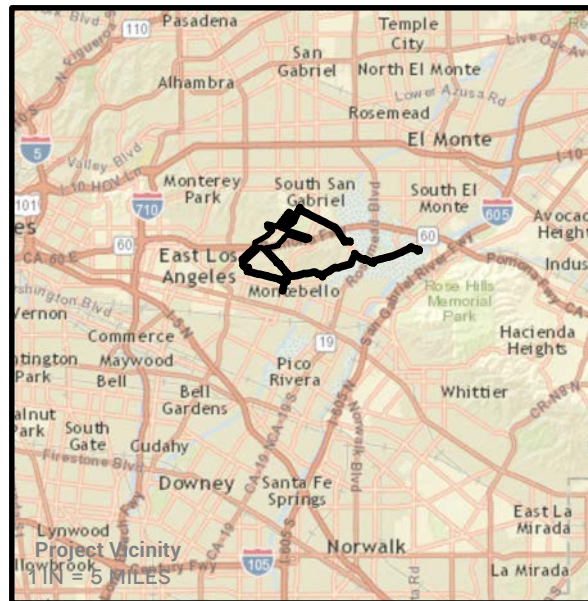
SE: Listed as Endangered by California Department of Fish and Wildlife

WL: California Department of Fish and Wildlife Watch List

SSC: California Department of Fish and Wildlife Species of Special Concern

*Introduced Species















-  Proposed Project Plus 150-foot Buffer
-  Coastal California Gnatcatcher Critical Habitat (2007)
-  Coastal California Gnatcatcher Survey Area
-  2015 CAGN Nest
-  2015 CAGN Nesting Pair
-  2015 CAGN Nesting Pair with Fledges
-  2015 CAGN Observation (Not associated with a nest)

FIGURE 2	Coastal California Gnatcatcher Survey Area Overview MESA SUBSTATION
 Source: Google, Esri	



- Proposed Project Plus 150-foot Buffer
- Coastal California Gnatcatcher Survey Area
- Survey Route
- 2015 CAGN Nest

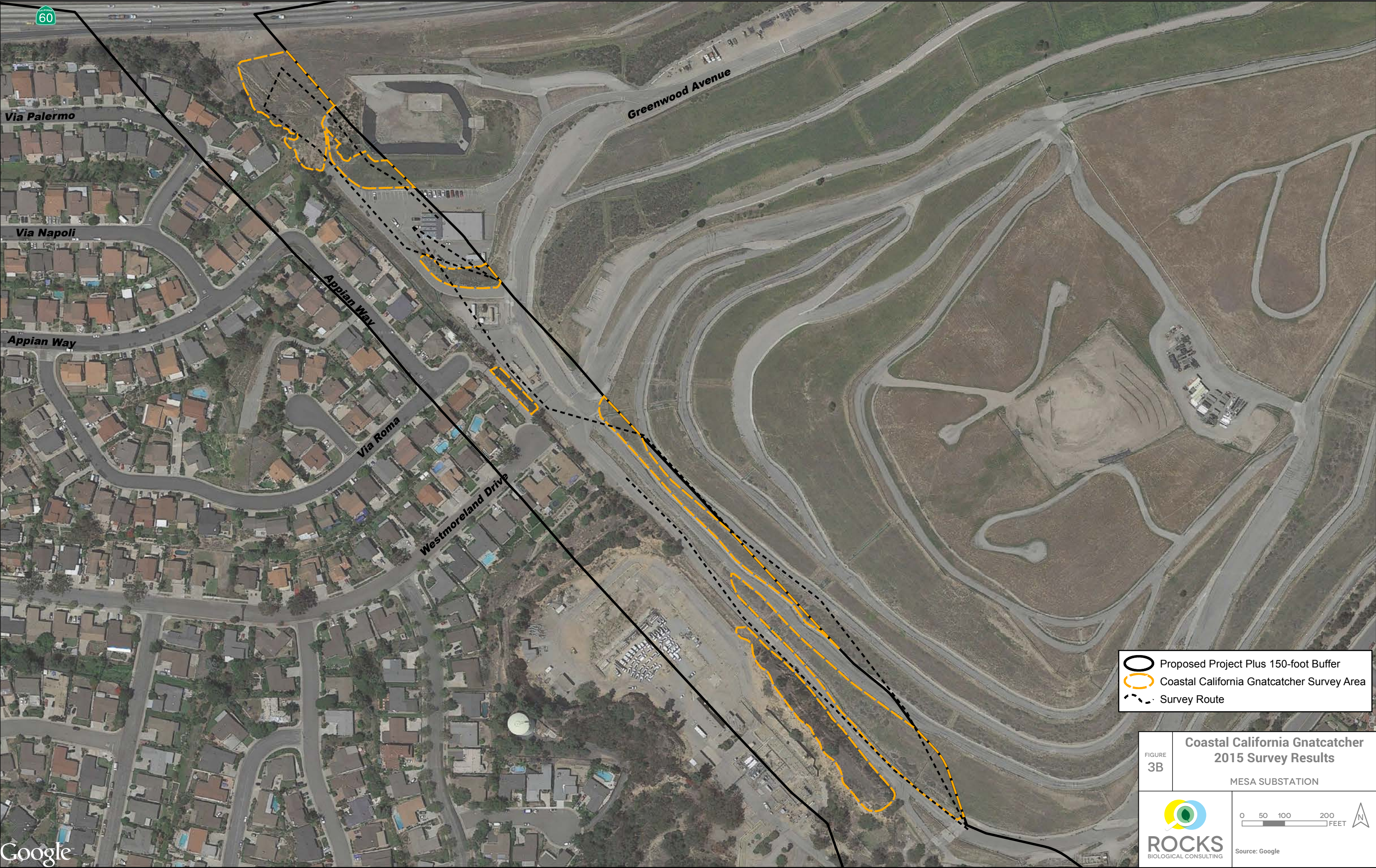
FIGURE
3A

**Coastal California Gnatcatcher
2015 Survey Results**

MESA SUBSTATION



Source: Google



- Proposed Project Plus 150-foot Buffer
- Coastal California Gnatcatcher Survey Area
- Survey Route

FIGURE
3B

**Coastal California Gnatcatcher
2015 Survey Results**

MESA SUBSTATION



0 50 100 200 FEET

Source: Google



- Proposed Project Plus 150-foot Buffer
- Coastal California Gnatcatcher Critical Habitat (2007)
- Coastal California Gnatcatcher Survey Area
- Survey Route
- 2015 CAGN Nesting Pair
- 2015 CAGN Nesting Pair with Fledges

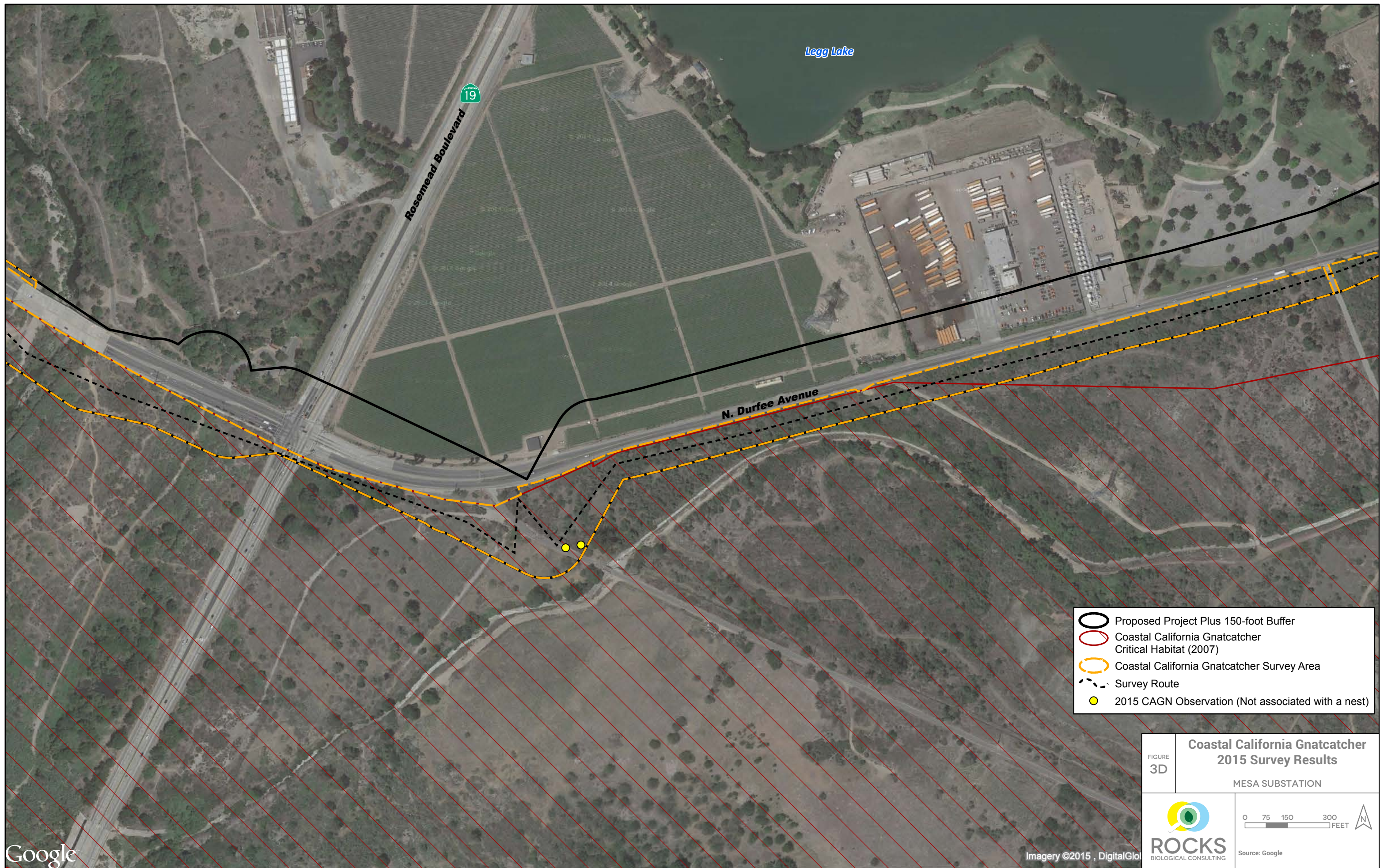
FIGURE
3C

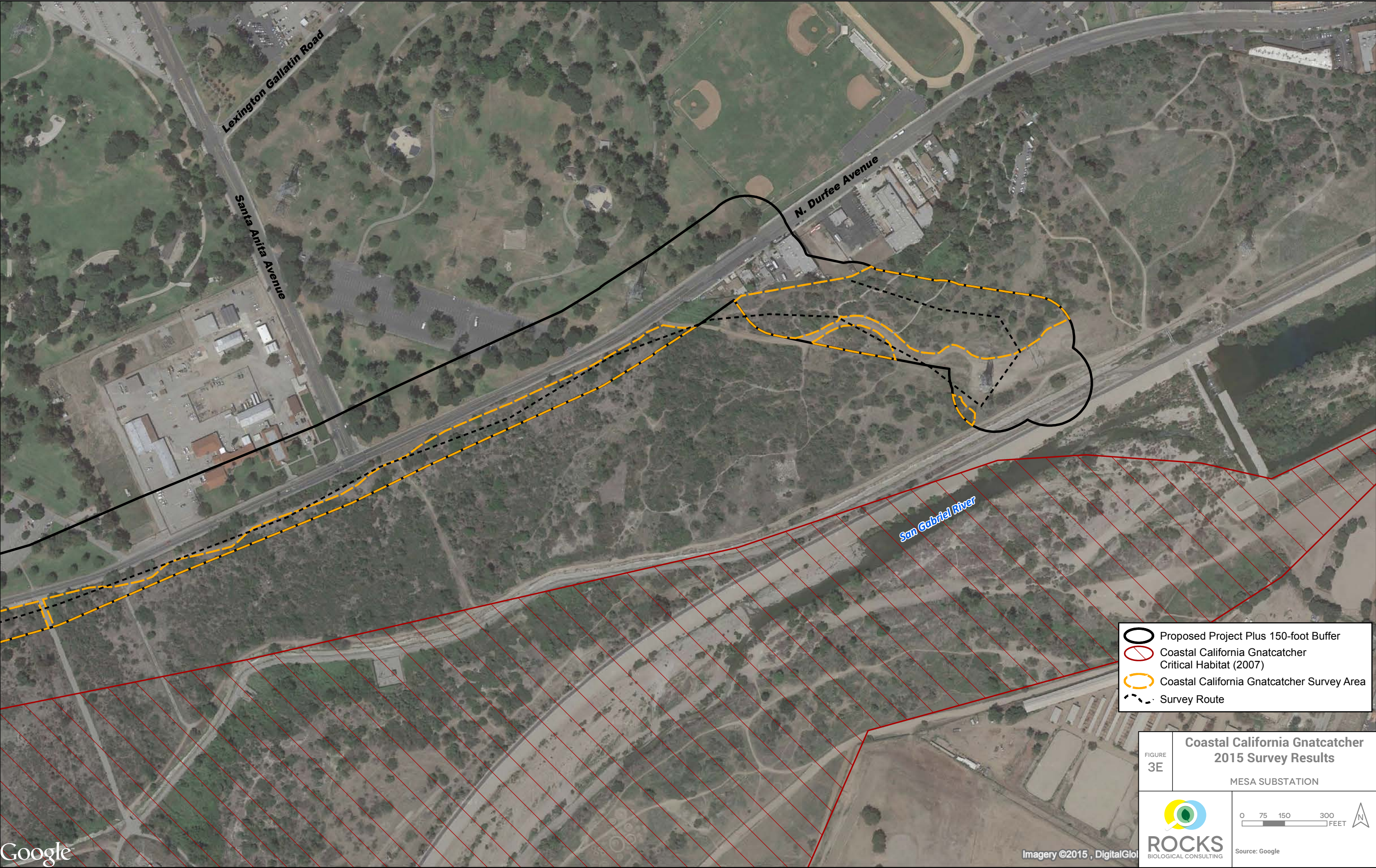
**Coastal California Gnatcatcher
2015 Survey Results**

MESA SUBSTATION



Source: Google





ATTACHMENT E: BIOLOGICAL ASSESSMENT

Biological Assessment

Mesa 500 kilovolt Substation Project

Los Angeles County, California

Prepared for
United States Army Corps of Engineers

Prepared by



258 High Street
Palo Alto, CA 94301

On behalf of



June 2015

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1.0 EXECUTIVE SUMMARY

1.1 Project Summary

Southern California Edison Company (SCE) proposes to construct the Mesa 500 kilovolt (kV) Substation Project (Project) to provide safe and reliable electrical service and to address reliability concerns resulting from the recent retirement of the San Onofre Nuclear Generation Station and from Once Through Cooling shutdowns expected by December 31, 2020. This Project will allow greater flexibility in the siting of future generation projects to meet local reliability needs in the Western Los Angeles Basin while reducing the total amount of new generation required by providing additional transmission import capability. Construction of the proposed Mesa Substation and demolition of the existing Mesa Substation will occur within the City of Monterey Park. Removal, relocation, modification, and/or construction of transmission, subtransmission, distribution, and telecommunications structures will occur within the cities of Monterey Park, Montebello, Rosemead, South El Monte, and Commerce, and in portions of unincorporated Los Angeles County. In addition, conversion of an existing street light source line from overhead to underground will take place within the City of Bell Gardens, and installation of a temporary 220 kV line loop-in at Goodrich Substation will occur within the City of Pasadena. Construction is anticipated to begin in June 2016 and end by December 31, 2020.

1.2 Purpose of the Biological Assessment

This biological assessment (BA) has been prepared in accordance with legal requirements set forth under Section 7 of the federal Endangered Species Act (ESA) (16 United States [U.S.] Code 1536[c]) to address the potential effects of the Project on federally listed threatened and endangered species, designated critical habitat, and proposed/candidate species for ESA protection. The U.S. Army Corps of Engineers (USACE) is the lead federal agency for the ESA Section 7 consultation with the U.S. Fish and Wildlife Service (USFWS). Specifically, this BA addresses the potential effects associated with the construction of the Project on the coastal California Gnatcatcher (*Poliophtila californica californica*), least Bell's Vireo (*Vireo bellii pusillus*), and Nevin's barberry (*Berberis nevinii*). The analysis has determined that the Project "may affect and is likely to adversely affect" the coastal California Gnatcatcher and will have no effect on least Bell's Vireo and Nevin's barberry (Table 1: *Determination of Effects*).

Least Bell's Vireo, a federally listed endangered species, is known to nest within riparian vegetation along the telecommunications route for the Project. Habitat exists near and adjacent to the telecommunications route in riparian areas associated with the Rio Hondo waterway. However, Project activity at this location will be limited to the existing roads, will not result in vegetation removal in riparian habitat, and will take place outside of the nesting season, which occurs from approximately March 1 through August 31. Therefore, work along the telecommunications route will have no effect on least Bell's Vireo.

On the Mesa Substation site, south of the existing Mesa Substation, ephemeral drainages support sparse mulefat scrub, but are primarily dominated by non-native and ornamental plant species. The plant communities associated with the ephemeral drainages south of Mesa

Substation are either non-native, non-habitat, or are characterized by riparian scrub that is too small, patchy, and/or marginal habitat for least Bell's Vireo. Further, least Bell's Vireo was not identified on the Mesa Substation site during four years of monitoring for the Tehachapi Renewable Transmission Project (TRTP) which is adjacent to and overlaps with portions of the Project. For these reasons, it has been determined that the Project will have "no effect" on least Bell's Vireo and this species is not discussed further.

Table 1: Determination of Effects

Species	Federal Listing Status	Determination	Details
Coastal California Gnatcatcher (<i>Polioptila californica californica</i>)	Threatened	May Affect, Likely to Adversely Affect	Direct impacts are expected to be minimized through the implementation of minimization and monitoring measures detailed in Section 3.2 Minimization and Monitoring Measures of this BA
Least Bell's Vireo (<i>Vireo bellii pusillus</i>)	Endangered	No Effect	No impacts
Nevin's barberry (<i>Berberis nevini</i>)	Endangered	No Effect	No impacts

Nevin's barberry, a federally listed endangered species, has been identified at the Whittier Narrows Natural Area within the Project area. One individual shrub of this species appears to have been planted as part of a demonstration garden. Work at this location will be limited to stringing overhead lines, which will not require any ground disturbance in the vicinity of this species' location. Work within the area of this shrub will be limited to walking new overhead cables between poles and climbing the poles to install the cables. This individual shrub will be flagged and avoided during work within this area. For these reasons, it has been determined that the Project will have "no effect" on Nevin's barberry and this species is not discussed further.

2.0 PROJECT DESCRIPTION

2.1 Regional Setting

The Project is located within the northwestern portion of the Peninsular Ranges geomorphic province in the foothills of the San Gabriel Mountains, near where the Peninsular and Transverse ranges meet. The Project spans the San Gabriel Valley, and the terrain surrounding the Project ranges from level ground to rolling foothills. The Project is situated at elevations ranging from 130 feet to 750 feet above mean sea level. The Project is located in the California Floristic Province, as described in *The Jepson Manual: Vascular Plants of California, Second Edition* (Baldwin et al. 2012). In addition, the Project is situated within the Los Angeles River watershed.

2.2 Project Area

The Project overlaps with portions of Segments 7, 8, 9, and 11 of the TRTP. SCE is currently constructing the TRTP to provide the electrical facilities necessary to interconnect new wind turbine-based electrical generation from the Tehachapi Wind Resource Area. The TRTP consists of a series of new and upgraded high-voltage transmission lines and substation facilities that will deliver electricity from renewable wind energy generators in eastern Kern County, California to the Los Angeles Basin. The TRTP consists of eight segments—Segment 4 through Segment 11. The Mesa Substation site includes the southern portion of Segment 11, the southwestern portion of Segment 7, and the northwestern portion of Segment 8. In addition, Segment 9 includes an upgrade to Mesa Substation. The former TRTP laydown area was located within the Mesa Substation site. Additional work areas within the Mesa Substation site, including the southwestern portion of the site, do not overlap with TRTP.

The Project is located within Los Angeles County, California in the cities of Monterey Park, Montebello, Rosemead, South El Monte, Commerce, Bell Gardens, and Pasadena, as well as in unincorporated portions of Los Angeles County (Figure 1: *Overview and Action Area*). The construction of Mesa Substation will occur in the City of Monterey Park. The City of Monterey Park is generally urban and developed with a few areas of open space or parkland. Land uses in the area surrounding the Project are industrial and commercial to the north, State Route (SR-) 60 to the south, the SCE Montebello Service Center to the east, the Resurrection Cemetery to the northeast, and low-density residential and commercial zones to the west.

A large retail shopping center—Monterey Park Market Place—is currently in the entitlement phase and is proposed to be located directly east of the Project site on the Operating Industries, Inc. (OII) Landfill. A portion of the SCE right-of-way (ROW) south of the existing Mesa Substation has a restricted use covenant with the California Department of Toxic Substances Control, enforced by the Environmental Protection Agency (EPA). As such, no grading or vegetation removal will occur for this Project within this restricted use area.

The proposed telecommunications route is located in the City of Montebello; however, portions of the telecommunications route are within the cities of Monterey Park, Rosemead, South El Monte, and unincorporated areas of Los Angeles County, including the community of South San Gabriel. The transmission, subtransmission, distribution, and telecommunications work will occur within existing SCE ROWs on existing overhead lines and conduits. The following three telecommunications routes will travel along existing lines and conduits:

- The first route will extend east of Mesa Substation along Potrero Grande Drive and then south along San Gabriel Boulevard before ending at an existing lattice steel tower (LST) adjacent to the Rio Hondo waterway.
- The second route—a cutoff route—will extend south of Mesa Substation along the edge of an existing landfill, through a residential area, and then south along North Montebello Boulevard where it will connect to the third route.

- The third route will extend west of Mesa Substation along Markland Drive and a wide ROW before turning south along Wilcox Avenue. It will then travel in an eastward direction along Lincoln Avenue, North Montebello Boulevard, and Avenida de la Merced, and finally southeast along San Gabriel Boulevard/Durfee Avenue where it will cross the Rio Hondo waterway and terminate at an LST near the channel that connects the San Gabriel River to the Rio Hondo waterway.

The area surrounding the telecommunications route in the cities of Monterey Park, Montebello, and Rosemead and in the community of South San Gabriel predominately consists of industrial, commercial, and residential uses, which includes the Don Bosco Technical Institute. An approximately 1.1-mile portion of the telecommunications route will be located within the Whittier Narrows Natural Area, which is located within unincorporated areas of Los Angeles County and an approximately 160-foot segment within the City of South El Monte. Whittier Narrows Natural Area includes property owned by the USACE and managed by the Los Angeles County Department of Parks and Recreation. The existing land in the vicinity of Whittier Narrows is characterized by native habitat and crosses the Whittier Narrows Recreation Area, the Whittier Narrows Water Reclamation Plant, the USACE Los Angeles District offices, commercial and residential uses, an agricultural field used for strawberries, and a trucking storage yard.

A staging area will be located within an existing ROW east of Mesa Substation, and will be bordered by a third-party landscape nursery, a cemetery, and residential uses to the northeast, and by a vacant former landfill and SR-60 to the south. A staging area will be located to the southwest of Mesa Substation within an existing ROW, and will be bordered by SR-60 to the north, Schurr High School to the south and east, a third-party landscape nursery to the southwest, and a shopping center to the west.

Within the City of Commerce, an existing transmission tower will be replaced within an SCE ROW approximately 2.1 miles north of Laguna Bell Substation and approximately 2.4 miles southwest of Mesa Substation. Within the City of Bell Gardens, a source line connecting three existing streetlights will be converted from an overhead to underground configuration approximately 0.2 mile south of Laguna Bell Substation. The installation of a temporary 220 kV line loop-in at Goodrich Substation will be located in the City of Pasadena. The proposed work within the cities of Commerce, Bell Gardens, and Pasadena consist of improvements within existing developed or ruderal lands and will not impact biological resources; therefore, Project elements within the cities of Commerce, Bell Gardens, and Pasadena are not further discussed in this BA.

2.3 Project Study Area

The Project study area to assess the biological resources for the Project is defined as the locations where work may be performed, as described in Section 2.2 Project Area, plus a 100-foot buffer. The study area represents the potential disturbance area associated with work at the substation and the associated transmission, subtransmission, distribution, and

telecommunications lines. The study area for the Project coincides with areas investigated in the course of preparing the Proponent's Environmental Assessment for the Project (SCE 2015).

2.4 Project Action Area

For the purpose of this BA, the Project action area is defined as all areas that may be affected, directly or indirectly, by the Project activities for which SCE is requesting take coverage. The action area includes the Project area (and the associated potential direct impacts to federally listed species), plus a 100-foot buffer (and the associated potential indirect impacts to those species) (Figure 1: *Overview and Action Area*). The "action area" is legally described in the implementing regulations of Section 7(a)(2) of the ESA as all areas affected directly or indirectly by the federal action and not merely the immediate area affected by the Project (50 Code of Federal Regulations § 402.02). The action area is the area of potential direct or indirect effects of the proposed action and any interrelated or interdependent human activities, and the direct and indirect effects of these activities include associated physical, chemical, and/or biological effects of considerable likelihood (USFWS and National Oceanic and Atmospheric Administration National Marine Fisheries Service [NOAA Fisheries] 1998).

Based on a review of the USFWS Conservation Plans and Agreements Database (USFWS 2013) and the California Department of Fish and Wildlife (CDFW) Natural Community Conservation Planning (NCCP) program (CDFW 2013), it was determined that the Project is not located in areas with Habitat Conservation Plan or NCCP coverage.

3.0 PROPOSED ACTION

Land disturbance will include all areas affected by construction of the Project. It is estimated that the total permanent land disturbance for the Project will be approximately 76.7 acres, and approximately 141.4 acres will be temporarily disturbed (Table 2: *Project Estimated Land Disturbance*). Approximately 20 acres of on-site vegetation will be removed during the clearing, grubbing, and grading for the construction of the proposed Mesa Substation, including trees along the frontage and within the fence line of the existing Mesa Substation site.

SCE anticipates that construction of the Project will take approximately 56 months. Construction of the Project is anticipated to begin in June 2016, and the substation will be completed and energized in December 2020. Construction will commence following approval from the California Public Utilities Commission (CPUC), final engineering, procurement activities, land rights acquisition, and receipt of all applicable permits.

Table 2: Project Estimated Land Disturbance

Project Feature	Approximate Area Disturbed During Construction (acres)	Approximate Area Temporarily Disturbed (acres)	Approximate Area Permanently Disturbed (acres)
Mesa Substation	82.9	13.5	69.4
Transmission Project Features	17.7	17.1	0.6
Subtransmission Project Features	13.9	13.9	<0.1
Telecommunications Project Features	0.8	0.8	<0.1
Distribution	0.5	0.5	<0.1
Staging Areas	11.3	11.3	0.0
Access Roads and/or Spur Roads	26.2	19.6	6.6
General Disturbance	64.7	64.7	0.0
Total Estimated for Project	218.0	141.4	76.7

Notes:

1. Disturbance calculations presented for the transmission, subtransmission, distribution, and telecommunications structures only account for areas outside of the approximately 69.4-acre Mesa Substation site. All disturbance within the Mesa Substation site has been attributed to this Project component. Due to the proximity of the Project components, overlapping portions of the work areas have been removed in the Approximate Area Disturbed During Construction column.
2. This table includes the removal of existing conductors, teardown of existing structures, and the removal of foundations to at least 2 feet below ground surface.
3. This table includes structure assembly and erection, and conductor and overhead optical ground wire installation. Permanently disturbed areas will measure approximately 0.25 acre for LSTs, and 0.06 acre for tubular steel poles (TSPs).
4. This table is based on the approximate length of roads in miles, with a drivable road width of approximately 14 feet and an approximately 2-foot berm on each side.
5. This table includes improving existing roads to current standards. It also assumes an existing improved road width of approximately 10 feet and an additional width of 4 feet, plus an approximately 2-foot berm on each side of the road.
6. The disturbed acreage calculations are estimates based on SCE's preferred area of use for the described Project feature, the width of the existing ROW, or the width of the proposed ROW.
7. Staging area acres and locations subject to change based on availability.

3.1 Project Components and Construction Description

Project Components

The main activity associated with the Project involves the construction of an approximately 69.4-acre, 500/220/66/16 kV substation (i.e., Mesa Substation) in place of the existing, approximately 21.6-acre, 220/66/16 kV Mesa Substation on approximately 86.2 acres of SCE fee-owned property. Construction of the proposed Mesa Substation will occur in phases, and a new 220/66/16 kV switchrack will be built next to the existing switchrack (to ensure that power is not lost from the existing substation), and the existing 220/66/16 kV structures will be demolished to accommodate the 500/220/66/16 kV switchracks.

SCE currently operates various 220 kV transmission lines, 66 kV subtransmission lines, 16 kV distribution lines, and telecommunications lines that connect to the existing Mesa Substation. As part of the Project, SCE will replace existing structures and lines, as necessary, to allow these existing circuits to connect to the proposed Mesa Substation configuration. In addition, the Project involves the loop-in of one existing 500 kV circuit and two existing 220 kV circuits, which currently pass by the existing Mesa Substation property on various 500 kV transmission lines and 220 kV transmission lines. The Project includes the following elements:

- **Mesa Substation:** Construct the 500/220/66/16 kV Mesa Substation. This substation will be constructed on the existing 220/66/16 kV Mesa Substation site. Mesa Substation will be a staffed, automated substation operating at 3,360 megavolt-ampere (MVA) at 500/220 kV, 840 MVA at 220/66 kV, and 56 MVA at 66/16 kV, with a potential capacity of 4,480 MVA at 500/220 kV, 1,120 MVA at 220/66 kV, and 112 MVA at 66/16 kV at ultimate build-out.
- **Transmission lines immediately adjacent to Mesa Substation:** Remove, relocate, and construct new transmission, subtransmission, and distribution structures within existing SCE transmission and substation fee-owned properties, ROWs, and franchise areas to accommodate the new Mesa Substation configuration.
- **Telecommunications routes:** Install new telecommunications lines and remove old telecommunications lines on existing subtransmission and distribution structures.
- **Staging areas:** Temporary areas in support of construction activities.
- **Access roads:** Potential improvements to existing access roads.

Mesa Substation

The areas directly adjacent to Mesa Substation—which include areas included in the description of the transmission lines—will be graded, and vegetation will be removed prior to construction.

Brief Description of Major Elements

Mesa Substation will be a 500/220/66/16 kV staffed, automated substation, operating at 3,360 MVA at 500/220 kV, 840 MVA at 220/66 kV, and 56 MVA at 66/16 kV. The substation capacity will have the potential to expand to 4,480 MVA at 500/220 kV, 1,120 MVA at 220/66 kV, and 112 MVA at 66/16 kV, as necessary. The proposed Mesa Substation will be constructed on approximately 69.4 acres within approximately 86.2 acres of SCE fee-owned property. The existing Mesa Substation occupies approximately 21.6 acres within the same approximately 69.4-acre area where the proposed Mesa Substation will be constructed. The dimensions of the substation parcel and the placement and orientation of the major components that will be included in the construction of Mesa Substation have been included in this BA (Figure 2: *Proposed Substation Layout*).

The monitoring equipment for the operation of Mesa Substation and portions of the SCE system will be located in a permanent Operations Building structure that will typically be a pre-engineered metal building shell. SCE anticipates the Operations Building will have prefinished metal panel exterior walls in earth-tone colors; green-tinted, glazed windows; and metal doors painted to match the metal siding of the adjacent exterior building. An exterior patio will be constructed at the northeast corner with translucent roof panels and perforated metal panel windscreens. The Operations Building will measure approximately 100 feet wide, 150 feet long, and 25 feet high. Several ancillary facilities will also be built, including two Mechanical and Electric Equipment Rooms and an approximately 35-foot-tall Test and Maintenance Building with restrooms.

In the event of a fire on the substation site, water provided by firefighting efforts will flow toward the detention pond in the southwest corner of the substation site (Figure 2: *Proposed Substation Layout*). The detention pond will be approximately one acre with a capacity of approximately 455,000 gallons, and will be constructed from mulch, gravel, soil, and geotextile membrane layers. In the event of a fire within the 500/220 kV transformer bank area, water provided by firefighting efforts will flow into a catch basin system installed around each transformer, which connects to a drainage pipe that flows into a concrete-lined detention basin measuring approximately 100 feet long, 50 feet wide, and 20 feet deep.

Primary access to the proposed Mesa Substation will be provided from Potrero Grande Drive via a new asphalt and/or concrete access driveway. Secondary access will be provided via a new access driveway off of East Markland Drive. The entrance at Potrero Grande Drive will be approximately 150 feet wide, and the entrance at East Markland Drive will be approximately 25 feet wide. Gates will be installed at both driveway entrances (Figure 2: *Proposed Substation Layout*).

Substation Grading and Drainage

Prior to construction, the Mesa Substation site will be cleared and graded to prepare the site for construction. Approximately 83.3 acres of the site will be graded. Approximately 20 acres of on-site vegetation will be removed during the clearing, grubbing, and grading for the

construction of the proposed Mesa Substation, including trees along the frontage and within the fence line of the existing Mesa Substation site. Mowers, excavators, front-end loaders, and/or D-9 bulldozers will be utilized to conduct the clearing and vegetation removal activities. The existing Mesa Substation property will be over-excavated, the on-site soil will be re-compacted to prepare the area for site development, and grading will ensue. Site grading will be accomplished primarily with bulldozers and backhoes, which will condition, cut and fill, and blend the native soil and imported material to the desired pad elevations. Construction of Mesa Substation will require 580,000 cubic yards (CY) of fill and 595,000 CY of cut.

SCE will prepare and implement a drainage plan to comply with the requirements of the jurisdictional agency, as well as to minimize surface water and erosion impacts. Existing drainage structures, facilities, and devices may need to be modified, removed, replaced, and/or relocated to meet post-development hydrology conditions. The substation pad area will be finish-graded from a high point elevation at the east end of the pad to the perimeter at a slope of approximately 1 percent. Drainage inlets and pipes will be constructed to collect and divert storm water runoff. The surrounding area will be re-graded, and the low points will be filled to provide positive surface drainage to the southwest. Currently, the property generally drains by sheet flow to ephemeral drainages at the southwest corner of the site. These ephemeral drainages connect to storm drains that connect to the Rio Hondo Channel, which flows into the Los Angeles River. A detention pond will be constructed in the southwest corner of the new substation site, and other site and source control best management practices (BMPs) will be included in the design to help mitigate surface runoff. Drainage systems will be constructed along the perimeter of the substation to direct interior surface runoff to the detention pond.

Transmission Lines Immediately Adjacent to Mesa Substation

Construction along the transmission lines will occur immediately adjacent to Mesa substation, primarily within areas characterized by ruderal vegetation (i.e., non-native grasses and mustard); however, coastal California Gnatcatcher has been observed near these Project elements south of the existing Mesa Substation. Vegetation around the transmission lines is expected to be removed prior to the work described in the following subsections.

500/220 kV Transmission Lines

The Project will remove an existing overhead portion of the Mira Loma-Vincent 500 kV Transmission Line and up to four LSTs immediately adjacent to Mesa Substation (Figure 3: *Project Overview (Transmission)*). Then the existing overhead, single-circuit Mira Loma-Vincent 500 kV Transmission Line will be looped into the new 500 kV switchrack, and the existing overhead transmission line alignment to Mesa Substation will be realigned with up to three new LSTs.

The Project will include removal of portions of the existing overhead 220 kV transmission lines, including up to 35 existing single- and double-circuit LSTs and approximately four TSPs immediately adjacent to Mesa Substation (Figure 2: *Proposed Substation Layout*). Following, the existing overhead Goodrich-Laguna Bell and Laguna Bell-Rio Hondo 220 kV transmission

lines will be looped into the new 220 kV switchrack by constructing new overhead getaways—supported by new double-circuit LST—from the existing transmission line alignment to Mesa Substation. In addition, eight existing overhead 220 kV transmission lines will be relocated to the new 220 kV switchrack by constructing new overhead getaways, which will be supported by approximately 25 new double-circuit LSTs and approximately six new single- or double-circuit TSPs. The one existing 220 kV LST will be replaced with a new 220 kV LST to increase the capacity rating of the existing Goodrich-Laguna Bell and Mesa-Redondo 220 kV transmission lines.

66 kV Subtransmission Lines

The Project will relocate 16 overhead 66 kV subtransmission circuits into the new 66 kV switchrack with new underground getaways (Figure 4: *Project Overview (Subtransmission)*). Relocating the existing 66 kV lines to Mesa Substation will involve the following:

- removal of existing overhead structures,
- installation of new underground line segments in new duct banks and vault structures, and
- the installation of new overhead line segments supported by single- and double-circuit TSPs and lightweight steel poles.

16 kV Distribution Lines

The Project will relocate five existing underground 16 kV distribution lines into the new 16 kV switchracks with new underground getaways (Figure 5: *Project Overview (Distribution)*). Within the proposed Mesa Substation, five initial 16 kV distribution circuits will be placed in an underground conduit system. At ultimate build-out, the proposed substation could accommodate up to twelve 16 kV distribution circuits. Additional electrical distribution circuits will be constructed from the proposed substation to areas of demand on an as-needed basis.

Access Roads and/or Spur Roads

The existing access roads occur immediately south of Mesa Substation, primarily within areas characterized by ruderal vegetation (i.e., non-native grasses and mustard); however, coastal California Gnatcatcher has been observed near this Project element. These roads are expected to be removed during initial site grading and replaced or modified at the end of construction.

Where required, a network of existing access roads could be improved and new roads will be constructed to current SCE road specifications to support the construction of the Project. Approximately 5.6 miles of existing dirt access roads on SCE property and existing ROWs will be used to access the Project work areas. Typical construction activities associated with rehabilitation of existing unpaved access roads include vegetation clearing, blade-grading, grubbing, mowing, and re-compacting to remove potholes, ruts, and other surface irregularities to provide a surface that is capable of supporting heavy construction equipment. Existing

unpaved roads may also require additional upgrades, such as protection (e.g., soil cover and steel plates) for existing underground utilities.

Helicopter Access

Helicopters will be used to support construction activities. Specifically, SCE currently anticipates helicopters will be utilized during conductor-stringing activities for the 500 kV and 220 kV transmission lines. SCE will consider the Institute of Electrical and Electronics Engineers Standards 524-2003, Guide to the Installation of Overhead Transmission Line Conductors, for the construction of the Project. Helicopters will be based at an existing aviation facility and will fly to the Project sites from that location. For the Project, helicopters may use the potential staging yard locations as needed and will most likely be based out of the El Monte and Chino airports, where refueling will occur.

Helicopter operations and support areas typically include helicopter staging and material yards, storage and maintenance sites, and ground locations in close proximity to conductor pulling, tensioning, and splice sites, and/or within previously disturbed areas near construction sites. In addition, helicopters must be able to land within SCE ROWs, which could include landing on access or spur roads. At night or during off-days, helicopters and their associated support vehicles and equipment will be based at a local airport for safety and security concerns.

Telecommunications Route

There is no vegetation clearing associated with the telecommunications route. A majority of the telecommunications route will occur along roadways and/or sidewalks on existing poles; however, there is native vegetation where the telecommunications route crosses the Montebello Hills and Whittier Narrows Natural Area. Portions of these areas are also classified as critical habitat for coastal California Gnatcatcher (Figure 6: *Coastal California Gnatcatcher Habitat and Designated Critical Habitat*). Generally, work within coastal California Gnatcatcher critical habitat consists of a worker walking between poles with a rope that will be used to pull the cable. Pull/tension locations along the telecommunications route are located in developed areas, outside of habitat for coastal California Gnatcatcher. In the event that a pole cannot be reached by a truck from an existing paved road, the worker will climb the pole to attach the new cable to the pole. As such, there will be no impacts to vegetation in coastal California Gnatcatcher critical habitat. Further, work will occur during the non-breeding season in order to avoid impacts to least Bell's Vireo. The following work description applies only to activities within native vegetation.

Telecommunications

Telecommunications infrastructure, which includes direct current power, LightWave, data, and channel equipment, will be added to existing overhead and underground structures. New impacts will occur at the end of the route where the telecommunications infrastructure is expected to be connected and spliced to the existing telecommunications route on LSTs. The new impacts are not within coastal California Gnatcatcher habitat, but are located within

disturbed areas around the LSTs where cable will be placed underground; however, the cable may connect overhead, thereby eliminating any ground disturbance. The telecommunications line will be installed on existing wood poles, lightweight steel poles, and LSTs. These structures will support 0.5-inch-diameter fiber optic cable. The lowest cable will be 20 to 30 feet above ground. The average span length between overhead structures will be 150 to 200 feet.

Staging Areas

Staging areas occur in ROWs adjacent to Mesa Substation and within areas characterized by ruderal vegetation that are not habitat for coastal California Gnatcatcher. Vegetation around the staging areas is expected to be removed prior to the start of construction.

Staging Areas Description

Construction of the Project will require the establishment of temporary staging yards (Figure 7: *Conductor Installation and Removal Work Areas*). Two types of staging yards will be used during construction—substation construction staging yards and transmission, subtransmission, distribution, and/or telecommunications construction staging yards. Staging yards will be used as a reporting location for workers, vehicle and equipment parking, and material storage. The yards may have construction trailers for supervisory and clerical personnel to serve as office and meeting locations. Staging yards may be lit for security purposes. Normal maintenance and refueling of construction equipment will also be conducted at these yards. SCE anticipates using one or more of the possible locations. Typically, the preferred acreage for each yard will be 5 to 25 acres in size, depending on land availability and intended use. Preparation of the staging yards will include temporary perimeter fencing and—depending on existing ground conditions at the site—clearing, grubbing, and/or minor grading may be required to provide a plane and dense surface for the application of gravel or crushed rock in some locations. Land disturbed at the staging yards will either be returned to pre-construction, weedy conditions or left without revegetating.

Materials commonly stored at substation construction staging yards will include, but will not be limited to:

- electrical equipment (e.g., circuit breakers, disconnect switches, lightning arresters, transformers, and vacuum switches)
- steel beams
- rebar
- foundation cages
- conduit
- insulators
- conductor and cable reels
- pull boxes
- line hardware

Materials and equipment commonly stored at the transmission, subtransmission, distribution, and/or telecommunications construction staging yards will include, but will not be limited to:

- construction trailers
- construction equipment
- portable sanitation facilities
- steel bundles
- steel/wood poles
- conductor reels
- overhead ground wire or overhead optical ground wire reels
- hardware
- insulators
- cross arms
- signage
- consumables (e.g., fuel and filler compound)
- waste materials for salvaging, recycling, or disposal
- BMP materials (e.g., straw wattles, gravel, and silt fences)

3.2 Minimization and Monitoring Measures

The following subsections describe the minimization and monitoring measures proposed by SCE to avoid and minimize the potential adverse effects to biological resources resulting from construction of the Project. The following general measures and measures developed for coastal California Gnatcatcher will be implemented during construction and are intended to avoid or minimize take.

General Measure

General Measure-01: Pre-construction Surveys. At least 60 days prior to the initiation of ground-disturbing activities, SCE will designate a field contact representative(s) who will be responsible for overseeing compliance with the measures outlined in the USFWS's biological opinion for the Project.

Mitigation Measures

MM-01: Revegetation Plan. To the extent feasible, SCE will minimize impacts and permanent loss to riparian habitat, native trees, and other vegetation that is regulated by federal, state, or local agencies, and/or that provides suitable habitat for special-status species. Impacts will be minimized at construction sites by flagging native vegetation to be avoided. If SCE is unable to avoid impacts to protected vegetation, a Habitat Compensation and Revegetation Plan (HCRP) will be prepared in coordination with the appropriate agencies for areas of native habitat that are temporarily and/or permanently impacted during construction. The HCRP will describe, at a minimum, which vegetation restoration method (e.g., natural revegetation, planting, or reseeding with native seed stock in compliance with the Project's Storm Water Pollution

Prevention Plan) will be implemented in the Project area. The HCRP will also include the species or habitats that could be impacted, the replacement or revegetation ratios (as appropriate), and the revegetation methods and techniques

MM-02: Biological Monitoring. To the extent feasible, biological monitors will monitor construction activities in areas with special-status species, native vegetation, wildlife habitat, or unique resources to ensure that such resources are avoided.

MM-03: Coastal California Gnatcatcher Protection. A USFWS-approved biologist will conduct pre-construction surveys for coastal California Gnatcatcher no more than seven days prior to the start of ground-disturbing activities, if this work will commence between March 1 and August 30. Surveys for coastal California Gnatcatcher will be conducted in suitable nesting habitat within 100 feet of the Project area. Construction activities in occupied coastal California Gnatcatcher habitat will be monitored by a full-time USFWS-approved avian biologist. If a breeding territory or a nest with eggs or chicks are found, an exclusion buffer will be established around the nest. A standard buffer will be established for Project activities until an USFWS-approved avian biologist can determine a reduced buffer distance, based on proposed construction activities, or whether the young have left the nest. Temporary and permanent impacts to coastal California Gnatcatcher and their habitat will be mitigated as required by the USFWS.

MM-04: Nesting Birds. SCE will conduct pre-construction clearance surveys no more than seven days prior to construction to determine the location of nesting birds and territories during the nesting bird season. An avian biologist will establish a buffer area around active nests and will monitor the effects of construction activities to prevent failure of the active nest. The buffer will be established based on construction activities, potential noise disturbance levels, and the behavior of the species. Construction activities that have the potential to affect active nests will be monitored until the adjacent construction activities are complete or until the nest is no longer active.

Coastal California Gnatcatcher Mitigation Measures

MM-CAGN-01: Pre-construction Sweeps. In addition to conducting protocol-level surveys for coastal California Gnatcatcher (in accordance with MM-03) and nesting bird surveys (in accordance with MM-04), SCE will conduct pre-construction clearance surveys for coastal California Gnatcatcher within seven days prior to initiation of ground-disturbing activities during the breeding season (February 1 and August 30). The surveys are intended to detect coastal California Gnatcatcher that may take residence after the protocol-level surveys have been completed and/or where habitat is not previously determined to be occupied by coastal California Gnatcatcher. Surveys will be conducted by an Avian Biologist approved by SCE and USFWS. If nesting behavior is observed, a California Gnatcatcher Specialist will monitor the species and install a buffer around any active nests, as needed.

MM-CAGN-02: Vegetation Removal. SCE will monitor vegetation clearing in coastal California Gnatcatcher habitat. Monitoring will be conducted by a biological monitor, which is a defined

as a wildlife biologist who has been approved by SCE to conduct surveys and monitoring for wildlife species. Vegetation removal will occur only after the California Gnatcatcher Specialist has confirmed that there are no active nests, the fledglings are no longer being fed by their parents, and/or the species has moved out of the work areas.

MM-CAGN-03: Coastal California Gnatcatcher Protection (Construction). A biological monitor will be present to ensure compliance with nest buffers during construction. Construction can occur within the buffers after the California Gnatcatcher Specialist confirms there are no active nests and/or the fledglings are no longer being fed by their parents. Construction monitoring for coastal California Gnatcatcher may be suspended if the California Gnatcatcher Specialist has determined that the species and their territories no longer overlap the Project.

MM-CAGN-04: Compensatory Mitigation. Permanent and temporary impacts to occupied coastal California Gnatcatcher breeding habitat will be mitigated at an off-site location, as agreed upon by the USFWS.

Additional Protection for Special-Status Wildlife Species

In addition to the APMs described previously, SCE will implement the following additional practices to minimize impacts to special-status species:

- **Worker Environmental Awareness Program Training:** Prior to construction, a qualified biologist or other qualified resource specialist will develop an environmental training for all Project personnel. The training will cover all pertinent Project APMs, permit conditions, and any other required environmental compliance measures. In addition, the environmental training will familiarize all Project personnel with special-status species that may occur within the construction areas. All Project personnel will attend the training prior to starting work on the Project. Upon completion of the training, each attendee will sign a form stating that he/she participated in the training and understood the material presented.

3.3 Monitoring and Reporting Plan

To mitigate impacts to species addressed in this BA, SCE will conduct biological monitoring of construction activities in the Project action area, including Mesa Substation; associated transmission, subtransmission, distribution, and telecommunications lines; and any area subject to Project disturbance. In addition to performing the duties detailed in Section 3.2 Minimization and Monitoring Measures, biological monitors will look for wildlife species addressed by this BA that may be located within or immediately adjacent to the construction areas. If coastal California Gnatcatcher is found, the biological monitor will stop work if necessary to prevent imminent harm to the animals and will report the occurrence, at minimum, to the SCE Biologist, Biology Project Manager, and California Gnatcatcher Specialist, who is an USFWS-approved biologist. The SCE Biologist, the Lead Biologist, and California Gnatcatcher Specialist will be responsible for implementing the appropriate minimization and monitoring measures. Monitoring notes and observations will be recorded daily.

During the construction of the Project, an annual report will be prepared, describing monitoring efforts and summarizing observations and actions taken. The SCE Biologist will coordinate with the contracted Biology Project Manager and the California Gnatcatcher Specialist to provide an annual written report to the USFWS detailing completed and ongoing construction-related compliance activities; any non-compliance issues pertaining to the coastal California Gnatcatcher; and any incidental observations of healthy, injured, or dead individuals of this species. SCE will notify the USFWS if any additional species listed under the ESA are observed during construction of the Project. SCE will prepare and provide the annual report by December 31 of each year of construction for the Project. The annual report will document compliance with the minimization and monitoring measures. Specifically, the annual report will describe the activities that were not in compliance with the minimization and monitoring measures and the corrective measures that were implemented to restore compliance.

3.4 Habitat Mitigation and Conservation

Coastal California Gnatcatcher

Coastal California Gnatcatcher at the Project site are nesting south of the existing Mesa Substation, primarily within a restored slope with coastal sage scrub, also referred to as “occupied breeding habitat” (Figure 8: *Coastal California Gnatcatcher Nest Locations*). Areas adjacent to the coastal sage scrub are within the territories for breeding coastal California Gnatcatcher but are being primarily used for foraging; however, because of the limited amount of coastal sage scrub on and adjacent to the Project site, historic breeding has occurred in areas that are considered atypical habitat and will be referred to as “occupied unsuitable habitat.”

Although permanent impacts to the coastal sage scrub are minimal, there will be a temporal loss of occupied breeding habitat in coastal sage scrub for an excess of five years, which could affect the viability of the breeding individuals. Furthermore, a majority of the coastal sage scrub on areas adjacent to the Project, which includes the restricted use area and the Oil Landfill, is expected to be converted into a shopping center within five years.

SCE will consider both the permanent and temporary impacts to coastal sage scrub as a permanent effect and will mitigate off site at a two-to-one ratio. Occupied breeding habitat that is to be permanently and temporarily impacted will be mitigated off site by purchasing credits of coastal sage scrub at Soquel Canyon, an approved mitigation bank held and managed by Land Veritas, or a comparable option. Once construction is complete, the occupied breeding habitat will be revegetated with native vegetation but not restored to coastal sage scrub, given that the Monterey Park Market Place development is expected to result in the long-term loss of viability of the species on site. The adjacent occupied unsuitable habitat will be revegetated to conditions similar to the current vegetation at a one-to-one ratio upon completion of construction. As stipulated under MM-01, SCE will prepare an HRCF to guide the implementation of revegetation for temporary impacts to occupied unsuitable habitat. Permanent impacts within occupied unsuitable habitat will not be mitigated given that this is not habitat for coastal California Gnatcatcher and, as further described in Section 4.1 Coastal

California Gnatcatcher, surveys from 2011-2015 have indicated that this species has not nested successfully in the atypical habitat where permanent impacts would occur.

Finally, there will be no impacts to coastal California Gnatcatcher habitat within critical habitat. However, if any temporary impacts were to occur unexpectedly to coastal California Gnatcatcher habitat along the telecommunications routes, then the HCRP will include guidelines and specifications to revegetate such habitat.

4.0 SPECIES AND HABITAT DESCRIPTION

4.1 Coastal California Gnatcatcher

Background Information

Coastal California Gnatcatcher is a federally threatened species and a state species of special concern. This species is a non-migratory songbird and is found west of the Peninsular and Transverse Ranges in coastal southern California. This species is primarily found at elevations below 800 feet along the coast and up to 1,600 feet inland. The largest populations of this species occur in San Diego, Orange, and Riverside counties, with smaller populations in Los Angeles County, southwestern San Bernardino County, and southern Ventura County (Atwood and Bontrager 2001). As of 1990, coastal California Gnatcatcher populations in California were estimated at 2,000 or fewer pairs (USFWS 2010). The coastal California Gnatcatcher occurs in the coastal sage scrub communities of southern California, especially in locations dominated by California sagebrush (*Artemisia californica*) and California buckwheat (*Eriogonum fasciculatum*). Other shrubs in coastal sage scrub vegetation communities occupied by coastal California Gnatcatcher include California bush sunflower (*Encelia californica*), brittlebush (*Encelia farinosa*), black sage (*Salvia mellifera*), white sage (*Salvia apiana*), and deerweed (*Acmispon glaber*).

The breeding season for coastal California Gnatcatcher extends from approximately February 1 through August 31, with peak nesting activity occurring from mid-March through mid-May. The incubation period takes 14 days and the young fledge at eight to 13 days. The young are dependent on their parents for up to three or four weeks; however, fledglings may continue to associate with their parents for several months (USFWS 1997). Foraging by coastal California Gnatcatcher primarily consists of gleaning sessile prey from foliage while quickly moving through branches of shrubs. Larger prey items are beaten against a branch before being swallowed whole or fed to juveniles (Atwood and Bontrager 2001).

Presence in the Project Action Area

Focused coastal California Gnatcatcher surveys were conducted for the TRTP in 2011 (ICF International [ICF] 2011) within portions of the Project impact area, and then again for the Mesa 500 kV Substation Project in 2015. In addition, the species was monitored during construction of the TRTP. As a result, there are five years of monitoring data for the Project, which includes nesting locations from 2011 through 2015 (Figure 8: *Coastal California*

Gnatcatcher Nest Locations). Protocol-level coastal California Gnatcatcher surveys were conducted by Rocks Biological Consulting (RBC) on April 9 through May 15, 2015. Surveys were conducted in potential coastal California Gnatcatcher habitat identified by RBC.

Based on monitoring for the TRTP, this species was observed foraging and nesting immediately south of Mesa Substation from 2010 through 2014. Although most of the historic nests were within a restored area of coastal sage scrub south of Mesa Substation, several historic nests were within atypical habitat, which included isolated patches (two to four plants) of mulefat (*Baccharis salicifolius*) surrounded by ruderal vegetation (e.g., non-native mustards [*Brassica nigra*, *Hirschfeldia incana*, and *Raphanus sativus*], grasses [*Avena* spp. and *Bromus* spp.]) and ornamental/non-native shrubs and trees (e.g., bougainvillea [*Bougainvillea spectabilis*] and Peruvian pepper-tree [*Schinus molle*]). Coastal California Gnatcatcher also was observed historically foraging in the Montebello Hills and in the Rio Hondo and San Gabriel River corridors.

RBC surveyed the area immediately south of the existing Mesa Substation within areas previously determined by the TRTP to be both occupied suitable habitat (i.e., having breeding pairs in coastal sage scrub with the primary habitat components) and occupied unsuitable habitat (i.e., nesting in native vegetation within ruderal areas). The survey area also included the restricted use area within the SCE ROW, the telecommunications route where it crosses the Montebello Hills (including along the edge of the landfill and Lincoln Avenue), and the Rio Hondo and San Gabriel River corridors (Figure 6: *Coastal California Gnatcatcher Habitat and Designated Critical Habitat*).

A total of six pairs of breeding coastal California Gnatcatcher were observed during RBC's 2015 protocol surveys. Two nesting pairs and their nests were identified adjacent to the existing Mesa Substation in occupied breeding habitat. One of the nests was within ground-disturbing impact areas for the Project; the other nest was located outside the Project's ground-disturbing impact area on the adjacent OII Landfill parcel (Figure 8: *Coastal California Gnatcatcher Nest Locations*). The remaining four breeding pairs were observed along the telecommunications route in the Montebello Hills. Both pairs adjacent to the existing Mesa Substation fledged three offspring during the survey period. In the Montebello Hills area north of Lincoln Avenue, four pairs of coastal California Gnatcatcher exhibited nesting behavior but, due to access restrictions, the precise location of nests was not confirmed. Of those, three were observed with fledglings. No individuals exhibiting nesting activity were observed in the Rio Hondo or San Gabriel River corridors (Attachment A: *Coastal California Gnatcatcher Survey Report*).

Designated Critical Habitat

Critical habitat for coastal California Gnatcatcher occurs within the Project area along the telecommunications route, in the Montebello Hills, and in the Rio Hondo and San Gabriel River corridors (Figure 6: *Coastal California Gnatcatcher Habitat and Designated Critical Habitat*). Approximately 3.80 acres of the Project area are designated as coastal California Gnatcatcher critical habitat. As discussed in Section 3.1 Project Components and Construction Description, construction work along the telecommunications route consists of workers manually stringing

cable, which will occur outside of the nesting season and adjacent to existing paved roads. Thus, this work will not result in ground-disturbing activities.

5.0 BASELINE ENVIRONMENTAL CONDITIONS

5.1 General Site Conditions

The Project consists of urbanized development and natural areas, including several nurseries located within SCE ROWs. The Project area is located within the Los Angeles River Hydrological Unit. Elevation ranges from 130 feet to 750 feet above mean sea level, with the lower elevations in the southwest portion of the Project, and the higher elevations at the northeast portion. The climate is subtropical and Mediterranean. The nearest climatological station (in the City of Montebello) recorded an average annual rainfall of 15.3 inches between 1981 and 2010. Fourteen vegetation communities occur in the Project area (Figure 9: *Vegetation Communities*); however, coastal California Gnatcatcher has been observed in only five of these plant communities. Given that no impacts to vegetation will occur along the telecommunications route, it will not be discussed further in this section. The following vegetation communities are located within permanent and temporary impacts adjacent to the existing substation where the presence of coastal California Gnatcatcher has been documented:

- coastal sage scrub
- mulefat scrub
- ruderal (atypical habitat)
- ephemeral drainages

Coastal California Gnatcatcher

Coastal sage scrub is the typical habitat for coastal California Gnatcatcher and consists of low, mostly soft-woody shrubs with a sparse herbaceous layer. Stands may be dominated by California sagebrush or by California buckwheat. Coastal California Gnatcatcher is also known to occupy other vegetation communities. The Primary Constituent Elements (PCEs) for critical habitat, pursuant to the Final Rule (USFWS 2007), are defined as follows:

- Dynamic and successional sage scrub habitats (PCE 1): Venturan coastal sage scrub, Diegan coastal sage scrub, Riversidean sage scrub, maritime succulent scrub, Riversidean alluvial fan scrub, southern coastal bluff scrub, and coastal sage-chaparral scrub in Ventura, Los Angeles, Orange, Riverside, San Bernardino, and San Diego counties that provide space for individual and population growth, normal behavior, breeding, reproduction, nesting, dispersal, and foraging.
- Non-sage scrub habitats (e.g., chaparral, grassland, and riparian areas) in proximity to sage scrub habitats, as described for PCE 1, which provide space for dispersal, foraging, and nesting.

Coastal sage scrub occurs south of the existing Mesa Substation, along the southern boundary of the Project area and within a restricted use area, and extends off-site and further to the south along a restored cut and fill slope. The restored slope is dominated by California sagebrush and California buckwheat. In addition, ephemeral drainages in this area support scattered patches of low-quality mulefat scrub, which are intermixed with stands of castor bean (*Ricinus communis*), Peruvian pepper-tree, and an assemblage of other non-native and ornamental species.

The majority of the vegetation south of the Mesa Substation site is ruderal and highly disturbed, due to regular vegetation removal associated with substation and transmission corridor activities. In addition, the southern portion of the site was formerly occupied by a nursery, and supports an assembly of naturalized ornamental species. Much of the ground cover consists of mustards, Russian thistle (*Salsola tragus*), and non-native grasses. A few native and non-native shrubs are scattered in the mustard areas, but the majority of shrubs—where present—are within the ephemeral drainages.

As discussed in Section 4.1 Coastal California Gnatcatcher, protocol-level surveys conducted in 2015 identified two coastal California Gnatcatcher breeding pairs south of the existing Mesa Substation site. The nest of one breeding pair was observed within coastal sage scrub on the off-site restored slope (Figure 8: *Coastal California Gnatcatcher Nest Locations*). A second pair was observed nesting on site within coastal sage scrub adjacent to a dirt access road. Previous surveys conducted for the TRTP identified nests in coastal sage scrub, mulefat scrub, and ruderal vegetation that were primarily concentrated in the southernmost area of the Mesa Substation site. Occupied breeding habitat for coastal California Gnatcatcher was mapped based on these nest locations, the coastal California Gnatcatcher activity observed during the 2015 protocol-level surveys, and previous coordination with USFWS on TRTP regarding the definition of occupied habitat at the Mesa site (Figure 8: *Coastal California Gnatcatcher Nest Locations*).

6.0 EFFECTS OF THE PROPOSED ACTION

This section addresses the potential direct, indirect, and cumulative effects to the coastal California Gnatcatcher resulting from the construction of the Project. Impacts from construction will be minimized by implementing measures described in Section 3.2 Minimization and Monitoring Measures, and are considered in this analysis.

The Project will result in permanent and temporary impacts to occupied breeding habitat for coastal California Gnatcatcher (Figure 10: *Anticipated Impacts to Coastal California Gnatcatcher Habitat*). No direct impacts will occur to occupied breeding habitat within the restricted use area or on adjacent parcels, outside the Project area. There will be impacts to occupied unsuitable habitat that historically had nests but was used only for foraging in 2015. No direct take of individual birds is anticipated. No direct impacts will occur along the telecommunications route within coastal California Gnatcatcher habitat.

A minimal amount of permanent impact will occur within occupied breeding habitat; most permanent impacts will be to occupied unsuitable habitat within ruderal vegetation immediately south of the existing Mesa Substation. Temporary impacts are also expected immediately south of the existing Mesa Substation within both occupied breeding habitat and occupied unsuitable habitat, in ruderal vegetation, an ephemeral drainage, mulefat scrub, and a small area of coastal sage scrub. Occupied breeding habitat in coastal sage scrub will be temporarily impacted for an excess of five years. Individual birds will be able to use coastal sage scrub located in the restricted use area and on parcels adjacent to the Project after vegetation is removed during the initial clearing phase.¹ However, as construction of the Monterey Park Market Place will eventually result in permanent impacts to on-site and adjacent off-site occupied breeding habitat, temporary Project impacts will be considered to have a permanent effect resulting in the long-term loss of viability of coastal California gnatcatcher in the Project area. As such, permanent and temporary impacts to occupied breeding habitat will be mitigated off-site at a two-to-one ratio, and impacted areas will be revegetated with native vegetation but not restored to coastal sage scrub. Occupied unsuitable habitat will be revegetated upon construction completion to like conditions.

6.1 Coastal California Gnatcatcher

Direct Effects to Occupied Breeding Habitat

Direct impacts are expected to affect a total of 1.00 acre of occupied breeding habitat for coastal California Gnatcatcher south of the existing Mesa Substation (Table 3: *Anticipated Impacts to Occupied Breeding Habitat of Coastal California Gnatcatcher*). Permanent and direct impacts to occupied breeding habitat for coastal California Gnatcatcher will occur within 0.02 acre of coastal sage scrub. In addition, there will be a temporal loss in excess of five years to 0.98 acre of occupied breeding habitat for coastal California Gnatcatcher. Within the areas affected, these impacts could affect up to two pairs of coastal California gnatcatcher. Shrubs and other vegetation used by coastal California Gnatcatcher will be removed in these areas, resulting in the loss of foraging and nesting habitat and/or the removal of some food sources. Impacts will be most significant during the nesting season, which is generally March through August. Permanent and temporary impacts to occupied breeding habitat will be mitigated off-site by purchasing credits for coastal sage scrub at a two-to-one ratio. As a result, off-site mitigation will result in a net increase in coastal California Gnatcatcher habitat. The details of the mitigation plan for this species will be coordinated with the USFWS and incorporated into the HCRP.

Direct Effects to Occupied Unsuitable Habitat

Impacts will also occur to occupied unsuitable habitat within the territories of coastal California Gnatcatcher where birds will forage. Birds appear to be using these low-quality areas because

¹ SCE assumes that construction of the adjacent Monterey Park Market Place will not remove the adjacent coastal sage scrub before the initial clearing phase of the Mesa 500 kV Substation Project.

of the limited availability of suitable coastal sage scrub habitat on and adjacent to the Project area. Shrubs and other vegetation used by coastal California Gnatcatcher in occupied unsuitable habitat will be removed in these areas, resulting in the temporary loss of foraging habitat and/or the removal of some food sources in excess of five years.

Table 3: Anticipated Impacts to Occupied Breeding Habitat of Coastal California Gnatcatcher

Location	Occupied Breeding Habitat in Project Area (acres)	Temporal Impacts to Occupied Breeding Habitat ² (acres)	Permanent Impacts to Occupied Breeding Habitat (acres)	No Impacts to Occupied Breeding Habitat (Restricted Use Area) (acres)
Adjacent to existing Mesa Substation site	1.40	0.98	0.02	0.40
Total	1.40	0.98	0.02	0.40

Direct temporary impacts to coastal California Gnatcatcher may also include the disruption of nesting behavior due to a temporary increase in the presence of humans, dust, and noise from construction equipment and vehicles. Increased noise and vibration resulting from heavy equipment could also disrupt nesting behavior in the restricted use area and in habitat outside of the Project, but within the Project action area (e.g., the off-site coastal sage scrub slope immediately south of the Mesa Substation site), which could further reduce available habitat for this species.

SCE will reduce direct impacts to coastal California Gnatcatcher by implementing MM-03, MM-04, MM-CAGN-01, MM-CAGN-02, MM-CAGN-03, and MM-CAGN-04, which includes conducting protocol-level surveys prior to the start of construction. Further, direct impacts will be reduced by implementing no-work buffers, as appropriate, if nesting birds are found within the Project action area, clearing vegetation only after a USFWS-approved biologist has swept the area for individual birds, ensuring that a biological monitor is present, and limiting work in close proximity to active nests until after chicks have fledged and are no longer dependent on their parents.

Indirect Effects

No indirect effects on coastal California Gnatcatcher are anticipated as a result of the Project.

² Temporary impact acres include temporal impacts for an excess of five years. These temporal impacts will be considered as a permanent effect of the species given that adjacent development projects may affect the long-term viability of the species. A portion of SCE's temporal impact acreage located north and west of Greenwood Avenue is within areas analyzed by the Monterey Park Market Place Final Environmental Impact Report and was found to have permanent impacts; consequently, some of these areas will be permanently impacted by the Monterey Park Market Place after temporal impacts have happened for the SCE project.

Critical Habitat

Critical habitat for coastal California Gnatcatcher occurs within the Project action area, along the telecommunications route, in the Montebello Hills and in the Rio Hondo and San Gabriel River corridors (Figure 6: *Coastal California Gnatcatcher Habitat and Designated Critical Habitat*). As discussed in Section 3.1 Project Components and Construction Description, construction work along the telecommunications route consists of workers manually stringing cable, which will occur outside of the nesting season and adjacent to existing paved roads. Thus, this work will not result in ground-disturbing activities.

Temporary impacts to critical habitat for the coastal California Gnatcatcher may include the disruption of nesting behavior within the Project action area due to a temporary increase in the presence of humans, dust, and noise from construction equipment and vehicles. These temporary impacts occur at the edges of habitat along existing roads and a landfill where there are existing human presence, dust, and noise. Thus, temporary effects in critical habitat are not likely to be significantly greater than the existing human presence, dust, and noise. Further, human presence, dust, and noise associated with construction are minimal and limited in duration. SCE will reduce impacts further to critical habitat for coastal California Gnatcatcher by implementing MM-03, MM-04, MM-CAGN-01, and MM-CAGN-03, which includes conducting protocol-level surveys prior to the start of construction. Impacts will be reduced by implementing no-work buffers as appropriate if nesting birds are found within the Project area, ensuring that a biological monitor is present, and limiting work in close proximity to active nests until after chicks have fledged and are no longer dependent on their parents.

Determination of Effect

Based on a literature review, field investigations, the Project design, and the construction schedule, SCE has determined that the activities associated with the Project “may affect, and will likely adversely affect” coastal California Gnatcatcher. The Project is “not likely to adversely affect” designated critical habitat for coastal California Gnatcatcher because the temporary effects of human presence, dust, and noise occur are minimal, limited in duration, and at the habitat edges along roads and a landfill. As part of the Project, SCE will implement the minimization and monitoring measures described in Section 3.2 Minimization and Monitoring Measures, to avoid and/or minimize the potential for direct take of federally protected species.

6.2 Cumulative Effects

Cumulative effects include the effects of future actions that are reasonably certain to occur in the Project action area considered in this BA. Future federal actions that are unrelated to the Project are not considered here because they require separate consultation pursuant to Section 7 of the federal ESA.

Construction and grading associated with the Project will result in temporary impacts to approximately 0.98 acre of coastal California Gnatcatcher occupied breeding habitat and direct permanent impacts to approximately 0.02 acre. In addition, the Monterey Park Market Place

has the potential to permanently impact habitat for the coastal California Gnatcatcher adjacent to the Project site. The coastal sage scrub on the parcel immediately south of the Mesa Substation site is located within the Monterey Park Market Place's development plan. As such, there is a potential that coastal California Gnatcatcher will no longer occur on the Project site should the Monterey Park Market Place be developed prior to the Project. The Montebello Hills Master Planned Community, located approximately 0.3 mile to the southeast of Mesa Substation, will also permanently affect habitat for the coastal California Gnatcatcher, including a portion of critical habitat designated for this species. However, the Montebello Hills Master Planned Community will result in a net increase in coastal California Gnatcatcher habitat due to mitigation for that project in the form of an approximately 260.60-acre, on-site habitat reserve. As a result, the Montebello Hills Master Planned Community and the Project will not result in cumulative impacts to coastal California Gnatcatcher habitat. In addition, all projects will be subject to the same permitting requirements under the federal and California ESAs, which are intended to minimize and mitigate for impacts to species, both at the project level and in a regional context. As a result, cumulative impacts to coastal California Gnatcatcher habitat are expected to be minimal with the implementation of minimization and monitoring measures from the Project and other projects.

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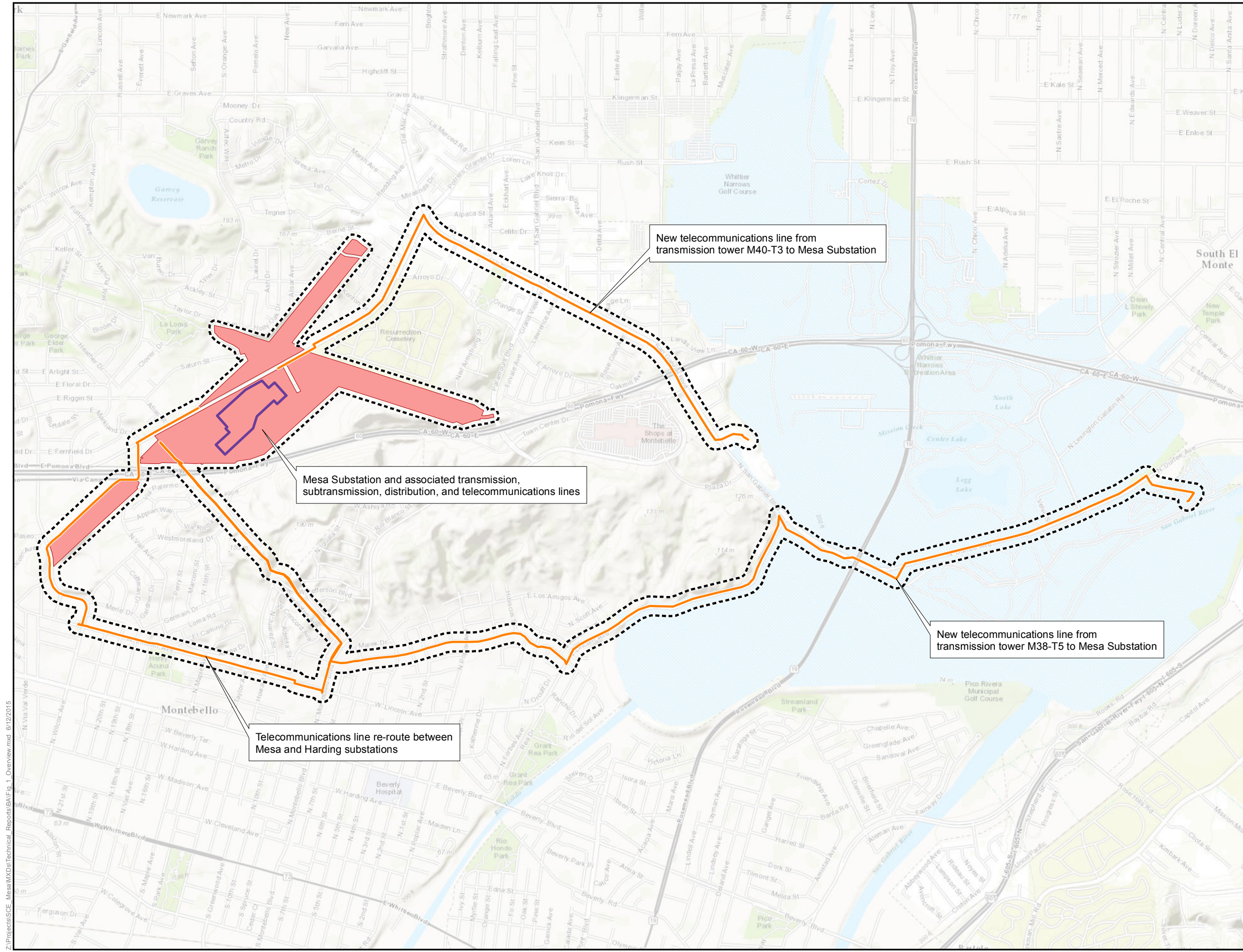




Figure 1:
Project Overview and
Action Area
Mesa 500 kV Substation Project

- Mesa Substation Study Area
- Action Area
- Existing Substation
- Proposed Telecommunications





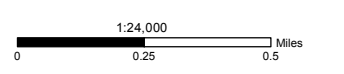

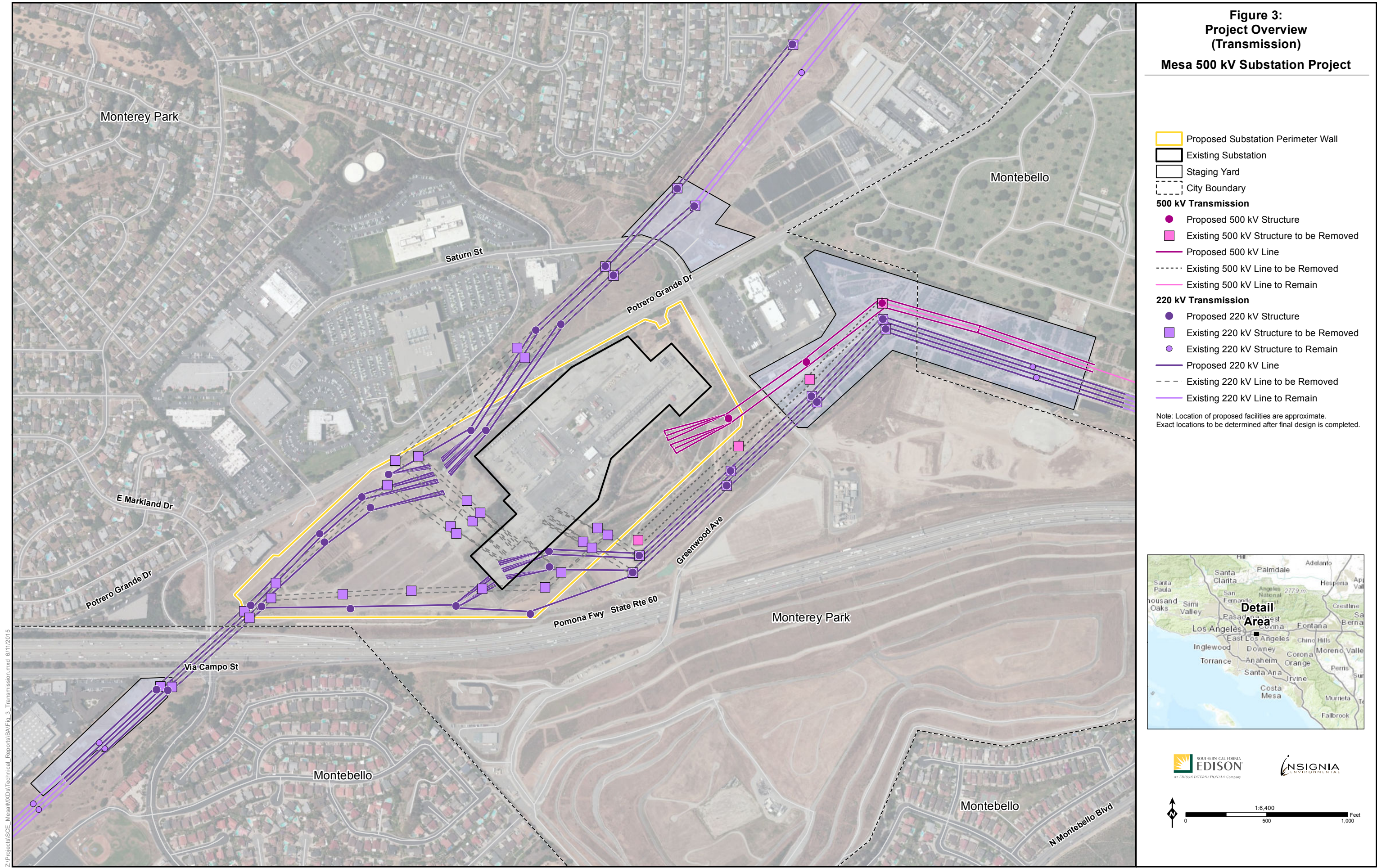




Figure 2: Proposed Substation Layout

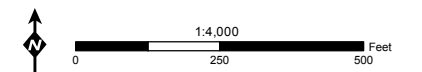
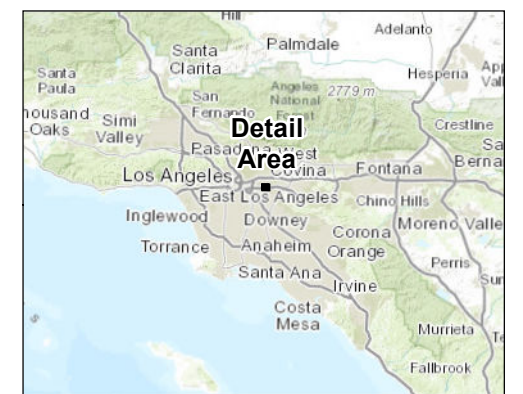


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**Figure 4:
Project Overview
(Subtransmission)**
Mesa 500 kV Substation Project













- Proposed Substation Perimeter Wall
 - Existing Substation
 - Staging Yard
 - City Boundary
- Subtransmission Structures**
- Existing Structure to Remain
 - Proposed Structure
 - Existing Structure to be Removed
 - Proposed Vault
- Subtransmission Lines**
- Existing Overhead 66 kV Line to Remain
 - Existing Overhead 66 kV Line to be Removed
 - Existing Underground 66 kV Line to be Removed
 - Proposed Overhead 66 kV Line
 - Proposed Underground 66 kV Line
- Note: Location of proposed facilities are approximate.
Exact locations to be determined after final design is completed.



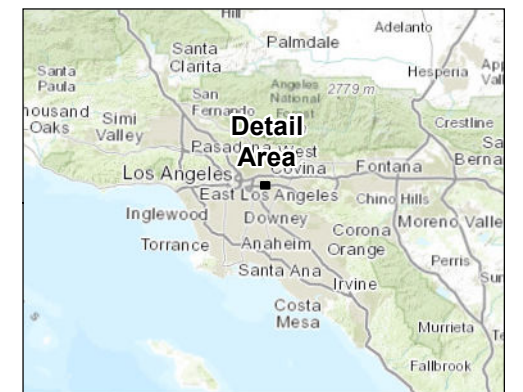
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**Figure 5:
Project Overview
(Distribution)**
Mesa 500 kV Substation Project

-  Proposed Substation Perimeter Wall
-  Existing Substation
-  Staging Yard
-  City Boundary
- Distribution Structures**
 -  Existing Pole
 -  Existing Vault (Manhole)
 -  Proposed Pole
 -  Proposed Vault
- Distribution Lines**
 -  Existing 16 kV Underground Line to Remain
 -  Proposed 16 kV Underground Line
 -  Re-Route 16 kV Underground Line
 -  Existing 16 kV Underground Line to be Removed

Note: Location of proposed facilities are approximate.
Exact locations to be determined after final design is completed.

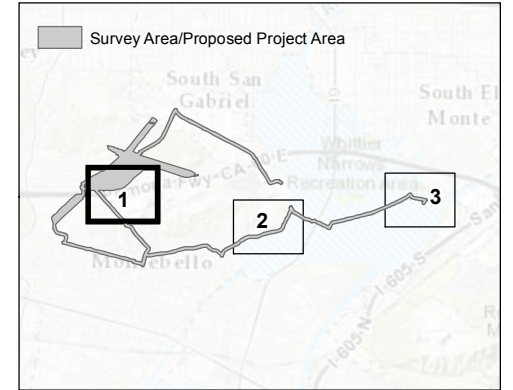




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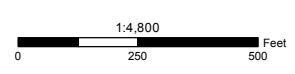

Z:\Projects\SCE_Mesa\MXDs\Technical Reports\BA\Fig. 6 CAGN Habitat and Critical.mxd 06/25/15

Figure 6:
Coastal California Gnatcatcher
Designated Critical Habitat Map
Map 1 of 3
Mesa 500 kV Substation Project

- Survey Area/Project Area
- Action
- Proposed Substation Perimeter Wall
- Existing Substation
- City Boundary
- Coastal California Gnatcatcher Occupied Breeding Habitat
- Coastal California Gnatcatcher Habitat
- Coastal California Gnatcatcher Critical Habitat















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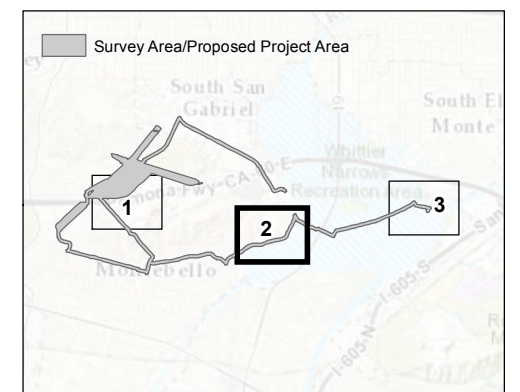
**Figure 6:
Coastal California Gnatcatcher
Designated Critical Habitat Map
Map 2 of 3
Mesa 500 kV Substation Project**

-  Survey Area/Project Area
-  Action
-  Proposed Substation Perimeter Wall
-  Existing Substation
-  City Boundary
-  Coastal California Gnatcatcher Occupied Breeding Habitat
-  Coastal California Gnatcatcher Habitat
-  Coastal California Gnatcatcher Critical Habitat

Montebello

Los Angeles
County

San Gabriel Blvd
State Rte 19
Rosemead Blvd



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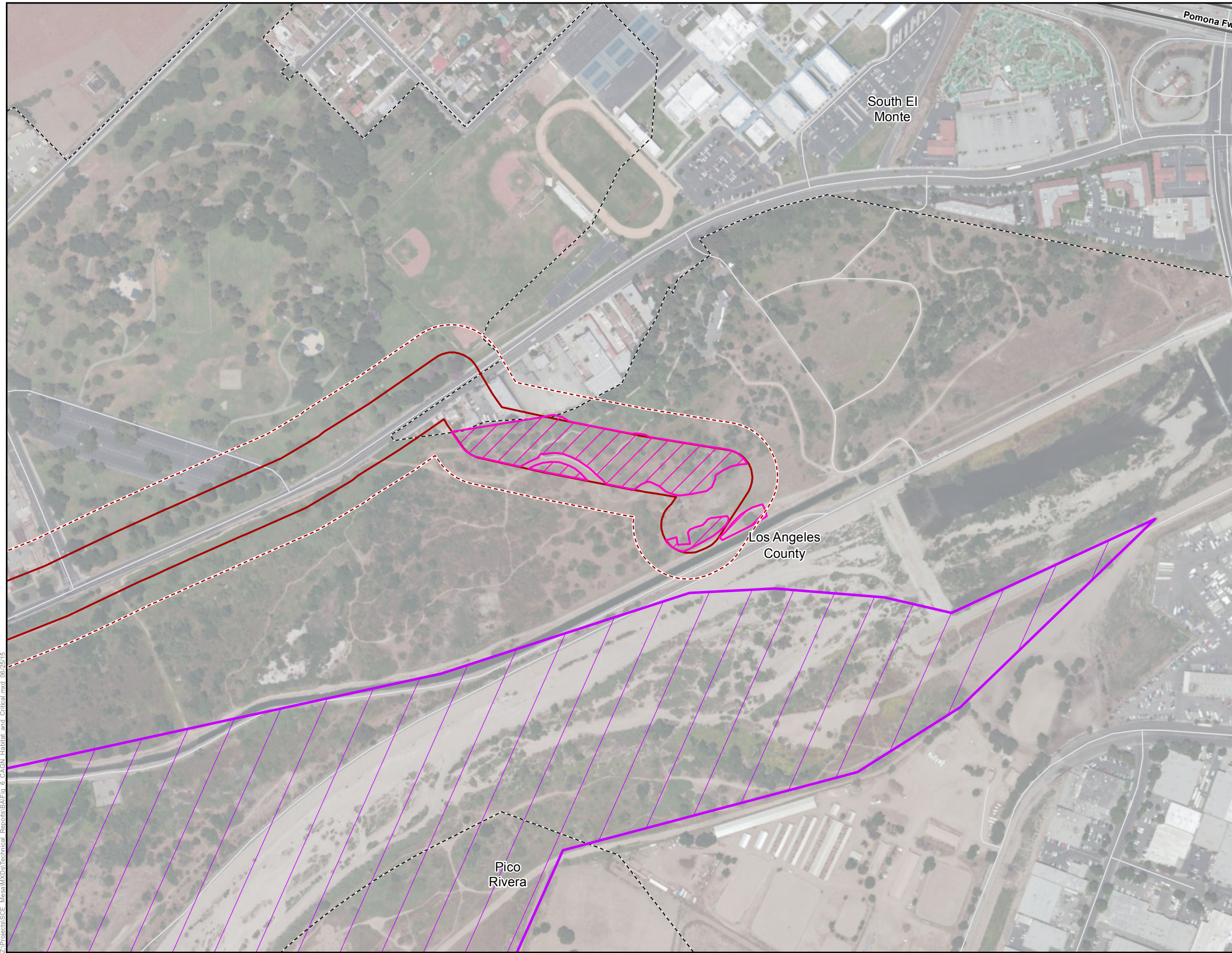








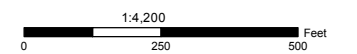
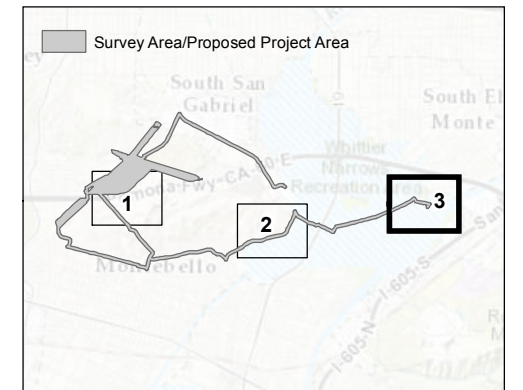
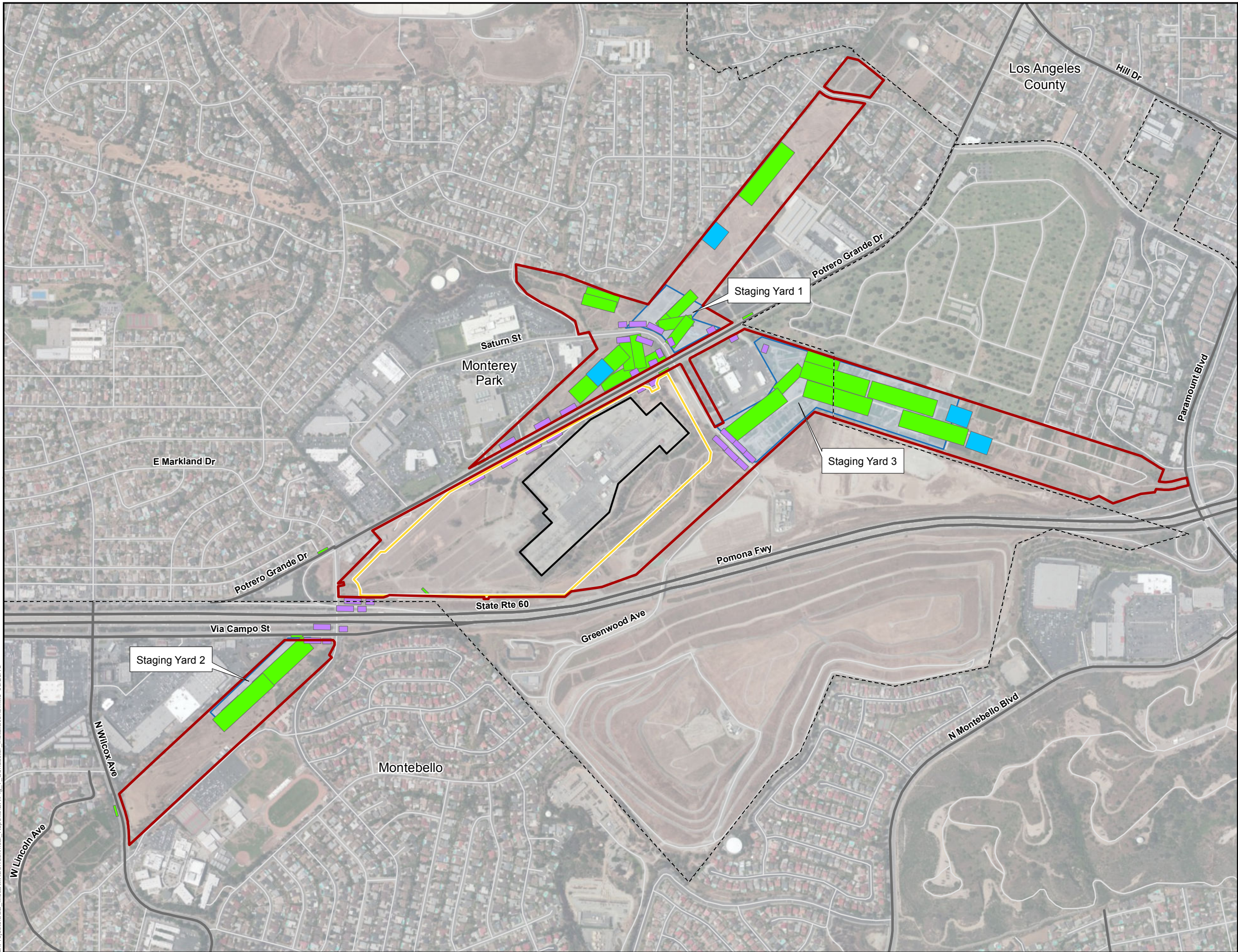


Figure 6:
Coastal California Gnatcatcher
Designated Critical Habitat Map
Map 3 of 3
Mesa 500 kV Substation Project

-  Survey Area/Project Area
-  Action
-  Proposed Substation Perimeter Wall
-  Existing Substation
-  City Boundary
-  Coastal California Gnatcatcher Occupied Breeding Habitat
-  Coastal California Gnatcatcher Habitat
-  Coastal California Gnatcatcher Critical Habitat



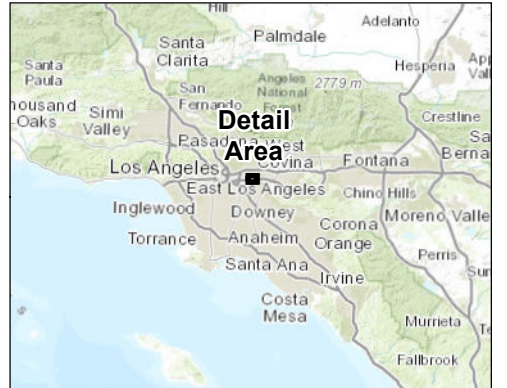
Z:\Projects\SCE_Mesa\MDs\Technical_Reports\BA\Fig. 7. Conductor Installations.mxd 06/25/15



**Figure 7:
Conductor Installation and
Removal Work Areas
Mesa 500 kV Substation Project**

- Mesa Substation Study Area
- Proposed Substation Perimeter Wall
- Existing Substation
- City Boundary
- Splicing Setup Area
- Pulling and Tensioning Area
- Guard Structure Work Area
- Staging Yard

Note: In some locations, multiple work areas overlap with each other. These overlapping areas were removed from the values presented in to avoid double-counting.



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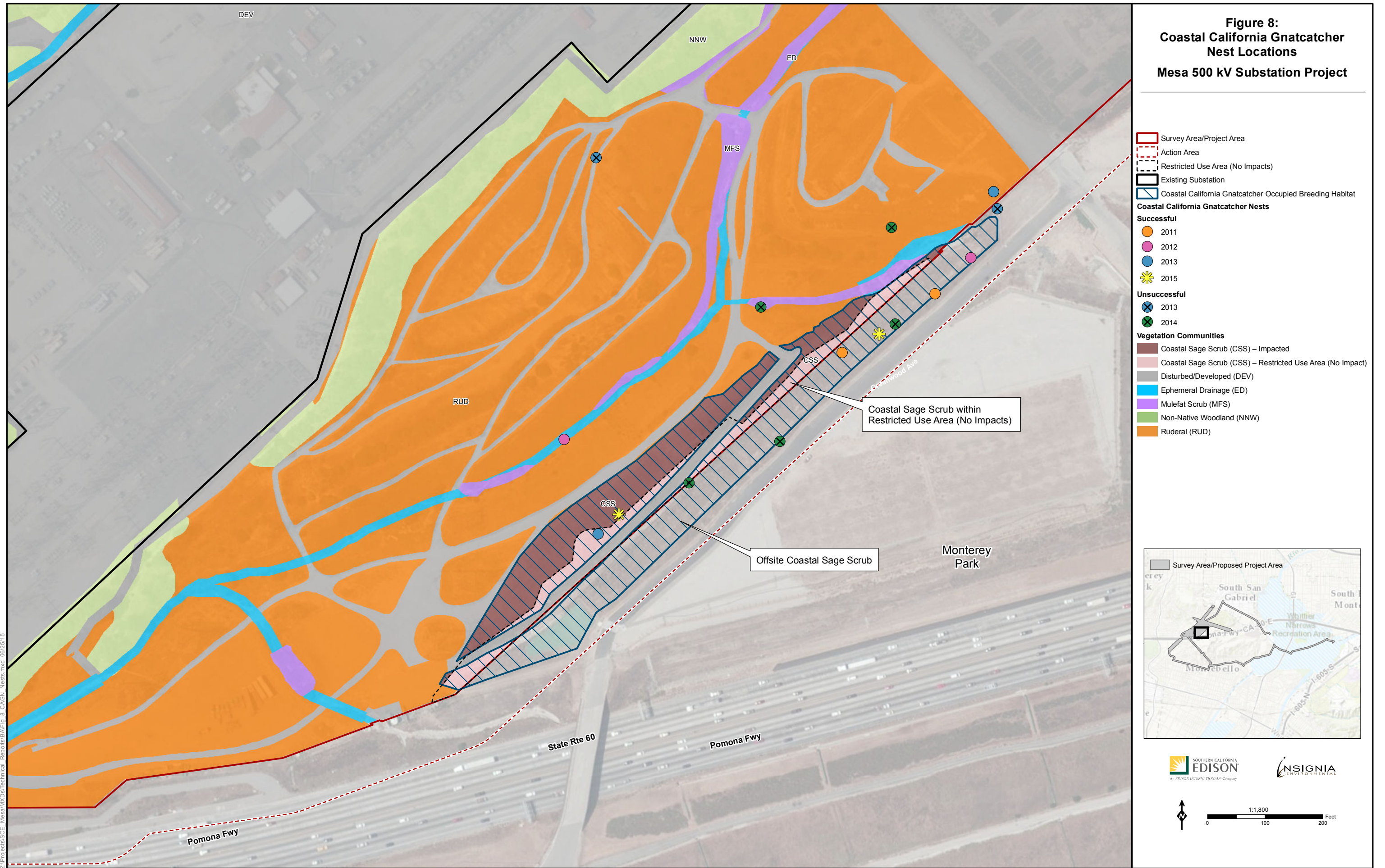
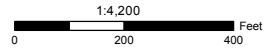
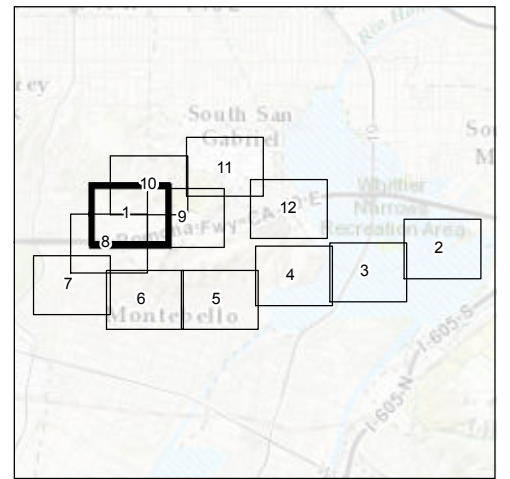




Figure 9:
Vegetation Communities
Map 1 of 12
Mesa 500 kV Substation Project

- Survey Area/Project Area
 - Action Area
 - City Boundary
 - Existing Substation
- Vegetation Communities**
- California Annual Grassland (CAG)
 - California Walnut Woodland (CWW)
 - Coast Live Oak Woodland (CLOW)
 - Coastal Sage Scrub (CSS)
 - Disturbed/Developed (DEV)
 - Mulefat Scrub (MFS)
 - Non-Native Giant Reed (NNGR)
 - Non-Native Woodland (NNW)
 - Riparian Woodland (RIPW)
 - Ruderal (RUD)
 - Southern Sycamore-Alder Riparian Woodland (SSARW)
 - Ephemeral Drainage (ED)
 - Intermittent Drainage (ID)
 - Man-Induced Wetland (MIW)



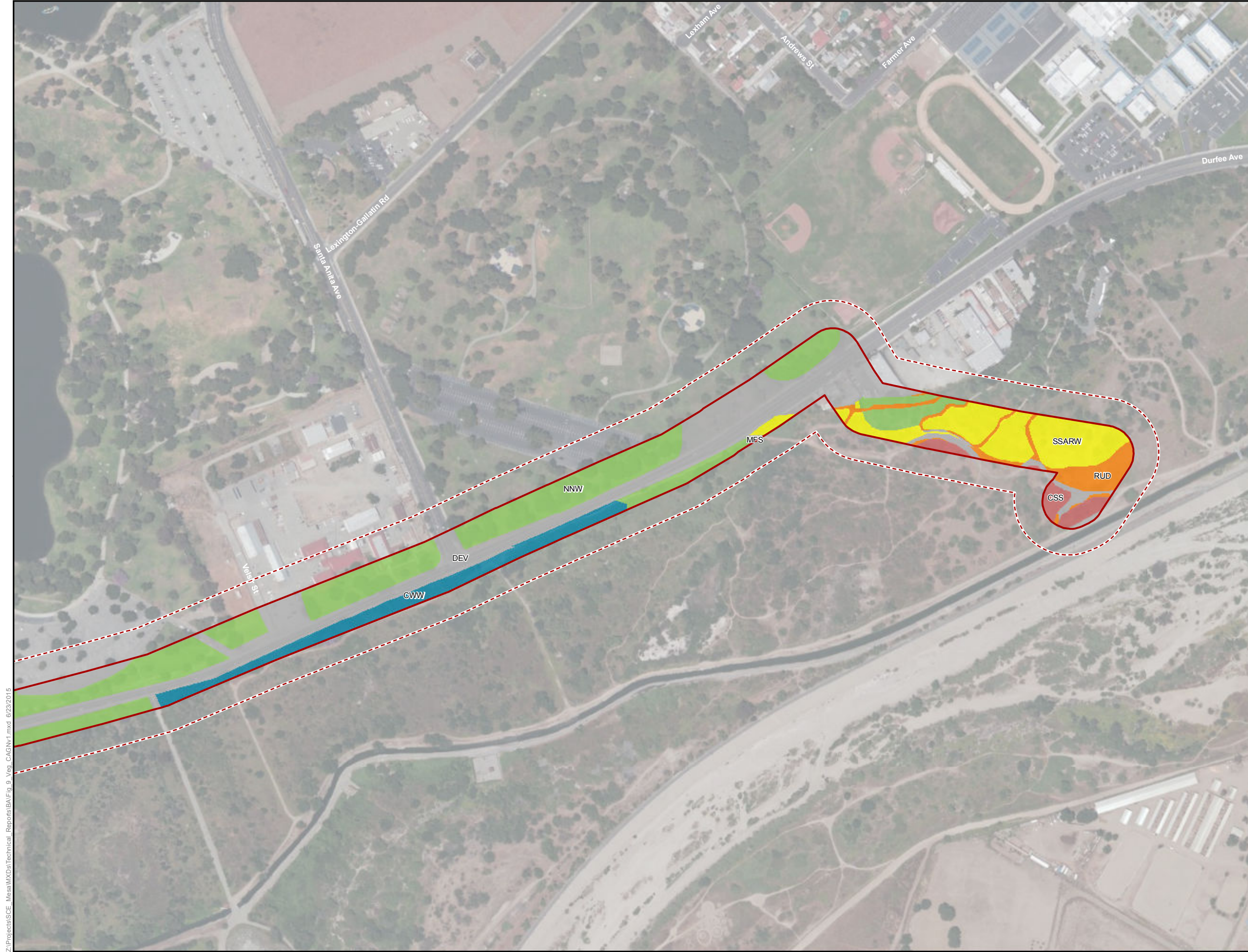
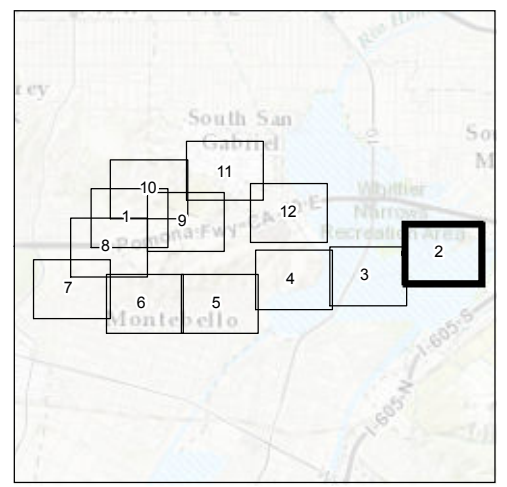


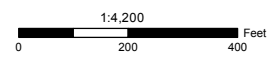



Figure 9:
Vegetation Communities
Map 2 of 12
Mesa 500 kV Substation Project

- Survey Area/Project Area
 - Action Area
 - City Boundary
 - Existing Substation
- Vegetation Communities**
- California Annual Grassland (CAG)
 - California Walnut Woodland (CWW)
 - Coast Live Oak Woodland (CLOW)
 - Coastal Sage Scrub (CSS)
 - Disturbed/Developed (DEV)
 - Mulefat Scrub (MFS)
 - Non-Native Giant Reed (NNGR)
 - Non-Native Woodland (NNW)
 - Riparian Woodland (RIPW)
 - Ruderal (RUD)
 - Southern Sycamore-Alder Riparian Woodland (SSARW)
 - Ephemeral Drainage (ED)
 - Intermittent Drainage (ID)
 - Man-Induced Wetland (MIW)























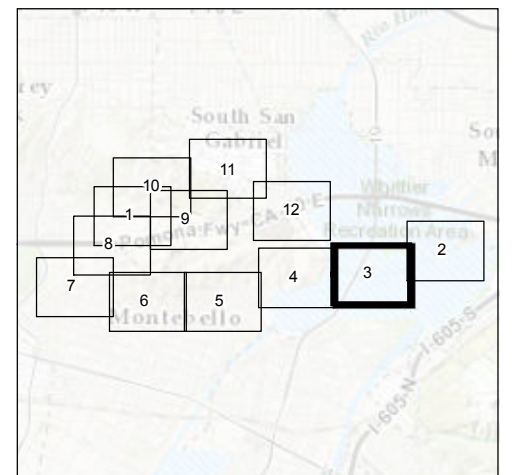


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**Figure 9:
Vegetation Communities
Map 3 of 12
Mesa 500 kV Substation Project**

-  Survey Area/Project Area
 Action Area
 City Boundary
 Existing Substation
- Vegetation Communities**
-  California Annual Grassland (CAG)
 -  California Walnut Woodland (CWW)
 -  Coast Live Oak Woodland (CLOW)
 -  Coastal Sage Scrub (CSS)
 -  Disturbed/Developed (DEV)
 -  Mulefat Scrub (MFS)
 -  Non-Native Giant Reed (NNGR)
 -  Non-Native Woodland (NNW)
 -  Riparian Woodland (RIPW)
 -  Ruderal (RUD)
 -  Southern Sycamore-Alder Riparian Woodland (SSARW)
 -  Ephemeral Drainage (ED)
 -  Intermittent Drainage (ID)
 -  Man-Induced Wetland (MIW)



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0 200 400 Feet

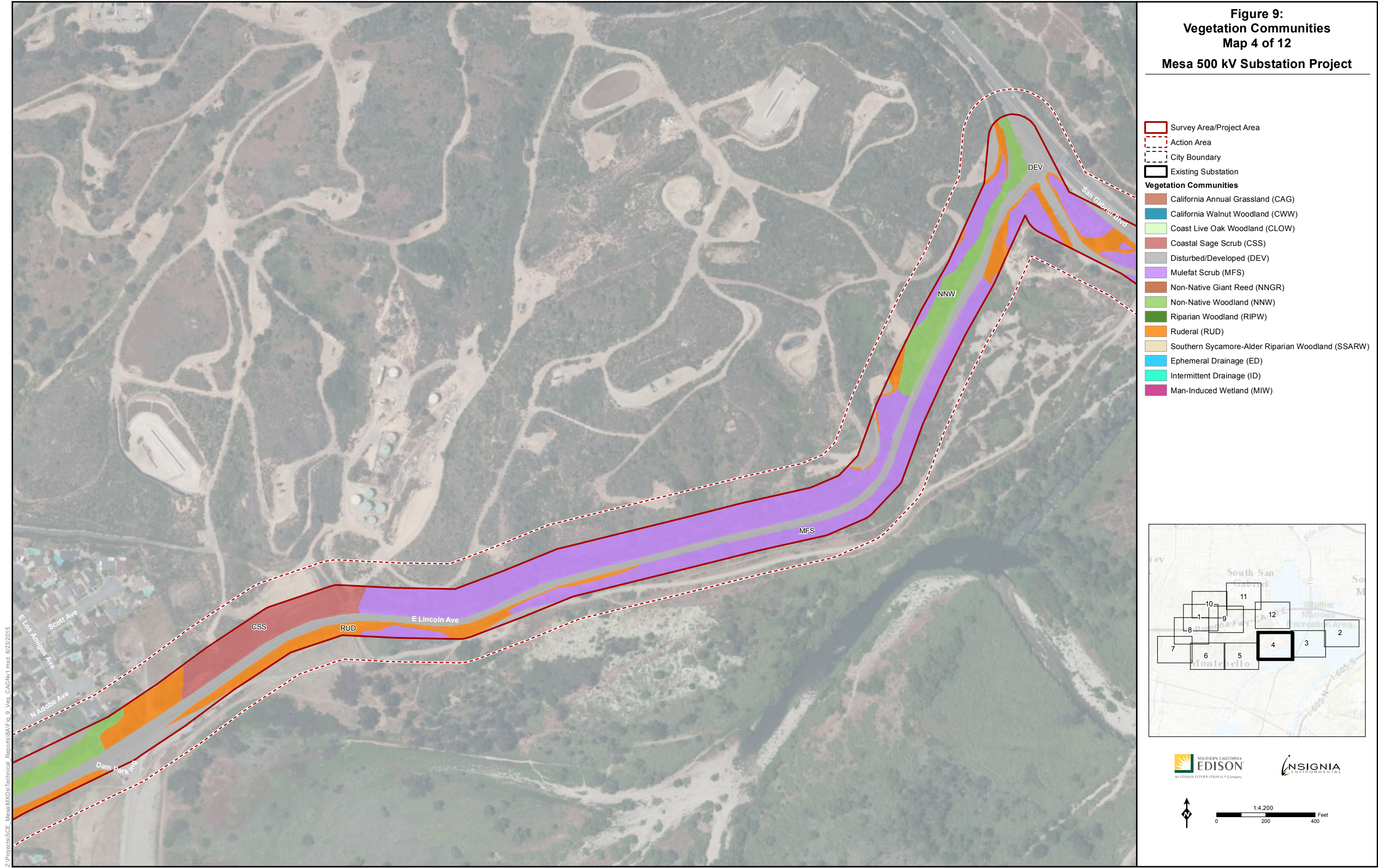


Figure 9:
Vegetation Communities
Map 5 of 12
Mesa 500 kV Substation Project

- Survey Area/Project Area
Action Area
City Boundary
Existing Substation
- Vegetation Communities**
- California Annual Grassland (CAG)
 - California Walnut Woodland (CWW)
 - Coast Live Oak Woodland (CLOW)
 - Coastal Sage Scrub (CSS)
 - Disturbed/Developed (DEV)
 - Mulefat Scrub (MFS)
 - Non-Native Giant Reed (NNGR)
 - Non-Native Woodland (NNW)
 - Riparian Woodland (RIPW)
 - Ruderal (RUD)
 - Southern Sycamore-Alder Riparian Woodland (SSARW)
 - Ephemeral Drainage (ED)
 - Intermittent Drainage (ID)
 - Man-Induced Wetland (MIW)

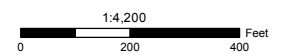
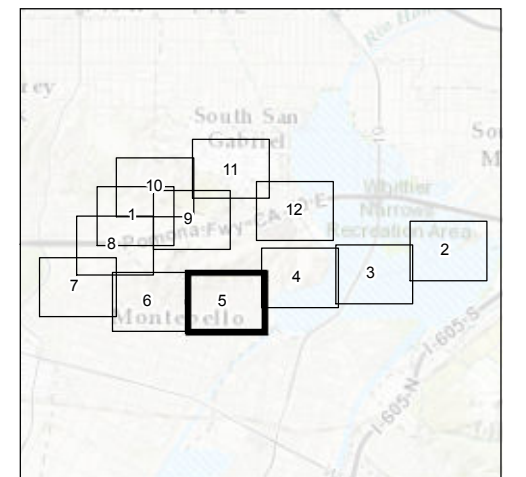




Figure 9:
Vegetation Communities
Map 6 of 12
Mesa 500 kV Substation Project

- Survey Area/Project Area
 - Action Area
 - City Boundary
 - Existing Substation
- Vegetation Communities**
- California Annual Grassland (CAG)
 - California Walnut Woodland (CWW)
 - Coast Live Oak Woodland (CLOW)
 - Coastal Sage Scrub (CSS)
 - Disturbed/Developed (DEV)
 - Mulefat Scrub (MFS)
 - Non-Native Giant Reed (NNGR)
 - Non-Native Woodland (NNW)
 - Riparian Woodland (RIPW)
 - Ruderal (RUD)
 - Southern Sycamore-Alder Riparian Woodland (SSARW)
 - Ephemeral Drainage (ED)
 - Intermittent Drainage (ID)
 - Man-Induced Wetland (MIW)

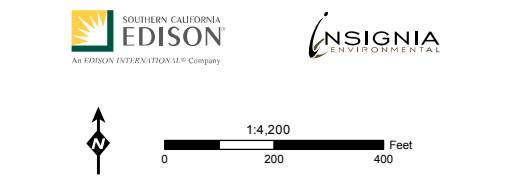
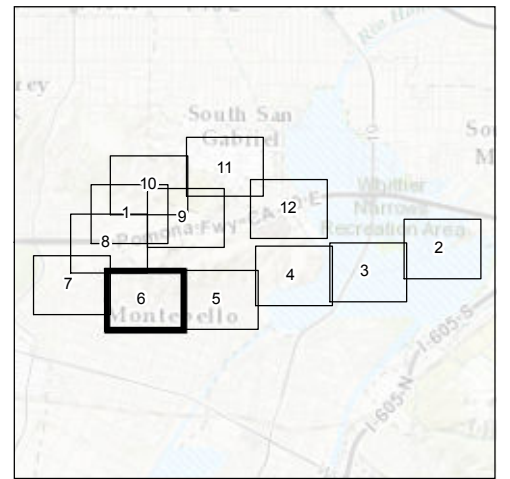
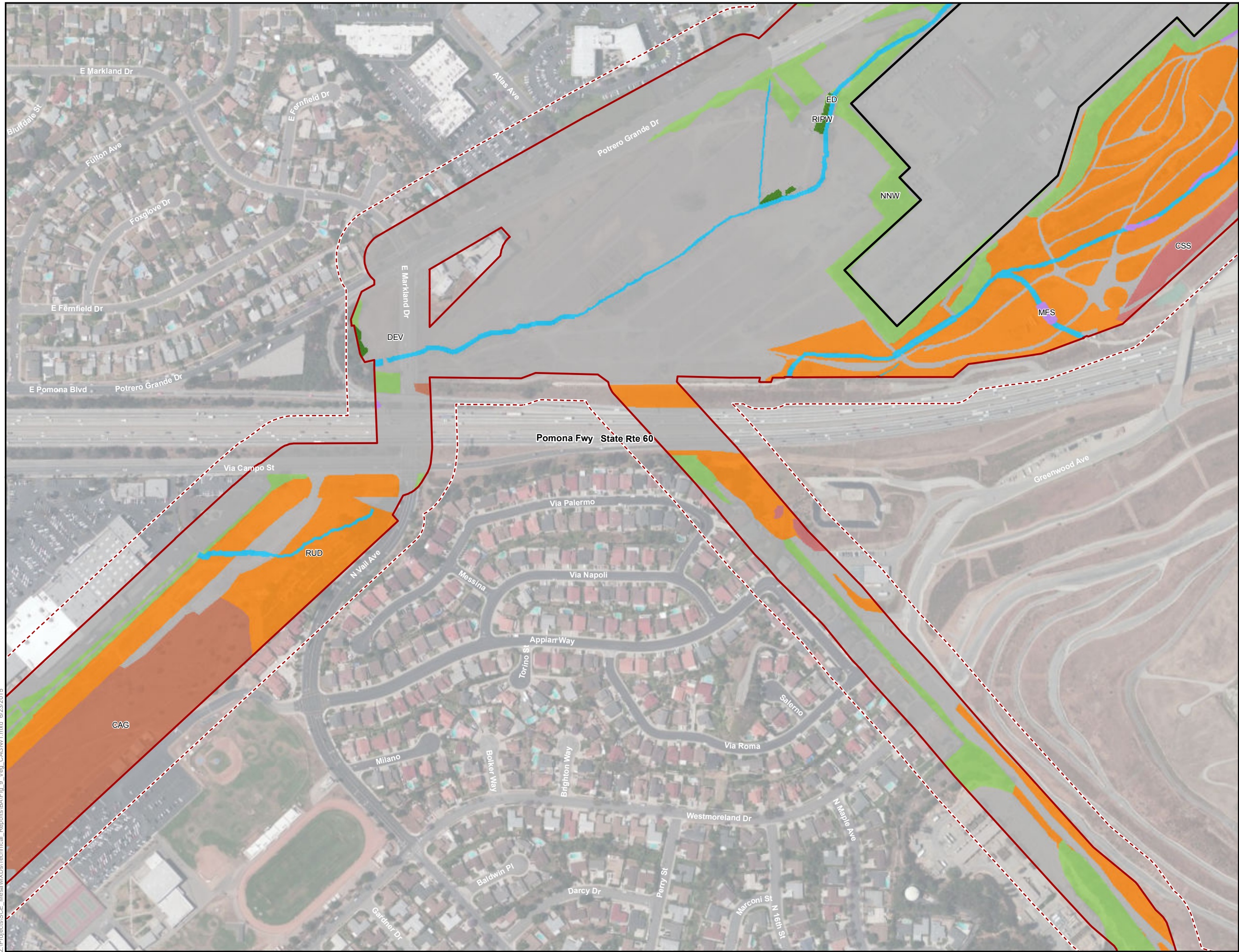
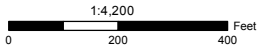
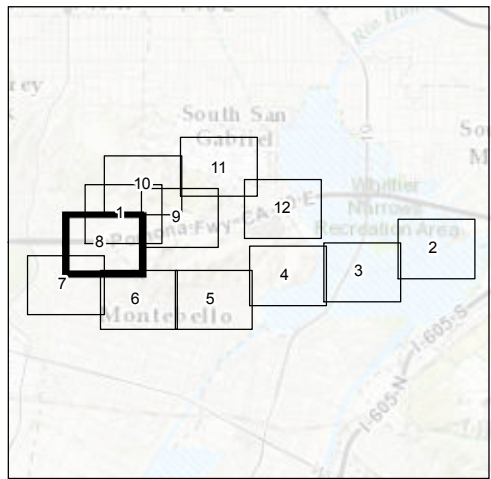


Figure 9:
Vegetation Communities
Map 8 of 12
Mesa 500 kV Substation Project



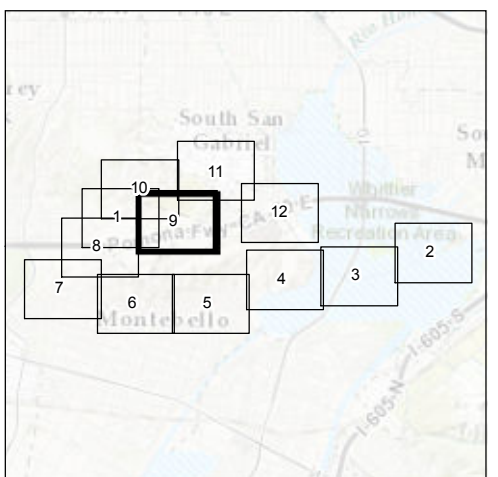
- Survey Area/Project Area
- Action Area
- City Boundary
- Existing Substation
- Vegetation Communities**
 - California Annual Grassland (CAG)
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 - Non-Native Woodland (NNW)
 - Riparian Woodland (RIPW)
 - Ruderal (RUD)
 - Southern Sycamore-Alder Riparian Woodland (SSARW)
- Ephemeral Drainage (ED)
- Intermittent Drainage (ID)
- Man-Induced Wetland (MIW)





**Figure 9:
Vegetation Communities
Map 9 of 12
Mesa 500 kV Substation Project**

- Survey Area/Project Area
- Action Area
- City Boundary
- Existing Substation
- Vegetation Communities**
 - California Annual Grassland (CAG)
 - California Walnut Woodland (CWW)
 - Coast Live Oak Woodland (CLOW)
 - Coastal Sage Scrub (CSS)
 - Disturbed/Developed (DEV)
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 - Non-Native Giant Reed (NNGR)
 - Non-Native Woodland (NNW)
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 - Ruderal (RUD)
 - Southern Sycamore-Alder Riparian Woodland (SSARW)
 - Ephemeral Drainage (ED)
 - Intermittent Drainage (ID)
 - Man-Induced Wetland (MIW)



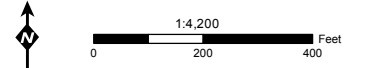
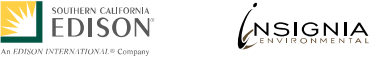
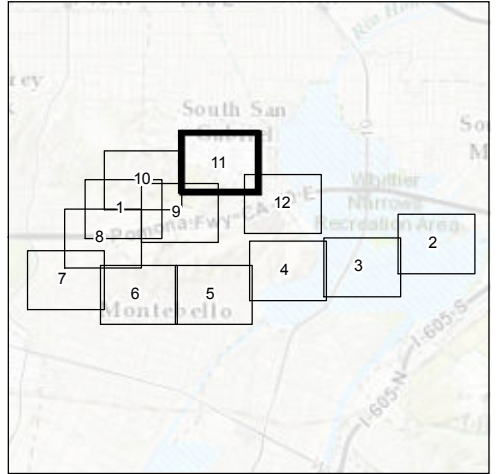
**Figure 9:
Vegetation Communities
Map 10 of 12
Mesa 500 kV Substation Project**





Figure 9:
Vegetation Communities
Map 11 of 12
Mesa 500 kV Substation Project

- Survey Area/Project Area
 Action Area
 City Boundary
 Existing Substation
- Vegetation Communities**
- California Annual Grassland (CAG)
 - California Walnut Woodland (CWW)
 - Coast Live Oak Woodland (CLOW)
 - Coastal Sage Scrub (CSS)
 - Disturbed/Developed (DEV)
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 - Non-Native Woodland (NNW)
 - Riparian Woodland (RIPW)
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 - Southern Sycamore-Alder Riparian Woodland (SSARW)
 - Ephemeral Drainage (ED)
 - Intermittent Drainage (ID)
 - Man-Induced Wetland (MIW)

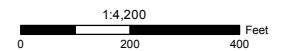
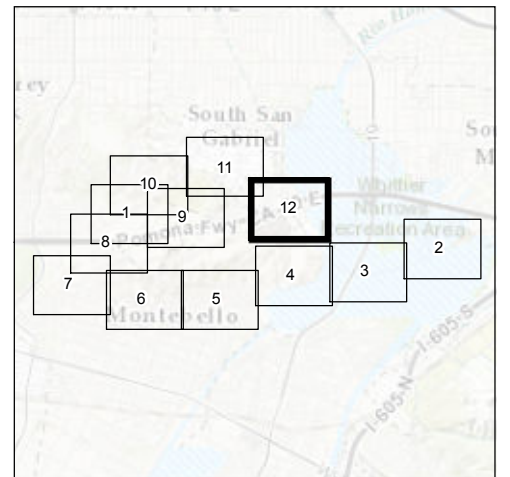


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**Figure 9:
Vegetation Communities
Map 12 of 12
Mesa 500 kV Substation Project**

- Survey Area/Project Area
- Action Area
- City Boundary
- Existing Substation
- Vegetation Communities**
 - California Annual Grassland (CAG)
 - California Walnut Woodland (CWW)
 - Coast Live Oak Woodland (CLOW)
 - Coastal Sage Scrub (CSS)
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 - Ephemeral Drainage (ED)
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 - Man-Induced Wetland (MIW)



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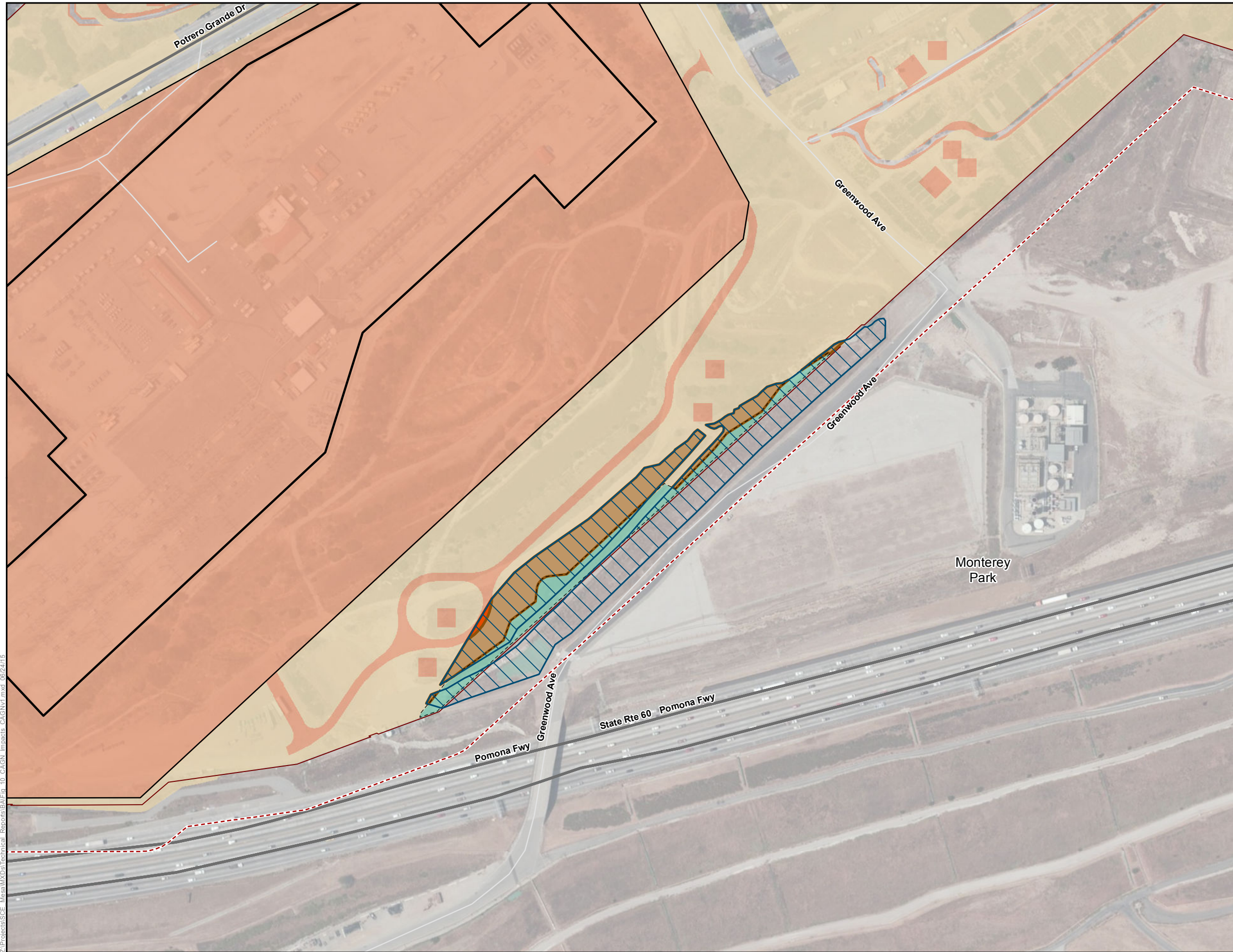
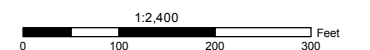
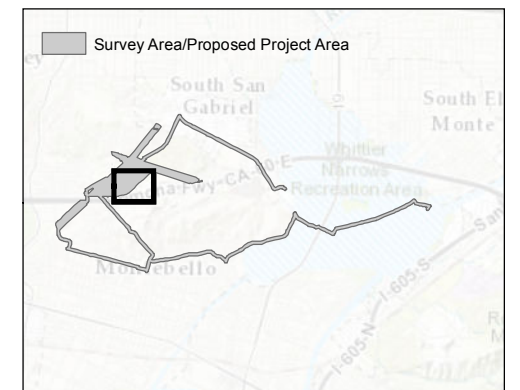


Figure 10:
Anticipated Impacts to Coastal
California Gnatcatcher Habitat
Mesa 500 kV Substation Project

- Survey Area/Project Area
 - Action Area
 - Proposed Substation Perimeter Wall
 - Existing Substation
 - Coastal California Gnatcatcher Occupied Breeding Habitat
- Project Impacts**
- Temporary
 - Permanent
 - No Impact (Restricted Use Area)
- Anticipated Impacts to Coastal California Gnatcatcher Habitat**
- Temporary
 - Permanent



ATTACHMENT A: COASTAL CALIFORNIA GNATCATCHER SURVEY REPORT



June 2, 2015

U.S. Fish and Wildlife Service
Attn: Stacey Love
Carlsbad Fish and Wildlife Office
2177 Salk Avenue, Suite 250
Carlsbad, California 92008

Subject: 45-day Report for Protocol Coastal California Gnatcatcher Surveys for the Proposed Southern California Edison Mesa 500 kilovolt Substation Project, Los Angeles County, California

Ms. Love:

This letter presents the 45-Day Report for U.S. Fish and Wildlife Service (USFWS) protocol breeding season surveys for the coastal California gnatcatcher (CAGN; *Polioptila californica californica*). Surveys were conducted for the proposed Southern California Edison (SCE) Mesa 500 kilovolt (kV) Substation Project (project) in Los Angeles County, California. Rocks Biological Consulting (RBC) performed the surveys described in this report under contract to Insignia Environmental.

The project is located primarily in the City of Monterey Park, with other project features within unincorporated areas of Los Angeles County and Montebello, Rosemead, South El Monte, Commerce, Bell Gardens, and Pasadena, California. The project is within the El Monte and Los Angeles U.S. Geological Survey (USGS) 7.5-minute series quadrangle maps (Figure 1). These surveys were performed in support of a Biological Assessment (BA) for a formal Section 7 consultation with the USFWS.

The 2015 CAGN survey area was determined by creating a 150-foot buffer around all project features using a Geographic Information System (GIS) and surveying all suitable CAGN habitat within the buffer. Suitable CAGN habitat observed within or immediately adjacent to the buffer area included moderate and high quality coastal sage scrub (CSS), disturbed/fragmented CSS, revegetated CSS, and ruderal, weedy areas in close proximity to CSS. The dominant species within suitable habitat included California sagebrush (*Artemisia californica*), coyote brush (*Baccharis pilularis*), California buckwheat (*Eriogonum fasciculatum*), black sage (*Salvia mellifera*), lemonadeberry (*Rhus integrifolia*), and laurel sumac (*Malosma laurina*).

Non-suitable habitats within the project area included developed areas, highly disturbed areas with low-growing annual vegetation, dirt roads, agricultural fields, and riparian habitat and ornamental vegetation that are not immediately adjacent to CSS.

Survey methodology followed the USFWS presence/absence survey protocol (1997) for non-NCCP areas, which requires six (6) protocol surveys be conducted during the CAGN breeding season (March 15 – June 30). Surveyors Lee Ripma (TE-221290-3.1) and Garrett Huffman (TE-20168A-0) conducted the surveys weekly across approximately 80 acres of suitable habitat at a rate of approximately 8 acres/hour. Taped vocalizations were used sparingly to elicit a CAGN response and were ceased upon hearing or observing a CAGN.

Please see Table 1 for survey dates, times, and conditions. The attached figures (1–3E) show the survey area, survey route, and location of observed CAGN. A list of the 56 bird species observed during the survey is included as Appendix A.

Table 1. Survey Conditions During California Gnatcatcher Surveys at the Proposed Southern California Edison Mesa 500 kilovolt Substation Project, Los Angeles County, California

CAGN Survey	Date	Surveyor	Time (Start-End)	Temp F (Start-End)	Cloud Cover (Start-End)	Wind Range in mph (Start-End)
#1	4/9/2015	Lee Ripma	0630-1155	52.7-78.7	20-0	0-1, 2-4
#1	4/10/2015	Lee Ripma	0640-1158	51.7-75.5	30-40	0-2, 1-3
#2	4/17/2015	Garrett Huffman	0600-1200	55-87	0-0	1-2, 1-3
#2	4/17/2015	Lee Ripma	0605-1105	54.8-72.4	0-0	1-3, 0-2
#3	4/23/2015	Garrett Huffman	0600-1200	57-73	70-60	0-2, 1-3
#3	4/24/2015	Lee Ripma	0550-1045	56.8-64.2	90-100	0-2, 1-3
#4	4/30/2015	Lee Ripma	0605-1145	57.8-95.5	5-30	0-2, 2-4
#4	5/1/2015	Lee Ripma	0610-1135	56.1-88.2	25-15	0-1, 2-4
#5	5/7/2015	Lee Ripma	0610-1150	60.5-71.3	95-90	0-1, 2-5
#5	5/8/2015	Lee Ripma	0615-1140	50.4-66.7	30-95	2-4, 0-2
#6	5/14/2015	Lee Ripma	0620-1155	59.6-71.2	60-100	0-1, 0-2
#6	5/15/2015	Lee Ripma	0610-1200	52.9-62.9	100-95	0-1, 2-4

Two pairs of CAGN were observed nesting within approximately 550 feet of each other at the Mesa Substation site (Figure 3A). During surveys 1–3, both pairs were observed in various stages of nest building, incubation, and/or caring for nestlings. During surveys 4–6, the two pairs were observed tending to their fledges. One pair had three fledges foraging with them and the other had two.

In addition CAGN were observed along the associated transmission, subtransmission, distribution, and telecommunications line areas (Figures 3B–3E). Four pairs of CAGN were consistently observed within the high quality CSS along the north side of Lincoln Avenue at the

base of the Montebello Hills oilfield (Figure 3C). The CSS in this area is USFWS-designated critical habitat for CAGN. These four CAGN pairs were observed on all six surveys in the same locations. Due to restricted access on private property, actual nests were not observed during surveys; however, all four CAGN pairs exhibited nesting behavior and three CAGN pairs were observed with fledges during later surveys. As such, three of these four pairs are mapped as CAGN nesting pairs with fledges and one is mapped as a nesting CAGN pair on Figure 3C.

In addition, one adult and one juvenile were observed foraging together south of N. Durfee Ave. during the final survey, but no nesting activity was observed during the first five surveys (Figure 3D). It is likely that these CAGN are primarily using the suitable habitat south of the survey area and occasionally forage in this area. This portion of the alignment is also within critical habitat for CAGN.

In summary, a total of six pairs of CAGN were observed nesting or exhibiting nesting behavior within the survey area during the 2015 breeding season surveys. One adult and one juvenile were also observed foraging within the survey area, but nesting behavior was not observed.

Please feel free to call me at (619) 508-3803 should you have any questions or concerns.

We certify that the information in this survey report and attached figures fully and accurately represent our work.

Sincerely,



Lee Ripma
TE-221290-3.1



Garrett Huffman
TE-20168A-0

Enclosures: Appendix A – Bird Species Observed
Figure 1 – USGS Quadrangle Map
Figure 2 – Coastal California Gnatcatcher Survey Area Overview
Figures 3A – 3E - Coastal California Gnatcatcher 2015 Survey Results

Appendix A. Bird Species Observed During Coastal California Gnatcatcher Protocol Surveys
at the Proposed Southern California Edison Mesa 500 kilovolt Substation Project, Los
Angeles County, California

Common Name	Scientific Name
Allen's hummingbird	<i>Selasphorus sasin</i>
American kestrel	<i>Falco sparverius</i>
Anna's hummingbird	<i>Calypte anna</i>
ash-throated flycatcher	<i>Myiarchus cinerascens</i>
Bewick's wren	<i>Thryomanes bewickii</i>
black phoebe	<i>Sayornis nigricans</i>
black-headed grosbeak	<i>Pheucticus melanocephalus</i>
blue grosbeak	<i>Passerina caerulea</i>
brown-headed cowbird*	<i>Molothrus ater</i>
bushtit	<i>Psaltiriparus minimus</i>
cactus wren	<i>Campylorhynchus brunneicapilus</i>
coastal California gnatcatcher	<i>Polioptila californica californica</i> (FT)
California quail	<i>Callipepla californica</i>
California thrasher	<i>Toxostoma redivivum</i>
California towhee	<i>Melospiza crissalis</i>
Cassin's kingbird	<i>Tyrannus vociferans</i>
cedar waxwing	<i>Bombocilla cedrorum</i>
cliff swallow	<i>Petrochelidon pyrrhonota</i>
common raven	<i>Corvus corax</i>
common yellowthroat	<i>Geothlypis trichas</i>
Cooper's hawk	<i>Accipiter cooperii</i> (WL)
double-crested cormorant	<i>Phalacrocorax auritus</i>
European starling*	<i>Sturnus vulgaris</i>
great blue heron	<i>Ardea herodias</i>
great egret	<i>Ardea alba</i>
great-tailed grackle	<i>Quiscalus mexicanus</i>
hooded oriole	<i>Icterus cucullatus</i>
house finch	<i>Carpodacus mexicanus</i>
house wren	<i>Troglodytes aedon</i>
killdeer	<i>Charadrius vociferus</i>
Lazuli bunting	<i>Passerina amoena</i>
least Bell's vireo	<i>Vireo bellii pusillus</i> (FE, SE)
lesser goldfinch	<i>Spinus psaltria</i>
mallard	<i>Anas platyrhynchos</i>
mourning dove	<i>Zenaidura macroura</i>
northern mockingbird	<i>Mimus polyglottos</i>
northern rough-winged swallow	<i>Stelgidopteryx serripennis</i>
Nuttall's woodpecker	<i>Picoides nuttallii</i>
orange-crowned warbler	<i>Oreothlypis celata</i>
pacific-slope flycatcher	<i>Empidonax difficilis</i>
phainopepla	<i>Phainopepla nitens</i>

red-tailed hawk	<i>Buteo jamaicensis</i>
rock pigeon*	<i>Columba livia</i>
rufous hummingbird	<i>Selasphorus rufus</i>
Say's phoebe	<i>Sayornis saya</i>
song sparrow	<i>Melospiza melodia</i>
spotted towhee	<i>Pipilo maculatus</i>
Swainson's thrush	<i>Catharus ustulatus</i>
warbling vireo	<i>Vireo gilvus</i>
western kingbird	<i>Tyrannus verticalis</i>
western scrub-jay	<i>Aphelocoma californica</i>
western tanager	<i>Piranga ludoviciana</i>
white-throated swift	<i>Aeronautes saxatalis</i>
Wilson's warbler	<i>Cardellina pusilla</i>
yellow warbler	<i>Setophaga petechia</i> (SSC)
yellow-breasted chat	<i>Icteria virens</i> (SSC)

FE: Listed as Endangered by USFWS

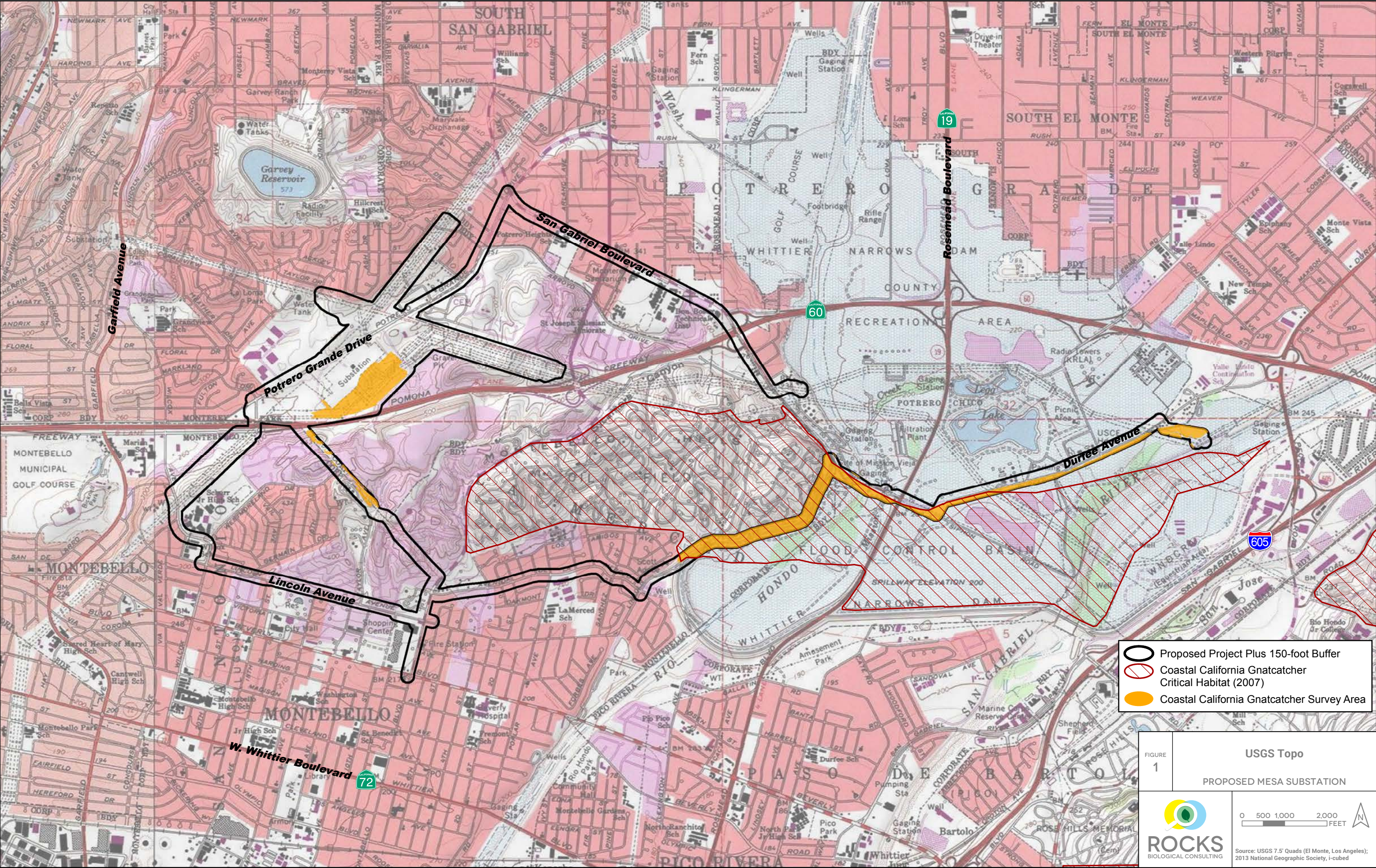
FT: Listed as Threatened by USFWS

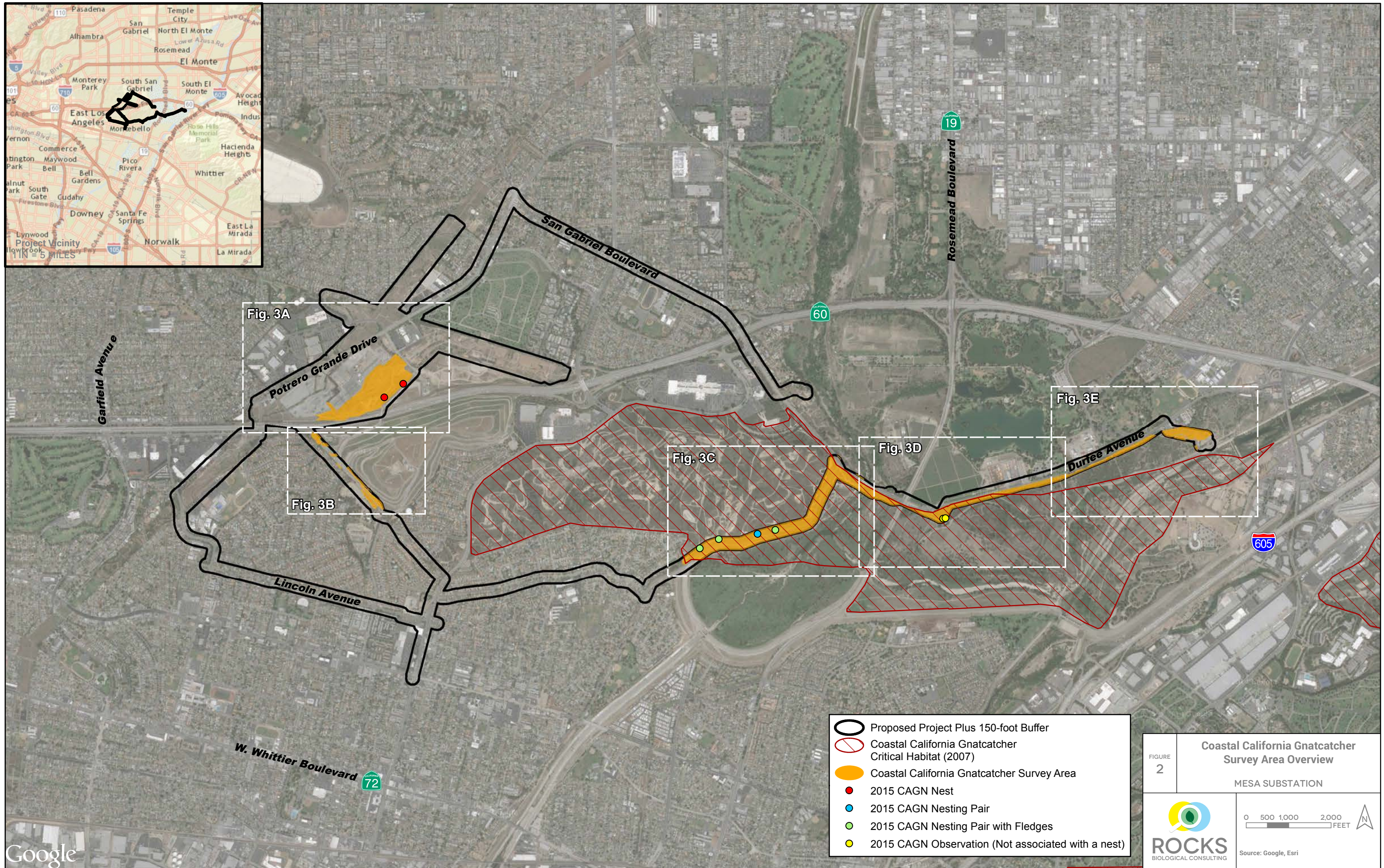
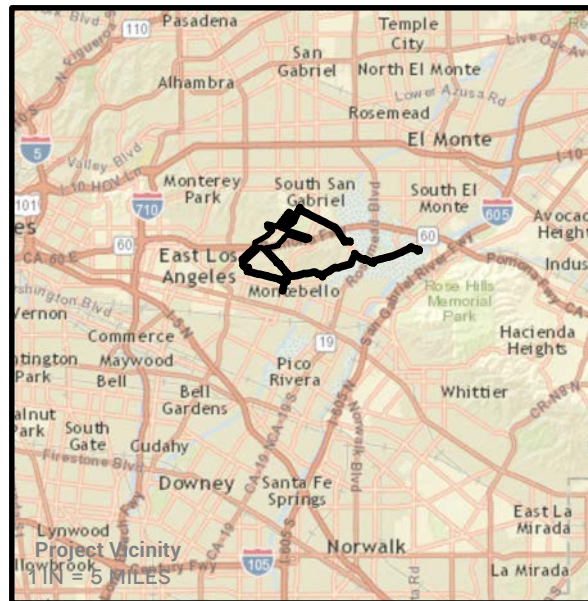
SE: Listed as Endangered by California Department of Fish and Wildlife

WL: California Department of Fish and Wildlife Watch List

SSC: California Department of Fish and Wildlife Species of Special Concern

*Introduced Species





	Proposed Project Plus 150-foot Buffer
	Coastal California Gnatcatcher Critical Habitat (2007)
	Coastal California Gnatcatcher Survey Area
	2015 CAGN Nest
	2015 CAGN Nesting Pair
	2015 CAGN Nesting Pair with Fledges
	2015 CAGN Observation (Not associated with a nest)

FIGURE 2	Coastal California Gnatcatcher Survey Area Overview
	MESA SUBSTATION
0 500 1,000 2,000 FEET	
Source: Google, Esri	



- Proposed Project Plus 150-foot Buffer
- Coastal California Gnatcatcher Survey Area
- Survey Route
- 2015 CAGN Nest

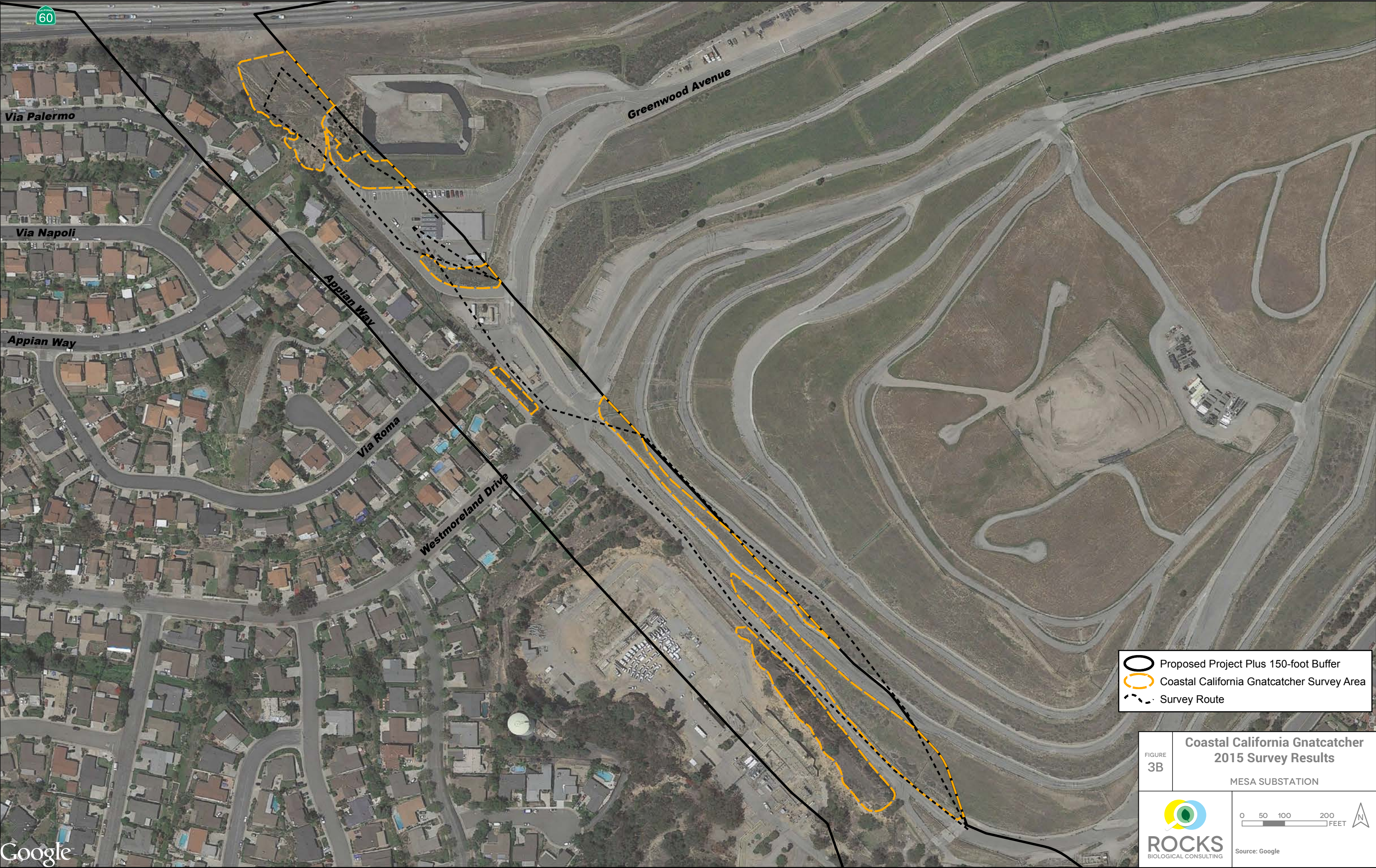
FIGURE
3A

**Coastal California Gnatcatcher
2015 Survey Results**

MESA SUBSTATION



Source: Google



Proposed Project Plus 150-foot Buffer
Coastal California Gnatcatcher Survey Area
Survey Route

FIGURE
3B

Coastal California Gnatcatcher
2015 Survey Results

MESA SUBSTATION





- Proposed Project Plus 150-foot Buffer
- Coastal California Gnatcatcher Critical Habitat (2007)
- Coastal California Gnatcatcher Survey Area
- Survey Route
- 2015 CAGN Nesting Pair
- 2015 CAGN Nesting Pair with Fledges

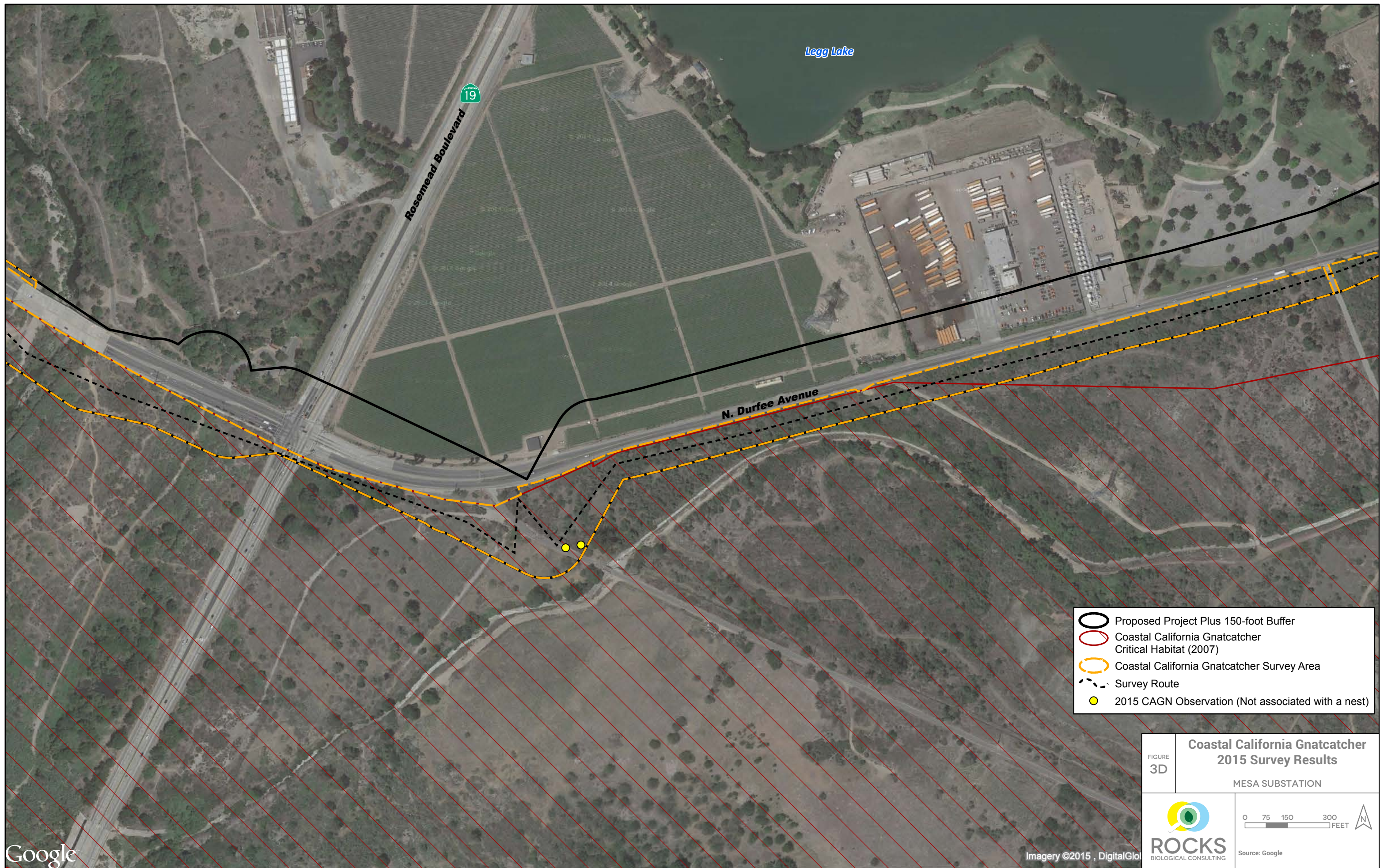
FIGURE
3C

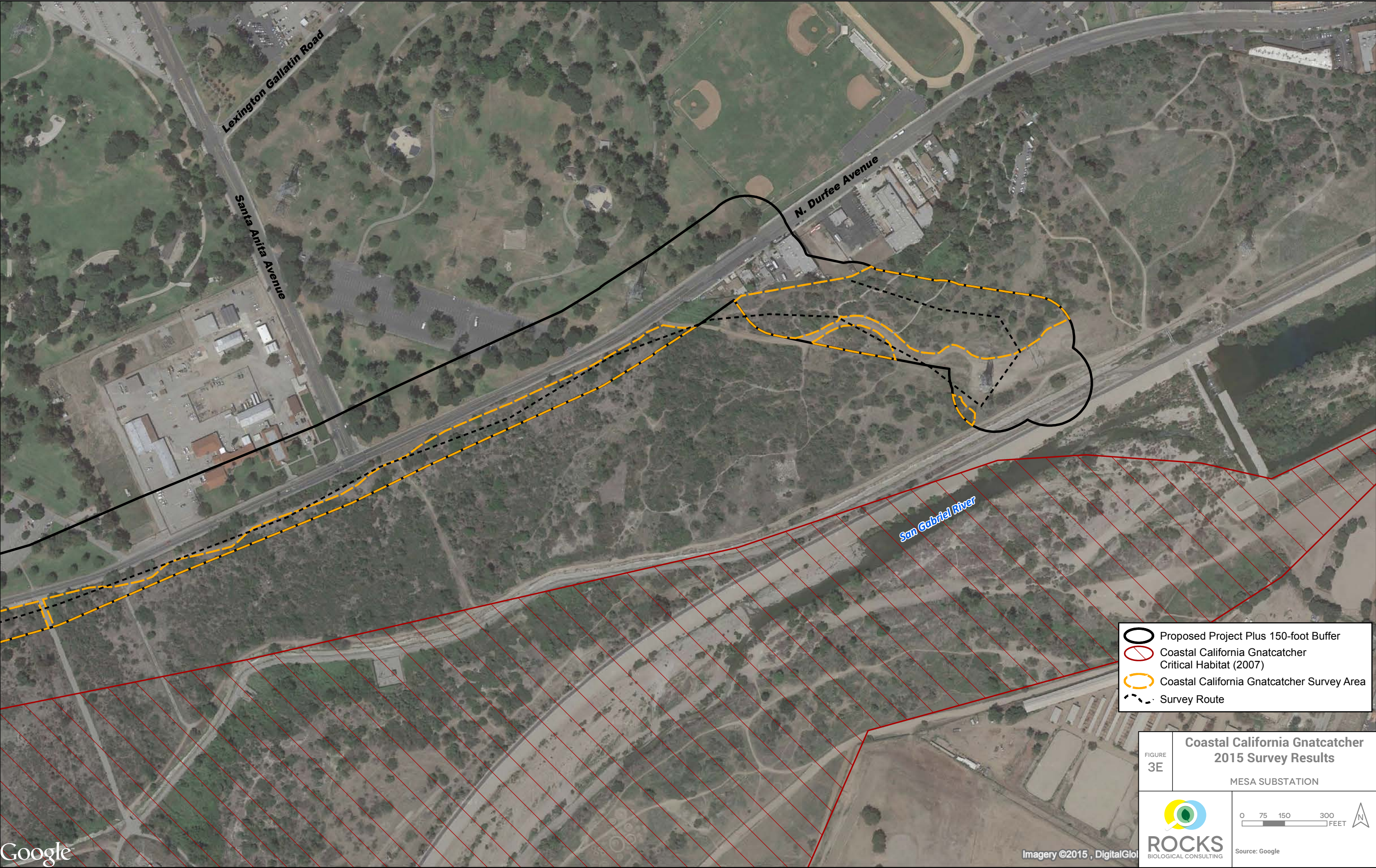
**Coastal California Gnatcatcher
2015 Survey Results**

MESA SUBSTATION



Source: Google





- Proposed Project Plus 150-foot Buffer
- Coastal California Gnatcatcher Critical Habitat (2007)
- Coastal California Gnatcatcher Survey Area
- Survey Route

FIGURE
3E

Coastal California Gnatcatcher
2015 Survey Results

MESA SUBSTATION



Source: Google

ATTACHMENT B: REPRESENTATIVE PHOTOGRAPHS

ATTACHMENT B: REPRESENTATIVE PHOTOGRAPHS



Photograph 1:
Ruderal grassland and
disturbed/developed
vegetation at the Mesa
Substation site.



Photograph 2:
Disturbed riparian
vegetation at the Mesa
Substation site.



Photograph 3:
Ruderal vegetation at the
Mesa Substation site.



Photograph 4:
Mule fat scrub within the
Proposed Project area.



Photograph 5:
Sparsely vegetated
ephemeral channel at the
Mesa Substation site.



Photograph 6:
Coastal sage scrub south of
the Mesa Substation.



Photograph 7:
Dense coastal sage scrub
north of Lincoln Avenue in
the Montebello Hills area.



Photograph 8:
Coastal sage scrub north of
Lincoln Avenue in the
Montebello Hills area.



Photograph 9:
The Rio Hondo Corridor
within the Proposed Project.



Photograph 10:
Sparse scrub habitat at the
Whittier Narrows
Recreation Area.

ATTACHMENT F: HISTORIC PROPERTIES AND CULTURAL RESOURCES SUMMARY

Information in Attachment F is sensitive and may be available upon request