BUSBY
Biological Services

May 1, 2015

Ms. Stacey Love
Recovery Permits Coordinator
Carlsbad Fish and Wildlife Office
2177 Salk Avenue, Suite 250
Carlsbad, California 92008

RE: COASTAL CALIFORNIA GNATCATCHER SURVEY SUMMARY REPORT FOR AREAS NOT PREVIOUSLY SURVEYED FOR THE PROPOSED SAN DIEGO GAS & ELECTRIC COMPANY SYCAMORE TO PEÑASQUITOS 230 kV TRANSMISSION LINE PROJECT, SAN DIEGO COUNTY, CALIFORNIA

Ms. Love:

This letter report summarizes the results of the focused, protocol-level, presence/absence surveys for the federally listed threatened coastal California gnatcatcher (*Polioptila californica californica*) for portions of the proposed Sycamore to Peñasquitos 230 Kilovolt (kV) Transmission Line Project (Proposed Project) that were not previously surveyed for the Proposed Project because they were added after the initial focused coastal California gnatcatcher surveys were conducted in fall 2013. Busby Biological Services, Inc. (BBS) was contracted by Chambers Group, Inc. (Chambers) to conduct these surveys on behalf of San Diego Gas & Electric Company (SDG&E) to evaluate the potential impacts of the Proposed Project.

This survey summary report focuses on the methods and results used to evaluate areas along the main alignment that were not previously surveyed for the Proposed Project. A separate report was prepared to summarize the methods and results for the surveys performed for the Encina Hub portion of the Proposed Project. This report is titled *Coastal California Gnatcatcher Survey Summary Report for the Encina Hub Portion of the Proposed San Diego Gas & Electric Company Sycamore to Peñasquitos 230 kV Transmission Line Project, San Diego County, California* and dated April 28, 2015.

BACKGROUND INFORMATION

A brief summary of the Proposed Project and coastal California gnatcatcher are provided in this section.

Proposed Project Location and Description

The Proposed Project includes construction of a new, approximately 16.7-mile 230 kV transmission line between the existing SDG&E Sycamore Canyon and Peñasquitos substations; the consolidation of two existing 69 kV power lines onto new double-circuit, steel structures that would replace existing, predominantly wood structures; and re-routing at the Encina and Mira Mesa Hubs. All new transmission line facilities would be located within existing SDG&E Right-of-Way (ROW) or within franchise position within existing

public roadways, and the entire Proposed Project is located within San Diego County (Appendix A: Figure 1).

Brief Survey Area Explanation

Focused coastal California gnatcatcher surveys were conducted for the Proposed Project within all suitable habitats within and adjacent to the current Proposed Project alignment.

During fall 2013, focused, protocol-level, non-breeding season coastal California gnatcatcher surveys were conducted within the original Biological Survey Area (BSA), which included a 500-foot-wide survey corridor along the approximately 16.7-mile Proposed Project alignment, the Sycamore Canyon and Peñasquitos Substations, and the proposed Sycamore and Stowe construction yards (Appendix A: Figures 1 through 3). The results of the fall 2013 coastal California gnatcatcher surveys conducted within the original BSA were summarized previously in a separate survey summary report, titled *Coastal California Gnatcatcher Survey Summary Report for the Proposed San Diego Gas & Electric Company Sycamore to Peñasquitos 230 kV Transmission Line Project, San Diego County, California* and dated January 14, 2014.

During Spring 2015, subsequent focused, protocol-level, breeding season coastal California gnatcatcher surveys were conducted within and adjacent to the portions of the current BSA that were added after the original BSA had already been surveyed, including access roads, staging yards, the Encina Hub, the Mira Mesa Hub, and all other associated work areas (Appendix A: Figures 1 through 4).

Because the Encina Hub is located in a geographically distinct location and is not within the immediate vicinity of the main Proposed Project alignment (Appendix A: Figure 1), two separate survey summary reports were prepared for the spring 2015 surveys, one for the coastal California gnatcatcher surveys conducted at Encina Hub and one for the surveys that were conducted along the main Proposed Project alignment. This report focuses on the results of the focused coastal California gnatcatcher surveys conducted that were conducted in the suitable habitat along the main Proposed Project alignment that was not surveyed previously.

The results of the focused coastal California gnatcatcher surveys in the original BSA, new areas along the main alignment, and the Encina Hub will be compiled so that all survey results are utilized to inform future Proposed Project planning efforts.

Coastal California Gnatcatcher Species Information

The coastal California gnatcatcher is a small, blue-gray, non-migratory songbird that is a federally listed threatened species and a California Department of Fish and Wildlife (CDFW) species of special concern. One of three subspecies of the California gnatcatcher (*Polioptila californica*), the coastal California gnatcatcher has one of the most limited distributions of any bird species in North America (Atwood 1991). The coastal California gnatcatcher occurs on coastal slopes in southern California, from the coast and foothills of southern Ventura County, south through Los Angeles County, Orange County, southwestern San Bernardino County, western Riverside County, and San Diego County, and south into northwestern Baja California, Mexico (Atwood 1991).

The coastal California gnatcatcher typically occurs from sea level to approximately 2,500 feet in elevation in or near coastal sage scrub habitat, which is patchily distributed throughout the species' range. The species occurs most frequently within coastal sage scrub stands on mesas, gently sloping areas, and along the lower slopes of the coast ranges that are dominated by California sagebrush (*Artemisia californica*) (Atwood 1990). Other plant species important for the nesting and foraging of this species include California buckwheat (*Eriogonum fasciculatum*), white sage (*Salvia apiana*), black sage (*Salvia mellifera*), coyote brush (*Baccharis pilularis*), and broom baccharis (*Baccharis sarothroides*). Chamise (*Adenostoma fasciculatum*) habitats may also support breeding pairs, especially where coastal sage scrub may occur nearby or form a component of the habitat (Bontrager 1991).

The coastal California gnatcatcher typically occurs in high frequencies and densities in coastal sage scrub with a slope gradient of less than 40 percent and with an open or broken canopy with a shrub cover of 20 to 60 percent and a shrub height of 3 to 4 feet. The coastal California gnatcatcher occurs in low frequencies and densities or is absent in coastal sage scrub with a very short or tall shrub height and with a dense or closed canopy (Weaver 1998); this species is usually absent from coastal sage scrub dominated by tall shrubs. Territory size is highly variable as vegetation density decreases with distance from the coast, probably as a result of food resource availability, ranging from less than 1 hectare along the coast to over 9 hectares inland (Braden 1997, Preston et al. 1998, Atwood et al. 1998). Nonbreeding season home range size is about 80 percent larger than breeding season home range (Preston et al. 1998, Bontrager 1991).

While predominantly dependent on coastal sage scrub, the coastal California gnatcatcher also uses other habitats and shows seasonal and daily patterns in such use of these habitats. In particular, the coastal California gnatcatcher has been documented using chaparral, grassland, and riparian habitats where these habitats occur adjacent to coastal sage scrub and especially when these habitats are mesic and not summer-deciduous. The use of these habitats appears to be most frequent during late summer, autumn, and winter for dispersal and during periods of drought for dispersal and foraging opportunities; however, breeding territories have also been documented outside of coastal sage scrub habitat (Campbell *et al.* 1998). Factors contributing to the gnatcatcher's use of alternative habitats may include improved food source availability, higher survival rates during juvenile dispersal, fire avoidance, cooler microclimate during heat stress, and lower predation rates for juveniles (Campbell *et al.* 1998).

The coastal California gnatcatcher becomes highly territorial each year by late February or early March, and males generally become more vocal during this period (Mock *et al.* 1990). In southwestern San Diego County, where the Proposed Project is located, the mean breeding season territory size ranges from 12 to 27 acres per pair, and nonbreeding season territory size ranges from 12 to 42 acres per pair (Preston *et al.* 1998). During the nonbreeding season, the coastal California gnatcatcher has been observed to wander in adjacent territories and unoccupied habitat, increasing its home range size to approximately 78 percent larger than its breeding territory (Preston *et al.* 1998).

The coastal California gnatcatcher breeding season extends from mid-February through the end of August, with peak nesting activity occurring from mid-March through mid-May. Nest building begins in mid-March, with the earliest recorded egg date of March 20 (Mock *et al.* 1990). The nest of the coastal California gnatcatcher is a small, cup-shaped basket usually

found 1 to 3 feet above the ground in a small shrub. Clutch size ranges between three and five eggs. Juvenile birds associate with their parents for several weeks (sometimes months) after fledging (Atwood 1990). Post breeding dispersal of fledglings occurs between late May and late November. The coastal California gnatcatcher is a persistent nest builder and often attempts multiple broods, which suggests high reproductive potential. However, this is typically offset by high rates of nest predation and brood parasitism (Atwood 1990; Grishaver *et al.* 1998).

The principal reasons for the federally threatened status of the coastal California gnatcatcher is the loss, fragmentation, and adverse modification of habitat from urban and agricultural development, wildfire, invasive nonnative plants, grazing, nest predation, and brood parasitism by brown-headed cowbirds (*Molothrus ater*) (Mock et al. 1990,). It is estimated that up to 90 percent of coastal sage scrub vegetation has been lost as a result of development and land conversion, and coastal sage scrub is considered to be one of the most depleted habitat types in the United States (Kirkpatrick and Hutchinson 1977; O'Leary 1990; Westman 1981a-b; Barbour and Major 1977; Bontrager 1991; USFWS 2007, USFWS 2010).

METHODS

A habitat assessment and focused, protocol-level, breeding season coastal California gnatcatcher surveys were performed within suitable habitat located in or within 300 feet of areas that have been added to the Proposed Project since the initial coastal California gnatcatcher surveys were conducted within the original BSA in fall 2013 (Appendix A: Figures 2 through 4). The methods used for the habitat assessment and focused, protocol-level surveys are presented in this section.

Habitat Assessment Methods

Prior to initiating the focused, protocol-level, breeding coastal California gnatcatcher surveys for the Proposed Project, a focused habitat assessment was conducted by U.S. Fish and Wildlife Service (USFWS) permitted biologists to identify locations of suitable coastal California gnatcatcher habitat located in or within 300 feet of areas that have been added to the Proposed Project since the initial coastal California gnatcatcher surveys were conducted in fall 2013 (Appendix A: Figures 2 through 4). The habitat assessment was composed of several steps, including office components and field components described in the following paragraphs.

Initially, historical occurrence data for coastal California gnatcatcher that have been reported from within 5 miles of the Proposed Project were evaluated prior to conducting the habitat assessment field survey for coastal California gnatcatcher. A Geographic Information Systems (GIS) specialist generated a map from the most recent version of the CDFW *California Natural Diversity Database* (CNDDB; CDFW 2014) and other databases identifying reported coastal California gnatcatcher detections within a 5-mile buffer of the Proposed Project to allow USFWS-permitted biologists to view the historic distribution of coastal California gnatcatcher within the vicinity of the Proposed Project.

Next, USFWS-permitted biologists conducted a field habitat assessment for potential coastal California gnatcatcher habitat within the areas that were added to the Proposed Project after the initial focused coastal California gnatcatcher surveys were conducted in

fall 2013 (Appendix A: Figures 2 and 3). The field habitat assessment was conducted by driving to strategic vantage points within the Proposed Project area and assessing the vegetation communities first through use of binoculars when access was prohibited or limited because of private property or fencing or when views of potentially suitable habitat were unobstructed. Biologists assessed potential habitat on foot when these areas could not be viewed through binoculars because of obstructions or to gain a closer look at the plant species composition within the potentially suitable habitat.

Polygons of suitable habitat were hand-drawn onto high-resolution aerial field maps. The polygons on these field maps were later screen-digitized in the office by a GIS specialist using ArcGIS software. Finally, survey boundaries were adjusted and potentially suitable coastal California gnatcatcher habitat was either added or eliminated from the coastal California gnatcatcher survey area through closer investigation on foot during the first round of focused, protocol-level, breeding coastal California gnatcatcher surveys.

Focused Coastal California Gnatcatcher Survey Methods

Focused surveys for coastal California gnatcatcher were conducted by USFWS-permitted biologists in accordance with the current USFWS survey protocol for coastal California gnatcatcher surveys within NCCP areas, titled *Coastal California Gnatcatcher* (Polioptila californica californica) *Presence/Absence Survey Guidelines* and dated February 28, 1997.

Three surveys were conducted between approximately 6:00am and 12:00pm and avoided periods of adverse weather conditions (e.g., excessively hot or cold temperatures, high winds, steady rain, dense fog, other inclement weather conditions) that would impede detection of the coastal California gnatcatcher. Surveyors slowly walked throughout the suitable habitat identified within and adjacent to the Proposed Project during the habitat assessment and used visual and auditory cues to detect the coastal California gnatcatcher. Various routes were utilized to conduct an unbiased survey of the potentially suitable habitat within the survey area.

Pre-recorded coastal California gnatcatcher vocalization playbacks were only used to elicit initial calls from coastal California gnatcatcher and were not used frequently or to elicit further behaviors. Pre-recorded vocalizations were played for a period of 5 to 15 seconds and were generally repeated approximately every 100 feet within the surveyed habitat. No more than approximately 80 acres of suitable habitat were surveyed per day, per USFWS-permitted biologist.

For each coastal California gnatcatcher detection, surveyors recorded the approximate location electronically using a hand-held Global Positioning Systems (GPS) device and/or by hand onto a high resolution aerial image of the survey areas. Surveyors also estimated the age, sex, and number of individuals detected and included notes about each detection. In addition, surveyors recorded other wildlife species observed directly or detected indirectly by sign, including scat, tracks, calls, and other evidence.

RESULTS

The results of the habitat assessment and focused, protocol-level coastal California gnatcatcher surveys are presented in this section.

Habitat Assessment Results

BBS biologists, Darin Busby and Laurie Gorman, conducted the field habitat assessment for coastal California gnatcatcher within and adjacent to the portions of the Proposed Project that were added after the initial coastal California gnatcatcher surveys were conducted (Appendix A: Figures 2 and 3). The habitat assessment was conducted during various field visits during fall 2014 and winter 2014/2015 as these new areas were added to the Proposed Project.

The initial assessment of potentially suitable coastal California gnatcatcher habitat was further refined by BBS biologist, Laurie Gorman, through closer investigation on foot during the first round of focused, protocol-level coastal California gnatcatcher surveys. A total of approximately 149.21 acres of potentially suitable coastal California gnatcatcher habitat that had not previously been surveyed was surveyed during the spring 2015 surveys (Appendix A: Figure 4).

Potentially suitable habitat for the coastal California gnatcatcher that required surveys included Diegan coastal sage scrub and its various sub-associations, including disturbed Diegan coastal sage scrub and revegetated coastal sage scrub (Appendix A: Figure 4). Additionally, the following vegetation communities within the survey area were considered potentially suitable for the coastal California gnatcatcher where Diegan coastal sage scrub or its sub-associations occurred nearby or formed a component of the habitat: coastal sage-chaparral scrub, chamise chaparral, disturbed chamise chaparral, southern mixed chaparral, southern mixed chaparral-disturbed, and ornamental. The potentially suitable habitat that was identified within these vegetation communities listed above typically has an open or broken canopy with a shrub cover of 20 to 60 percent, a shrub height of 3 to 4 feet, and contains the following species that either dominate or form a component of the vegetation communities: California sagebrush, California buckwheat, white sage, black sage, coyote brush, and broom baccharis.

Vegetation communities excluded from the focused, protocol-level coastal California gnatcatcher surveys because they were determined through field reconnaissance not to contain suitable habitat for the species consist primarily of chaparral and scrub communities with vegetation that is too short, too tall, or too sparse; fire-recovering communities dominated or sub-dominated by deerweed (*Acmispon glaber*); and communities where Diegan coastal sage scrub and/or its components are minimal or lacking.

The following paragraphs provide a description of the vegetation communities that were considered suitable or potentially suitable coastal California gnatcatcher habitat.

Diegan Coastal Sage Scrub

Diegan coastal sage scrub is a wide-spread vegetation community ranging from coastal Los Angeles County into northern Baja California. It consists mainly of low, soft-woody sub-shrubs (approximately 3 feet high) that are most actively growing in winter and early spring and are facultatively drought-deciduous. Within the Biological Survey Area (BSA) for the Proposed Project, this vegetation community is dominated by a variable mix of California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), black

sage (*Salvia melifera*), laurel sumac (*Malosma laurina*), deerweed (*Acmispon glaber*), broom baccharis (*Baccharis sarathroides*), coyote brush (*Baccharis pilularis*), California sunflower (*Encelia californica*), and occasionally live-forevers (*Dudleya* spp.) and coast barrel cactus (*Ferocactus viridescens*).

Variations of this vegetation community within and adjacent to the Proposed Project alignment include disturbed Diegan coastal sage scrub and revegetated coastal sage scrub. Disturbed Diegan coastal sage scrub contains many of the same species that are found in undisturbed Diegan coastal sage scrub but may contain various types of disturbance, ranging from a predominance of invasive or ornamental species, physical disturbance from grading or fire management activities, or a recent history of fire. Revegetated coastal sage scrub is a subtype of coastal sage scrub that represents a restored coastal sage scrub vegetation community planted with container plants and/or a seed mix typically after an area was disturbed or recontoured as the result of a development or related project.

Coastal California gnatcatcher surveys were conducted in the majority of the Diegan coastal sage scrub and its variations, discussed above, within and adjacent to the Proposed Project alignment that were determined to contain suitable habitat for the species and that had not been previously surveyed in fall 2013. However, for reasons discussed in the introduction to this section, some areas within these communities were not surveyed for coastal California gnatcatcher because they were determined through field reconnaissance not to contain suitable habitat for the species.

Coastal Sage-Chaparral Scrub

Coastal sage-chaparral scrub is a mixed community including both drought-deciduous sage scrub species and woody chaparral species. This vegetation community is a post-fire successional community containing vegetative cover that includes roughly equal amounts of both sage scrub and chaparral species. Characteristic dominant species often include chamise (*Adenostoma fasciculatum*), California sagebrush, lilacs (*Ceanothus* spp.), black sage, broom baccharis, laurel sumac, lemonadeberry (*Rhus integrifolia*), and poison oak (*Toxicodendron diversilobum*). Plant species detected within the BSA included chamise, California sagebrush, California buckwheat, black sage, laurel sumac, lemonadeberry, and mission manzanita (*Xylococcus bicolor*).

Coastal California gnatcatcher surveys were conducted in the majority of the coastal sage-chaparral scrub within and adjacent to the Proposed Project alignment determined to contain moderately suitable habitat for the species. However, for reasons discussed in the introduction to this section, some areas within these communities were not surveyed for coastal California gnatcatcher because they were determined through field reconnaissance not to contain suitable habitat for the species.

Chamise Chaparral

Chamise chaparral is widely distributed throughout California on dry slopes and ridges at low and medium elevations where it occupies thin, rocky, or heavy soils. It is typically composed of broad-leaved, sclerophyllous shrubs (e.g., bearing stiff, leathery leaves), although species composition varies considerably with location. Within the BSA, chamise chaparral is characterized by nearly monotypic stands of chamise ranging from 3 to 9 feet

in height. Additional shrub species, such as mission manzanita, may be present, but contribute little to the overall cover.

Variations of this vegetation community within and adjacent to the Proposed Project alignment include chamise chaparral-disturbed that contains many of the same species that are found in undisturbed chamise chaparral but contain various types of disturbance, ranging from a predominance of invasive or ornamental species, physical disturbance from grading or fire management activities, to a recent history of fire.

The majority of the chamise chaparral and chamise chaparral-disturbed within and adjacent to the Proposed Project alignment is characterized by nearly monotypic stands of chamise and does not provide suitable habitat for coastal California gnatcatcher. However, small scattered patches of coastal sage scrub associated species, such as black sage, broom baccharis, and California buckwheat, were identified in portions of the BSA and were determined through field reconnaissance to provide marginally suitable habitat for coastal California gnatcatcher; therefore, these small patches of chamise chaparral and chamise chaparral-disturbed were surveyed for coastal California gnatcatcher.

Southern Mixed Chaparral

Southern mixed chaparral tends to occur on steeper, more mesic north-facing slopes than chamise chaparral. This vegetation community type is characterized by relatively high species diversity. Within the BSA, species include chamise, mission manzanita, coast spice bush (*Cneoridium dumosum*), Nuttall's scrub oak (*Quercus dumosa*), Ramona-lilac (*Ceanothus tomentosus*), summer-holly (*Comarostaphylis diversifolia*), lemonadeberry, holly-leaf red berry (*Rhanmus ilicifolia*), and toyon (*Heteromeles arbutifolia*).

Variations of this vegetation community within and adjacent to the Proposed Project alignment include southern mixed chaparral-disturbed that contains many of the same species that are found in undisturbed southern mixed chaparral but may contain various types of disturbance, ranging from a predominance of invasive or ornamental species, physical disturbance from grading or fire management activities, to a recent history of fire.

The majority of the southern mixed chaparral and southern mixed chaparral-disturbed within and adjacent to the Proposed Project alignment is dominated by tall, dense, and/or woody shrubs that do not provide suitable habitat for coastal California gnatcatcher. However, small scattered patches of coastal sage scrub associated species, such as black sage, broom baccharis, and California buckwheat, were identified in portions of the BSA and were determined through field reconnaissance to provide marginally suitable habitat for coastal California gnatcatcher; therefore, these small patches of southern mixed chaparral and southern mixed chaparral-disturbed were surveyed for coastal California gnatcatcher.

Ornamental

Ornamental vegetation typically consists of nonnative landscaping and/or garden plantings that have been planted in association with buildings, roads, or other development. Occasionally, ornamental species such as rock rose (*Cistus* sp.) were found growing within the BSA away from urban areas and may be naturalizing.

The majority of the ornamental areas within and adjacent to the Proposed Project alignment are dominated by nonnative vegetation that does not provide suitable habitat for coastal California gnatcatcher. However, small scattered patches of coastal sage scrub associated species, such as California sagebrush, California buckwheat, black sage, broom baccharis, and California sunflower, were identified in portions of landscaped areas within the BSA and were determined through field reconnaissance to provide marginally suitable habitat for coastal California gnatcatcher; therefore, these small patches of ornamental vegetation were surveyed for coastal California gnatcatcher.

Focused Coastal California Gnatcatcher Survey Results

A total of three focused, protocol-level, breeding season coastal California gnatcatcher survey rounds were conducted within approximately 149.21 acres of potentially suitable habitat between February 27 and April 7, 2015 (Appendix A: Figure 4). Each survey round took 3 days to complete because of the small, patchy distribution of suitable habitat within and adjacent to the Proposed Project alignment. All surveys were conducted during appropriate weather conditions by USFWS-permitted biologist Laurie Gorman (TE-233367-1). Appendix B provides a summary of survey conditions, including survey times, weather conditions, and name of surveyor.

During these coastal California gnatcatcher surveys, the number of coastal California gnatcatcher detections ranged from 13 individuals during survey rounds 1 and 3 to 17 individuals during survey round 2 (Table 1; Appendix A: Figures 5a and 5b-1 through 5b-7).

Table 1. Summary of Individuals Detected per Survey Round

Survey Round	Dates	Number of Individuals
Round 1	2/27/15 – 3/4/15	13
Round 2	3/11/15 – 3/13/15	17
Round 3	4/1/15 – 4/7/15	13

After reviewing the location of all detections during all three surveys, the total number of individual coastal California gnatcatcher within and adjacent to the Proposed Project in the areas that were not previously surveyed is estimated to be approximately 16 individuals. The estimated total number of individual coastal California gnatcatcher in this survey area is greater than the total number of individuals detected during two of the survey rounds because not all individuals were detected during each survey round. In addition, a range of detected individuals is provided based on our interpretation of whether each detected individual was newly detected or a previously detected.

Coastal California gnatcatcher detections during these surveys ranged from nesting adult pairs to solitary adult male and female individuals. Appendix C provides a more detailed breakdown of each detection, including the number of individuals, GPS coordinates, and brief notes about the detection.

The majority of coastal California gnatcatcher detections were within Diegan coastal sage scrub. During the breeding season, it is typical for coastal California gnatcatcher to remain in territories within higher quality habitats. During the fall, it is common for coastal California gnatcatcher to be detected in a variety of habitats not typically considered suitable during

the breeding season because adult nonbreeding season home range size compared to breeding season home range size increases by approximately 80 percent (Preston et al. 1998, Bontrager 1991), juveniles are dispersing through submarginal habitats, and adjacent habitats provide diverse foraging opportunities for individuals.

In addition to the coastal California gnatcatcher, 50 other wildlife species were detected during the focused coastal California gnatcatcher surveys. Appendix D provides a complete list of all wildlife species detected during the focused coastal California gnatcatcher surveys.

SUMMARY

Based on the results of these spring 2015 surveys, approximately 16 individual coastal California gnatcatchers are estimated within and adjacent to the portions of the main alignment of the Proposed Project that were not previously surveyed in fall 2013. Coastal California gnatcatchers were detected within a variety of vegetation communities, including Diegan coastal sage scrub, disturbed Diegan coastal sage scrub, revegetated coastal sage scrub, coastal sage-chaparral scrub, and southern mixed chaparral.

Please do not hesitate to contact Melissa Busby at melissa@busbybiological.com or 858.334.9507 or Darin Busby at darin@busbybiological.com or 858.334.9508 if you have any questions.

Sincerely,

Melissa Busby
Owner/Principal Biologist
Busby Biological Services, Inc.

Darin Busby
Owner/Principal Biologist
Busby Biological Services, Inc.

cc: Paul Morrissey, Chambers
Joshua Taylor, TRC
Elisha Back, TRC
Robert Fletcher, SDG&E

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PROJECT BIOLOGIST SIGNATURE PAGE

All biologists performing focused, protocol-level, coastal California gnatcatcher (*Polioptila californica californica*) surveys for the proposed Sycamore to Peñasquitos Substation 230 kilovolt transmission line project (Proposed Project) were permitted to survey for this species under Section 10(a)(1)(A) of the Endangered Species Act (ESA). The undersigned project biologists certify this report to be a complete and accurate account of the findings and conclusions of surveys for coastal California gnatcatcher conducted for the Proposed Project during spring 2015.

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Laurie Gorman
Senior Biologist/Project Manager
Busby Biological Services, Inc.
ESA Permit Number TE-233367-1

APPENDIX A – Figures

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Sycamore to Peñasquitos 230 kV Transmission Line Project

Project Location Map

Figure 1

- Proposed Project Route
- Staging Yards
- Encina Hub
- Mira Mesa Hub

0 2 4 6 Miles

4/28/2015

TRC

SDGE A Sempra Energy utility

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Sycamore to Peñasquitos 230 kV Transmission Line Project

Location Map

Figure 2

CAGN Habitat Assessment and Survey Area (2013)

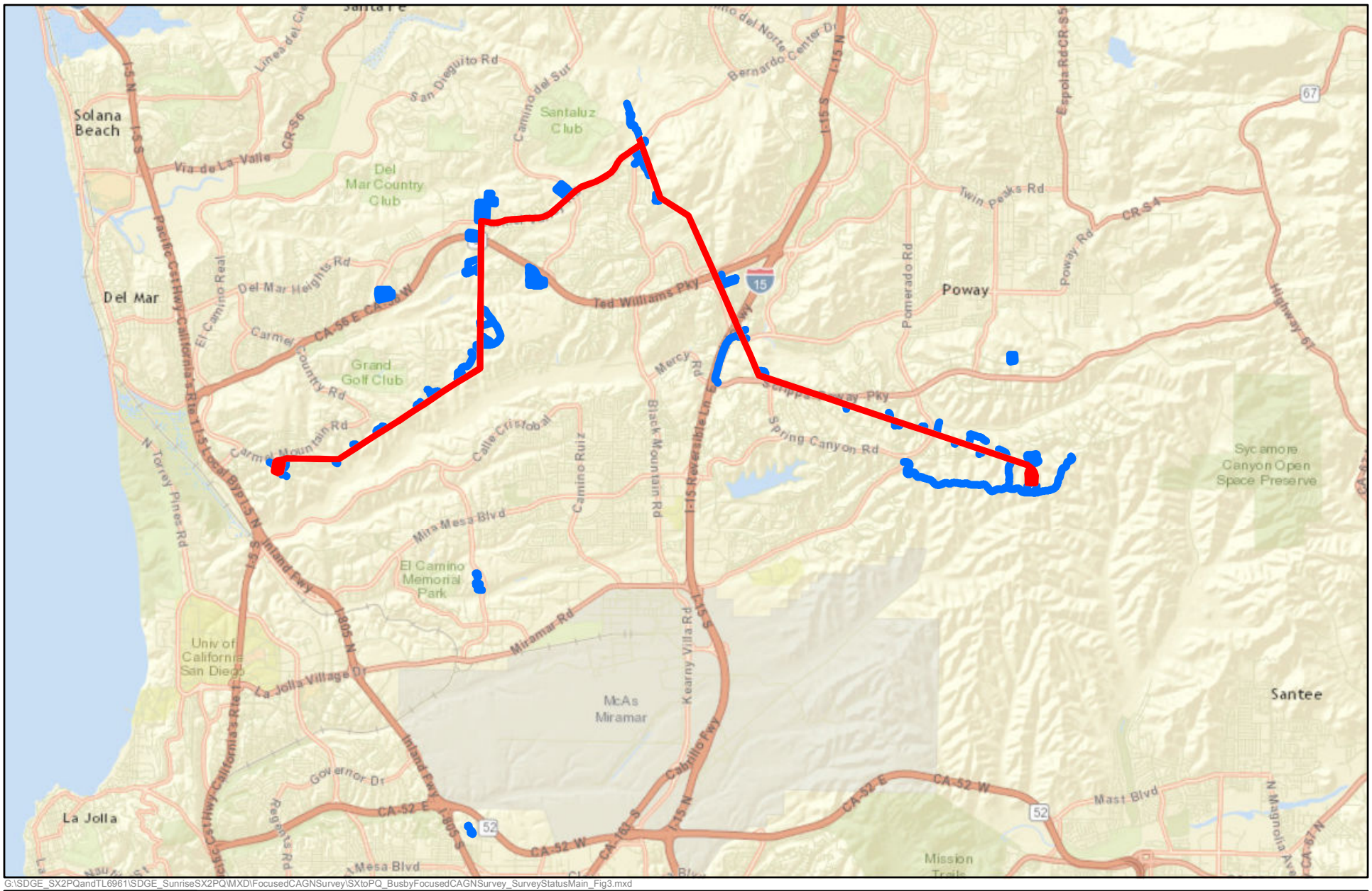
CAGN Habitat Assessment and Survey Area (2014-2015)

N W E S

0 1 2 3 Miles

4/28/2015

TRC SDGE A Sempra Energy utility



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CAGN Habitat Assessment and Survey Area (2013)

CAGN Habitat Assessment and Survey Area (2014-2015)

Sycamore to Peñasquitos 230kV Transmission Line Project

CAGN Habitat Assessment and Survey Area (2013-2015)

Figure 3

4/28/2015

0 1 2 3 Miles

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SDGE A Sempra Energy utility

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Sycamore to Peñasquitos 230 kV Transmission Line Project

CAGN Habitat Assessment and Survey Areas

Figure 4

CAGN Habitat Assessment Areas (Fall 2013)

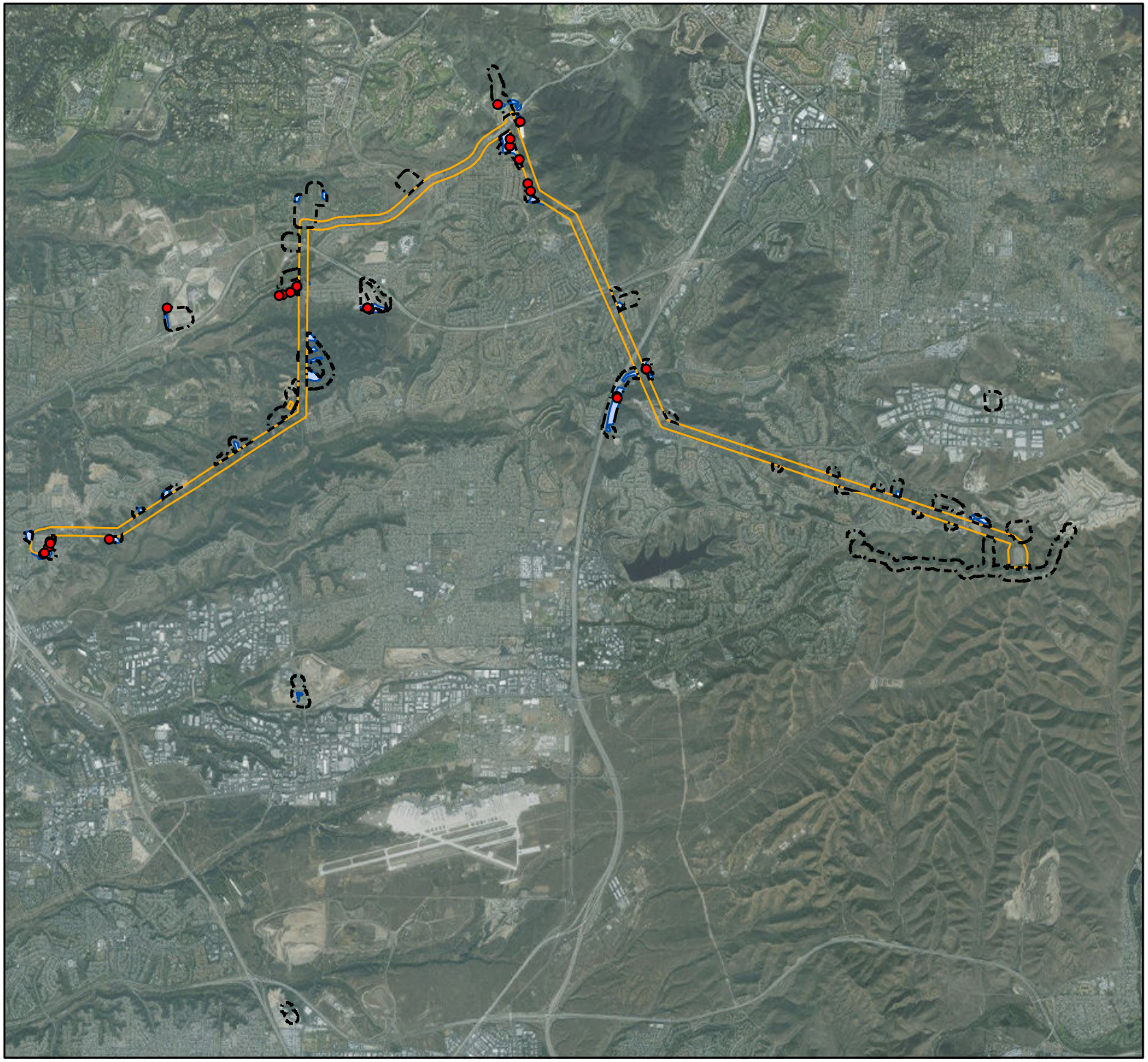
CAGN Potential Habitat and Survey Area (Spring 2015)

0 1 2 3 Miles

4/28/2015

TRC

SDGE A Sempra Energy utility



Sycamore to Peñasquitos 230kV Transmission Line Project

CAGN Survey Results (Spring 2015)

Figure 5a

Overview Map

CAGN Detections
CAGN Habitat Assessment Areas (Fall 2014)
CAGN Habitat Assessment and Survey Area (2013)
CAGN Potential Habitat and Survey Area (Spring 2015)

4/28/2015

TRC

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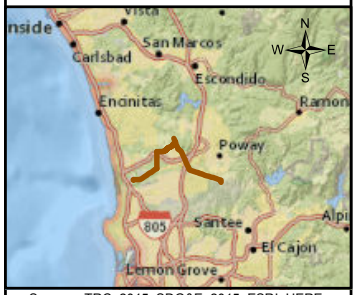
0 0.55 1.1 1.65 Miles



Sources: TRC, 2015; SDG&E, 2015; ESRI, HERE, DeLorme, USGS, Intermap, iPC, NRCAN, ESRI Japan, MEI, NatGeo

Sycamore to Peñasquitos 230kV Transmission Line Project

2015 CAGN Detections

Figure 5b-1

- CAGN Detections Survey 1
- CAGN Detections Survey 2
- CAGN Detections Survey 3
- CAGN Habiat Assessment Area
- CAGN Potential Habitat and Survey Area (Spring 2015)

4/28/2015

TRC

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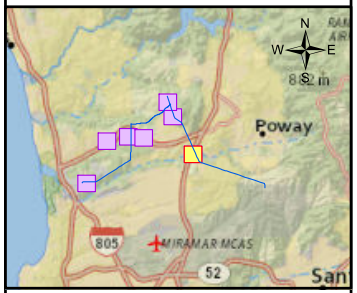
0 300 600 900 Feet



Sources: TRC, 2015; SDG&E, 2015; ESRI, HERE, DeLorme, USGS, Intermap, iPC, NRCAN, ESRI Japan, MEI, NatGeo

Sycamore to Peñasquitos 230kV Transmission Line Project

2015 CAGN Detections

Figure 5b-2

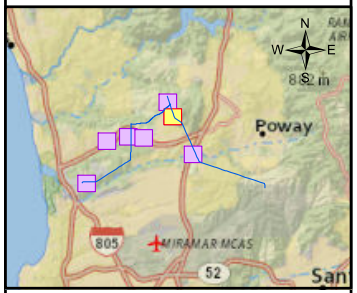
CAGN Detections Survey 1
CAGN Detections Survey 2
CAGN Detections Survey 3
CAGN Habiat Assessment Area
CAGN Potential Habitat and Survey Area (Spring 2015)

4/28/2015

TRC

SDGE
Sempra Energy utility

0 300 600 900 Feet



Sources: TRC, 2015; SDG&E, 2015; ESRI, HERE, DeLorme, USGS, Intermap, iPC, NRCAN, ESRI Japan, MEI, NatGeo

Sycamore to Peñasquitos 230kV Transmission Line Project

2015 CAGN Detections

Figure 5b-3

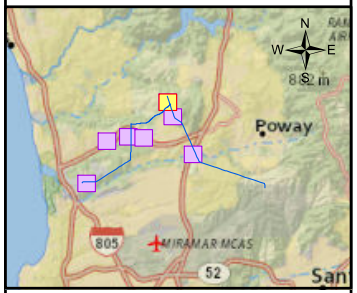
CAGN Detections Survey 1
CAGN Detections Survey 2
CAGN Detections Survey 3
CAGN Habiat Assessment Area
CAGN Potential Habitat and Survey Area (Spring 2015)

4/28/2015

TRC

SDGE
A Sempra Energy utility

0 300 600 900
Feet



Sources: TRC, 2015; SDG&E, 2015; ESRI, HERE, DeLorme, USGS, Intermap, iPC, NRCAN, ESRI Japan, MEI, NatGeo

Sycamore to Peñasquitos 230kV Transmission Line Project

2015 CAGN Detections

Figure 5b-4

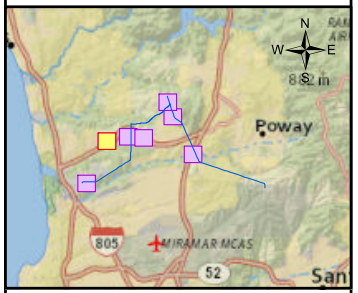
CAGN Detections Survey 1
CAGN Detections Survey 2
CAGN Detections Survey 3
CAGN Habiat Assessment Area
CAGN Potential Habitat and Survey Area (Spring 2015)

4/28/2015

TRC

SDGE
Sempra Energy utility

0 300 600 900
Feet



Sources: TRC, 2015; SDG&E, 2015; ESRI, HERE, DeLorme, USGS, Intermap, iPC, NRCAN, ESRI Japan, MEI, NatGeo

Sycamore to Peñasquitos 230kV Transmission Line Project

2015 CAGN Detections

Figure 5b-5

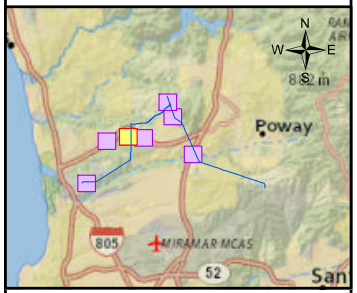
- CAGN Detections Survey 1
- CAGN Detections Survey 2
- CAGN Detections Survey 3
- CAGN Habiat Assessment Area
- CAGN Potential Habitat and Survey Area (Spring 2015)

4/28/2015

TRC

SDGE
A Sempra Energy utility

0 300 600 900 Feet



Sources: TRC, 2015; SDG&E, 2015; ESRI, HERE, DeLorme, USGS, Intermap, iPC, NRCAN, ESRI Japan, MEI, NatGeo

Sycamore to Peñasquitos 230kV Transmission Line Project

2015 CAGN Detections

Figure 5b-6

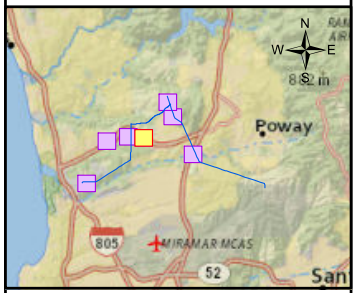
CAGN Detections Survey 1
CAGN Detections Survey 2
CAGN Detections Survey 3
CAGN Habiat Assessment Area
CAGN Potential Habitat and Survey Area (Spring 2015)

4/28/2015

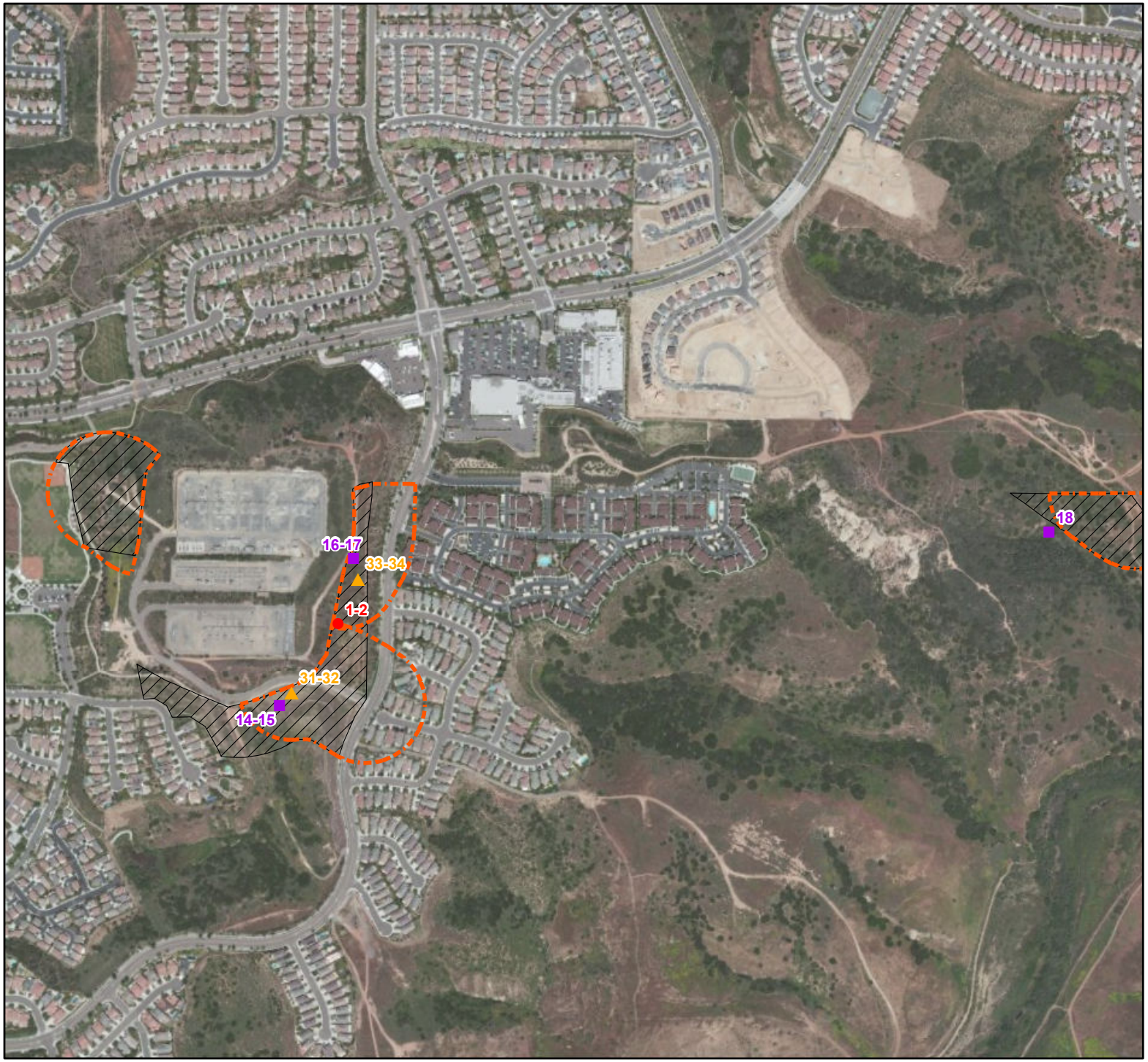
TRC

SDGE
A Sempra Energy utility

0 300 600 900
Feet



Sources: TRC, 2015; SDG&E, 2015; ESRI, HERE, DeLorme, USGS, Intermap, iPC, NRCAN, ESRI Japan, MEI, NatGeo



Sycamore to Peñasquitos 230kV Transmission Line Project

2015 CAGN Detections

Figure 5b-7

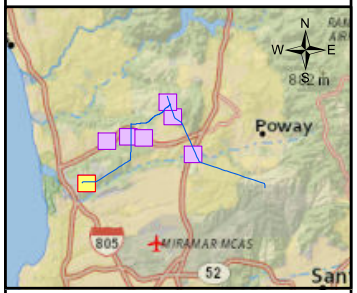
CAGN Detections Survey 1
CAGN Detections Survey 2
CAGN Detections Survey 3
CAGN Habiat Assessment Area
CAGN Potential Habitat and Survey Area (Spring 2015)

4/28/2015

TRC

SDGE
A Sempra Energy utility

0 300 600 900
Feet



Sources: TRC, 2015; SDG&E, 2015; ESRI, HERE, DeLorme, USGS, Intermap, iPC, NRCAN, ESRI Japan, MEI, NatGeo

APPENDIX B – Survey Conditions

Appendix B – Survey Conditions

Survey #	Day #	Date	Time		Weather				Surveyors
					Temp (°F)	Wind (mph)	Clouds (%)	Precip	
1	1	2/27/15	Start	0635	53	0-1	50	0	Laurie Gorman
			End	1215	70	1-7	0	0	
	2	3/3/15	Start	0630	48	0-1	10	0	
			End	1215	65	1-4	25	0	
	3	3/4/15	Start	0630	45	0-1	0	0	
			End	1255	68	1-5	2	0	
2	1	3/11/15	Start	0650	54	0-1	50	0	Laurie Gorman
			End	1140	74	1-6	90	0	
	2	3/12/14	Start	0700	57	0-2	0	0	
			End	1255	75	0-4	0	0	
	3	3/13/15	Start	0650	56	0-3	0	0	
			End	1300	89	1-6	0	0	
3	1	4/1/15	Start	0635	61	0-1	90	0	Laurie Gorman
			End	1220	73	0-2	20	0	
	2	4/3/15	Start	0615	56	0-1	0	0	
			End	1230	78	2-7	20	0	
	3	4/7/15	Start	0615	47	0-1	15	0	
			End	1220	68	2-5	30	0	

APPENDIX C – Survey Results

Appendix C – Survey Results

CAGN # on Map	Survey #	Date	GPS Location		Notes
			Northing	Easting	
1-2	1	2/27/15	32.91716	-117.21755	Male CAGN scolding softly. No other vocalization until 5 minutes later when he countercalled with female CAGN.
3	1	2/27/15	32.95614	-117.19516	Lone male CAGN foraging, calling and scolding
4-5	1	3/3/15	32.95983	-117.17015	CAGN pair. Female CAGN appeared first, no vocalization, then male CAGN appeared and called boldly. Female countercalled.
6-7	1	3/3/15	32.95850	-117.17292	CAGN pair countercalling.
8-9	1	3/3/15	32.95626	-117.15621	CAGN pair traveling closely together, countercalling and approaching in response to PB.
10	1	3/3/15	32.98967	-117.13184	Male CAGN calling aggressively in response to PB tape, then flew southwest. Territory likely encompassing polygon and habitat to the southwest.
11-12	1	3/4/15	32.94690	-117.10285	CAGN pair foraging and calling.
13	1	3/4/15	32.98079	-117.12759	One female CAGN observed foraging without vocalizing, then scolded briefly.
14-15	2	3/11/15	32.91602	-117.21851	CAGN pair. Male CAGN observed calling and approaching in response to playback tape, female CAGN countercalling from across drainage. Then I saw male CAGN bring nesting material to this GPS location.
16-17	2	3/11/15	32.91807	-117.21731	CAGN pair. Male calling in response to playback tape, female flew up from lower adjacent slope and countercalled. Male and female flew together in upper flat area by GPS point.
18	2	3/11/15	32.91852	-117.20589	CAGN calling across canyon.
19-20	2	3/12/15	32.95890	-117.17148	CAGN pair, male calling and fighting with BGGN pair and an ANHU.
21-22	2	3/12/15	32.95837	-117.17359	CAGN pair. Male came into polygon briefly without vocalizing, then called as he flew back out to GPS point and met with female.
23-24	2	3/12/15	32.95644	-117.15667	CAGN pair. Male CAGN defensive; female did not vocalize.
25	2	3/12/15	32.98689	-117.12745	Territorial male CAGN calling and scolding in response to playback tape. This individual flew in from outside polygon to the southeast.
26-27	2	3/13/15	32.94245	-117.10838	CAGN pair observed, male calling rapidly in response to playback tape.
28	2	3/13/15	32.97687	-117.12588	Male CAGN calling and scolding.
29-30	2	3/13/15	32.98294	-117.12948	Pair of CAGN approached, male calling.

Appendix C – Survey Results (Con't)

CAGN # on Map	Survey #	Date	GPS Location		Notes
			Northing	Easting	
31-32	3	4/1/15	32.91619	-117.21831	CAGN pair. Male called and approached in response to playback tape, flew down into shrub and exchanged contact call with female.
33-34	3	4/1/15	32.91777	-117.21723	CAGN pair. Female responded first, flew into *Artemisia californica*, then male appeared, and the pair flew east. Male returned, calling defensively.
35-36	3	4/3/15	32.95988	-117.17023	CAGN pair. Male scolded harshly and approached in response to playback tape. Female appeared but did not vocalize.
37	3	4/3/15	32.95646	-117.15654	Uncapped, likely female CAGN of pair found in this territory during previous surveys. Male not detected.
38-39	3	4/7/15	32.94216	-117.10834	CAGN pair. Male calling, female countercalling softly.
40-41	3	4/7/15	32.94690	-117.10279	CAGN pair with a nest with 3 nestlings in *Encelia californica*. Nestlings approximately one week old.
42	3	4/7/15	32.97561	-117.12537	Territorial male CAGN calling and approaching in response to playback tape.
43	3	4/7/15	32.98411	-117.12941	Territorial male CAGN observed fighting with a northern mockingbird.

APPENDIX D – Wildlife Species Detected

Appendix D - Wildlife Species Detected

INVERTEBRATES		
Class: Insecta		**Insects**
Order: Lepidoptera		**Butterflies**
	Vanessa atalanta	Red Admiral
Family Hesperiidae		**Skippers**
	Erynnis funeralis	Funereal Duskywing
Family Lycaenidae		**Blues**
	Leptotes marina	Marine Blue
Family Pipilionidae		**Swallowtails**
	Papilio zelicaon	Anise Swallowtail
Family Riodinidae		**Metalmarks**
	Apodemia virgulti	Behr's metalmark
VERTEBRATES		
Class: Sauropsida		**Reptiles**
Family Phrynosomatidae		**Spiny Lizards**
	Sceloporus occidentalis	Western Fence Lizard
	Uta stansburiana	Common Side-blotched Lizard
Class: Aves		**Birds**
Order Anseriformes		**Geese, Swans, and Ducks**
Family Anatidae		**Geese, Swans, and Ducks**
	Anas platyrhynchos	Mallard
Order Galliformes		**Gallinaceous Birds**
Family Odontophoridae		**New World Quail**
	Callipepla californica	California Quail
Family Cathartidae		**New World Vultures**
	Cathartes aura	Turkey Vulture
Family Accipitridae		**Hawks, Kites, Eagles, and Allies**
	Accipiter cooperii	Cooper's hawk
	Buteo jamaicensis	Red-tailed Hawk
Family Laridae		**Gulls, Terns, and Skimmers**
	Larus occidentalis	Western Gull
Order Columbiformes		**Pigeons and Doves**
Family Columbidae		**Pigeons and Doves**
	Zenaida macroura	Mourning Dove
Order Apodiformes		**Swifts and Hummingbirds**
Family Trochilidae		**Hummingbirds**
	Calypte anna	Anna's Hummingbird
	Selasphorus sasin	Allen's Hummingbird
Order Piciformes		**Woodpeckers and Allies**
Family Picidae		**Woodpeckers**
	Picoides nuttallii	Nuttall's Woodpecker

Appendix D - Wildlife Species Detected (Con't)

Order Passeriformes		**Perching Birds**
Family Tyrannidae		**Tyrant Flycatchers**
	Empidonax difficilis	Pacific-slope Flycatcher
	Sayornis nigricans	Black Phoebe
	Tyrannus vociferans	Cassin's Kingbird
	Tyrannus verticalis	Western Kingbird
Family Corvidae		**Crows and Jays**
	Aphelocoma californica	Western Scrub-Jay
	Corvus brachyrhynchos	American Crow
	Corvus corax	Common Raven
Family Aegithalidae		**Bushtits**
	Psaltriparus minimus	Bushtit
Family Troglodytidae		**Wrens**
	Thryomanes bewickii	Bewick's Wren
	Troglodytes aedon	House Wren
Family Regulidae		**Kinglets**
	Regulus calendula	Ruby-crowned Kinglet
Family Sylviidae		**Gnatcatchers**
	Polioptila caerulea	Blue-gray Gnatcatcher
	Polioptila californica	Coastal California Gnatcatcher
Family Turdidae		**Thrushes**
	Catharus guttatus	Hermit Thrush
Family Timaliidae		**Babblers**
	Chamaea fasciata	Wrentit
Family Mimidae		**Mockingbirds and Thrashers**
	Mimus polyglottos	Northern Mockingbird
	Toxostoma redivivum	California Thrasher
Family Sturnidae		**Starlings**
	Sturnus vulgaris	European Starling
Family Parulidae		**Wood-Warblers**
	Vermivora celata	Orange-crowned Warbler
	Dendroica coronata	Yellow-rumped Warbler
	Geothlypis trichas	Common Yellowthroat
Family Emberizidae		**Embrezids**
	Pipilo maculatus	Spotted Towhee
	Pipilo crissalis	California Towhee
	Aimophila ruficeps	Rufous-crowned Sparrow
	Melospiza melodia	Song Sparrow
	Zonotrichia leucophrys	White-crowned Sparrow
Family Icteridae		**Blackbirds**
	Sturnella neglecta	Western Meadowlark

Appendix D - Wildlife Species Detected (Con't)

Family Fringillidae		**Fringilline and Cardueline Finches and Allies**
	Carpodacus mexicanus	House Finch
	Carduelis psaltria	Lesser Goldfinch
Class: Mammalia		**Mammals**
Order Lagomorpha		**Rabbits and Hares**
Family Leporidae		**Rabbits and Hares**
	Sylvilagus audubonii	Desert Cottontail
Order Carnivora		**Carnivores**
Family Canidae		**Dogs and foxes**
	Canis familiaris	Domestic Dog
	Canis latrans	Coyote
Order Perissodactyla		**Odd-toed Ungulates**
	Equus caballus	Domestic Horse