

APPENDIX E

2016 Focused Coastal California Gnatcatcher Survey Report

December 21, 2016

9420-03

Stacey Love
Recovery Permit Coordinator
U.S. Fish and Wildlife Service
2177 Salk Avenue, Suite 250
Carlsbad, California 92008

Subject: 2016 Focused Coastal California Gnatcatcher Survey Report for the Pure Water San Diego Program North City Project, County of San Diego, California

Dear Ms. Love:

This report documents the results of protocol-level presence/absence surveys for the federally listed threatened coastal California gnatcatcher (*Poliophtila californica californica*) (CAGN). The surveys were conducted in support of the Pure Water San Diego Program North City Project (North City Project), located in the County of San Diego, California. The North City Project is the first phase of the City of San Diego's Public Utilities Department (PUD) proposed program to provide a safe, secure, and sustainable local drinking water supply for San Diego. The North City Project consists of the design and construction of a new advanced water treatment facility, expansion of a wastewater treatment facility, pump stations, transmission lines, and pipelines. The Project site contains approximately 575 acres of potentially CAGN-suitable habitat that were surveyed in 2016.

CAGN is a federally listed threatened species and a California Department of Fish and Wildlife (CDFW) Species of Special Concern. It is closely associated with coastal sage scrub habitat, and is thereby threatened primarily by loss, degradation, and fragmentation of this habitat. CAGN typically occurs below 820 feet above mean sea level (amsl) within 22 miles of the coast and 1,640 feet amsl for inland regions (Atwood and Bolsinger 1992). Studies have suggested that CAGN avoid nesting on very steep slopes (greater than 40%) (Bontrager 1991). CAGN is also impacted by brown-headed cowbird (*Molothrus ater*) nest parasitism (Braden et al. 1997).

LOCATION AND EXISTING CONDITIONS

North City Project pipelines extend through the cities of San Diego, Santee, and the community of Lakeside in unincorporated San Diego County, in addition to federal lands within MCAS Miramar (Figure 1, Regional Map). CAGN surveys were being conducted on MCAS Miramar in

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2016 as part of their yearly monitoring. Following consultation with the U.S. Fish and Wildlife Service (USFWS), it was determined that additional surveys as part of this project were not required in suitable habitat areas of the project that overlapped with MCAS Miramar. Results of 2016 focused CAGN surveys on MCAS Miramar will be submitted to USFWS separately by MCAS Miramar biologists.

The Project site occupies portions of Township 14 South, Range 1 East, projected Sections 30 and 31; Township 14 South, Range 1 West, projected Sections 25 and 36; Township 14 South, Range 2 West, projected Sections 32, and 33; Township 15 South, Range 1 East, projected Sections 6 and 18; Township 15 South, Range 1 West, projected Sections 1, 23, and 30; Township 15 South, Range 2 West, projected Sections 6, 25, 29, 30, 31, 32, 33, 35, and 36; Township 15 South, Range 3 West, projected Sections 9, 10, 11, 16, 17, 20, 25, 26, and 28; Township 16 South, Range 2 West, projected Sections 1, 2, 3, and 4; and Township 16 South, Range 3 West, projected Section 9 on the San Vicente Reservoir, El Cajon, La Mesa, Poway, La Jolla, and Del Mar U.S. Geological Survey 7.5 minute quadrangle maps (Figure 2, Vicinity Map).

Elevations range from about 94 feet amsl in the southwestern portion of the Project site to approximately 688 feet amsl.

Soils within the Project site consist of acid igneous rock land; Altamont clay; Carlsbad-Urban Land complex, Chesterton fine sandy loam; Chesterton-Urban Land complex; Cieneba rocky and very rocky coarse sandy loam, Cieneba-Fallbrook rocky sandy loam; Diablo clay; Diablo-Olivenhain complex; Diablo-Urban land complex; Fallbrook sandy loam; Fallbrook-Vista sandy loam; Friant rocky fine sandy loam; Gaviota fine sandy loam; gravel pits; Huerhuero loam; metamorphic rock land; Olivenhain cobbly loam; Ramona sandy loam; Redding cobbly and gravelly loam; Redding-Urban land complex; riverwash; Salinas clay loam; stony land; terrace escarpments; Tujunga sand; and Visalia sandy loam (SanGIS 2016).

VEGETATION COMMUNITIES

Based on species composition and general physiognomy, three vegetation communities with primary constituent element habitats (included restored and disturbed communities) suitable for CAGN were identified on the Project site and off-site mapping areas. Their acreages are presented in Table 1.

The entire project alignment includes approximately 847 acres of CAGN-suitable habitat were mapped on the Project site according to Holland (1986) and Oberbauer (2008). Approximately 517 acres of the CAGN-suitable habitat was surveyed on the Project site (due to exclusions and inaccessible private property).

Vegetation acreages are presented in Table 1, and primary constituent element habitats suitable for CAGN are described following the table.

Table 1
Coastal California Gnatcatcher-Suitable Vegetation Communities on the North City Project Site

Total Vegetation Community/Land Cover	Total Acres*	Total Surveyed Acres*
Diegan Coastal Sage Scrub	638.4	422.3
Diegan Coastal Sage Scrub-Restored	16.0	13.6
Diegan Coastal Sage Scrub-Disturbed	155.8	78.0
Diegan Coastal Sage Scrub: Baccharis-Dominated	32.4	3.5
Diegan Coastal Sage Scrub: Baccharis-Dominated-Disturbed	4.7	0.0
Grand Total	847.3	517.4

Note:

* The difference in total acres and surveyed acres is due to restricted access to private property and MCAS Miramar lands.

Diegan Coastal Sage Scrub

Diegan coastal sage scrub is a native vegetation community. According to Oberbauer et al. (2008), coastal sage scrub is composed of a variety of soft, low, aromatic shrubs, characteristically dominated by drought-deciduous species—such as California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), and sages (*Salvia* spp.)—with scattered evergreen shrubs, including laurel sumac (*Malosma laurina*). Diegan coastal sage scrub occupies 638.4 acres in many patches within undisturbed areas, and an additional 16.0 acres of restored Diegan coastal sage is located in two portions on site, including south of the San Vicente Reservoir and a small patch south of Miramar Road. In addition, 155.8 acres of disturbed Diegan coastal sage scrub occur in several areas, with the majority located north of Miramar Road and east of Interstate 805 (I-805).

Diegan Coastal Sage Scrub—Baccharis-Dominated

Diegan coastal sage scrub—Baccharis-dominated is similar to Diegan coastal sage scrub but dominated by *Baccharis* species (desert broom (*B. sarothroides*) and/or coyotebrush (*B. pilularis*) (Oberbauer et al. 2008). This community typically occurs on disturbed sites or those with nutrient-poor soils and is often found within other forms of Diegan coastal sage scrub and on upper terraces of river valleys. This community is distributed along coastal and foothills areas in San Diego County. Approximately 32.4 acres of Diegan coastal sage scrub—Baccharis-dominated, and an additional 4.7 acres of disturbed Diegan coastal sage scrub—Baccharis-dominated vegetation throughout the study area.

METHODS

Dudek conducted a desktop CAGN-habitat suitability assessment of all coastal sage scrub habitat within the Project site. A number of areas were excluded from surveys due to the patch size being too small and/or isolated to support CAGN or the patch was buffered from the construction footprint by residential or commercial buildings. A number of areas were also excluded from the surveys as access permission was not provided by the landowner.

Focused surveys for CAGN were performed within the Project site between May 18 and July 7, 2016, by permitted biologists Jeff Priest, Tricia Wotipka, Kam Muri, Brenna Ogg, and Brian Lohstroh (Table 2). Non-permitted biologists Shelly Lawrence and Johanna Page accompanied CAGN-permitted biologists as passive observers, which included sitting quietly with little or no movement for prolonged periods while studying CAGN movements with binoculars and listening carefully to vocalizations. The surveys were conducted following the currently accepted USFWS *Coastal California Gnatcatcher (Poliophtila californica californica) Presence/Absence Survey Protocol* (USFWS 1997), using the breeding season survey methods. The majority of the Project alignment overlaps with the City of San Diego’s Multiple Species Conservation Program Subarea Plan, with the exception of those portions of the alignment in the City of Santee and community of Lakeside, California. The survey included three visits at a minimum of 7-day intervals. Survey routes are shown in Figure 3.

Survey routes completely covered all accessible areas of suitable CAGN habitat on site. Appropriate birding binoculars (7 x 35 to 10 x 50 power) were used to aid in detecting and identifying bird species. The survey conditions were within protocol limits, as shown in Table 2. A recording of vocalizations was used frequently to elicit a response from the species. The recording was played approximately every 50 to 100 feet, and when a CAGN was detected, the playing of the recording ceased to avoid harassment. Two additional surveys were conducted in August and September to review habitat conditions for CAGN.

Table 2
Survey Conditions

Survey Pass	Survey Area	Date	Time	Personnel	Conditions
1	2	05/18/2016	6:00 AM–12:00 PM	JP	60°F–72°F; 20%–100% cc; 0 to 5 mph wind
1	7	05/19/2016	7:00 AM–12:00 PM	JP	62°F–78°F; 0%–100% cc; 0 to 8 mph wind
1	5	05/20/2016	6:10 AM–11:10 AM	BL	59°F–65°F; 50%–70% cc; 0 to 5 mph wind
1	6	05/20/2016	6:00 AM–12:00 PM	JP	60°F–72°F; 50%–90% cc; 0 to 6 mph wind
1	3	05/27/2016	6:30 AM–12:00 PM	TW	63°F–68°F; 100% cc; 0 to 2 mph wind

Table 2
Survey Conditions

Survey Pass	Survey Area	Date	Time	Personnel	Conditions
1	4	05/28/2016	6:00 AM–12:25 PM	BO	64°F–74°F; 90%–100% cc; 0 to 5 mph wind
1	8	05/30/2016	6:05 AM–11:30 AM	BO	61°F–72°F; 100% cc; 0 to 5 mph wind
1	1	06/01/2016	6:45 AM–12:00 PM	TW	62°F–69°F; 100% cc; 0 to 2 mph wind
2	2	05/25/2016	6:00 AM–12:00 PM	JP	56°F–68°F; 70%–50% cc; 0 to 6 mph wind
2	7	05/26/2016	6:10 AM–12:00 PM	JP	55°F–72°F; 90%–100% cc; 0 to 4 mph wind
2	5	05/27/2016	6:00 AM–11:44 AM	BL, SL	61°F–72°F; 70%–100% cc; 0 to 4 mph wind
2	4	06/04/2016	6:00 AM–12:00 PM	BO	60°F–85°F; 0%–100% cc; 0 to 11 mph wind
2	6	06/07/2016	6:00 AM–11:30 AM	JP	58°F–78°F; 10%–100% cc; 1 to 6 mph wind
2	1	06/09/2016	7:45 AM–11:45 AM	KM	64°F–68°F; 100% cc; 2 to 4 mph wind
2	8	06/12/2016	7:05 AM–12:00 PM	BO	61°F–70°F; 50%–100% cc; 0 to 5 mph wind
2	3	06/23/2016	7:40 AM–12:30 PM	KM	72°F–81°F; 10%–80% cc; 2 to 7 mph wind
3	5	06/03/2016	6:00 AM–11:00 AM	BL, JOP	59°F–82°F; 10%–100% cc; 0 to 5 mph wind
3	6	06/14/2016	7:45 AM–12:30 PM	KM	62°F–72°F; 0%–100% cc; 2 to 5 mph wind
3	4	06/18/2016	6:00 AM–12:00 PM	BO	53°F–89°F; 0%–50% cc; 0 to 12 mph wind
3	8	06/19/2016	6:35 AM–9:45 AM	BO	67°F–95°F; 0%–10% cc; 0 to 5 mph wind
3	2	06/20/2016	5:40 AM–11:45 AM	BL	68°F–92°F; 0% cc; 0/3 to 3 to 5 mph wind
3	6, 7	06/27/2016	6:10 AM–11:15 AM	JP	68°F–90°F; 10%–70% cc; 0 to 5 mph wind
3	3	06/30/2016	6:00 AM–12:00 PM	TW	64°F–79°F; 0%–100% cc; 0 to 4 mph wind
3	1	07/07/2016	7:45 AM–12:35 PM	KM	67°F–72°F; 0%–100% cc; 2 to 5 mph wind
3	2, 6	07/07/2016	6:00 AM–11:30 AM	JP	63°F–82°F; 0%–100% cc; 0 to 5 mph wind
3+	6, 7, 8	08/16/2016	9:30 AM–2:00 PM	BAO	73°F–98°F; 0% cc; 0 to 1 mph wind
3+	1, 2, 3, 4, 5	09/28/2016	8:40 AM– 4:10 PM	BAO	67°F–90°F; 30%–0% cc; 0 to 5 mph wind

Notes: BL = Brian Lohstroh; BO = Brenna Ogg; JP = Jeff Priest; JOP = Johanna Page; KM = Kamarul Muri; SL = Shelley Lawrence; TW = Tricia Wotipka; BAO = Brock Ortega; °F = Fahrenheit ; cc = cloud cover; mph = miles per hour.

RESULTS

Approximately 10 CAGN pairs and 45 individuals were observed in the survey area, including approximately 9 juveniles. Table 3 summarizes CAGN observations per survey area. Leg bands were not detected during these survey efforts.

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Table 3
Coastal California Gnatcatcher 2016 Survey Observations

Survey Area	Survey Area Maps	Estimated Total CAGN Individuals In Survey Map	Summarized Observations
1 (79.2 acres)	1, 2, 3, 4, and 5	6	One male individual was observed immediately west of the survey area on Map 2 on 09/06/16. One female individual observed approximately 150 feet east of the survey area on Map 4 on 05/25/16. Two groups of two uncapped individuals were observed adjacent to the survey area on Map 4 on 07/07/16.
2 (66.3 acres)	5, 6, 7, 8, and 9	2	One male was observed within the survey area on 05/27/16 on Map 9, and a pair was observed in the same general area on 07/07/16.
3 (87.5 acres)	10, 11, and 12	8	One pair was observed within middle portion of the survey area on Map 11 on 06/22/16. One unknown uncapped individual was observed on the most eastern portion of Map 11 on 06/30/16. A pair and a male individual were observed on 06/30/16 in the middle portion of Map 11. In the same general area, an unknown individual was observed on 06/22/16 and a juvenile on 06/30/16.
4 (61.6 acres)	12 and 13	17	Two unknown individuals were observed at the southern extent of this survey area on two survey dates – 06/04/16 and 05/28/16. An additional territory was also identified north of this with two unknown individuals observed on 05/28/16 and 06/04/16 and a male observed on 06/16/16. A single unknown individual was observed north of this area on 06/04/16. Three additional territories were observed within this survey area. The most northern territory had observations from all three survey dates (05/28/16, 06/03/16 and 06/18/16) and an observation from a biologist surveying the adjacent survey area on 05/27/16. The next most northern territory also had observations from all three survey dates and had observations of a pair with juveniles and unknown individuals. The next territory also had observations from all three dates and included observations of a male, a pair with juveniles, and unknown individuals.
5 (55.4 acres)	12 and 13	5	One male was observed on 05/20/16 in the center of a large contiguous patch of suitable habitat on Map 12. A male individual was observed at the southern extent of this survey area on Map 12 on 05/20/16 and just outside the survey area on 05/27/16. A pair of was also observed in this vicinity on 06/03/16. A pair of was observed on 05/27/16 and 06/03/16 just north of the previous pair; the pair was observed with juveniles on the 05/27/16 survey date.
6 (77.5 acres)	14, 15, 16, and 17	6	A pair was observed on Map 14 of this survey area on 06/07/16 and 06/14/16. This pair was observed with juveniles (approximately two) on 06/14/16. A second pair was observed in the same patch on 06/07/16 and was confirmed as a separate pair.
7 (57.0 acres)	16 and 17	1	There was one juvenile observed on 06/27/16 on Map 17 within this survey area.
8 (25.7 acres)	17 and 18	0	There were no CAGN observations in this survey area.

Note: "Adult" is defined as an individual known to have hatched the year prior to 2016. Otherwise, exact age unknown.

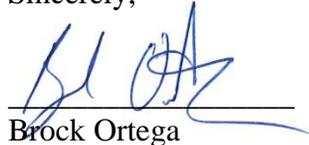
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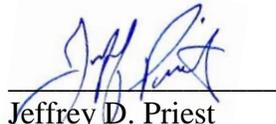
A total of 105 species of wildlife were observed or detected during the surveys: 72 bird species, 16 invertebrate species, 6 mammals, 1 amphibian species, and 10 reptile species (Attachment A).

We certify that the information in this survey report and attachments fully and accurately represent our work. Please contact Brock Ortega (bortega@dudek.com) with questions or if you require additional information.

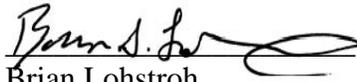
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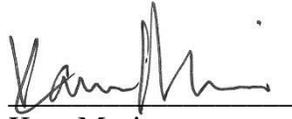
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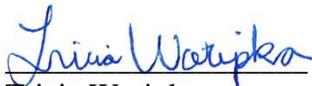
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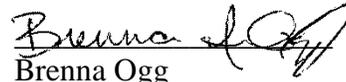
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Permit #TE063608/5



Kam Muri
Permit #TE813545/6



Tricia Wotipka
Permit #TE840619/2



Brenna Ogg
Permit # TE134338/3

Att: Figures 1–3
Attachment A

cc: Brock Ortega

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Atwood, J.L., and J.S. Bolsinger. 1992. "Elevational Distribution of California Gnatcatchers in the United States." *Journal of Field Ornithology* 63:159–168.

Bontrager, D.R. 1991. *Habitat Requirements, Home Range Requirements, and Breeding Biology of the California Gnatcatcher (Poliopitila californica) in South Orange County, California*. Prepared for Santa Margarita Company, Ranch Santa Margarita, California. April 1991.

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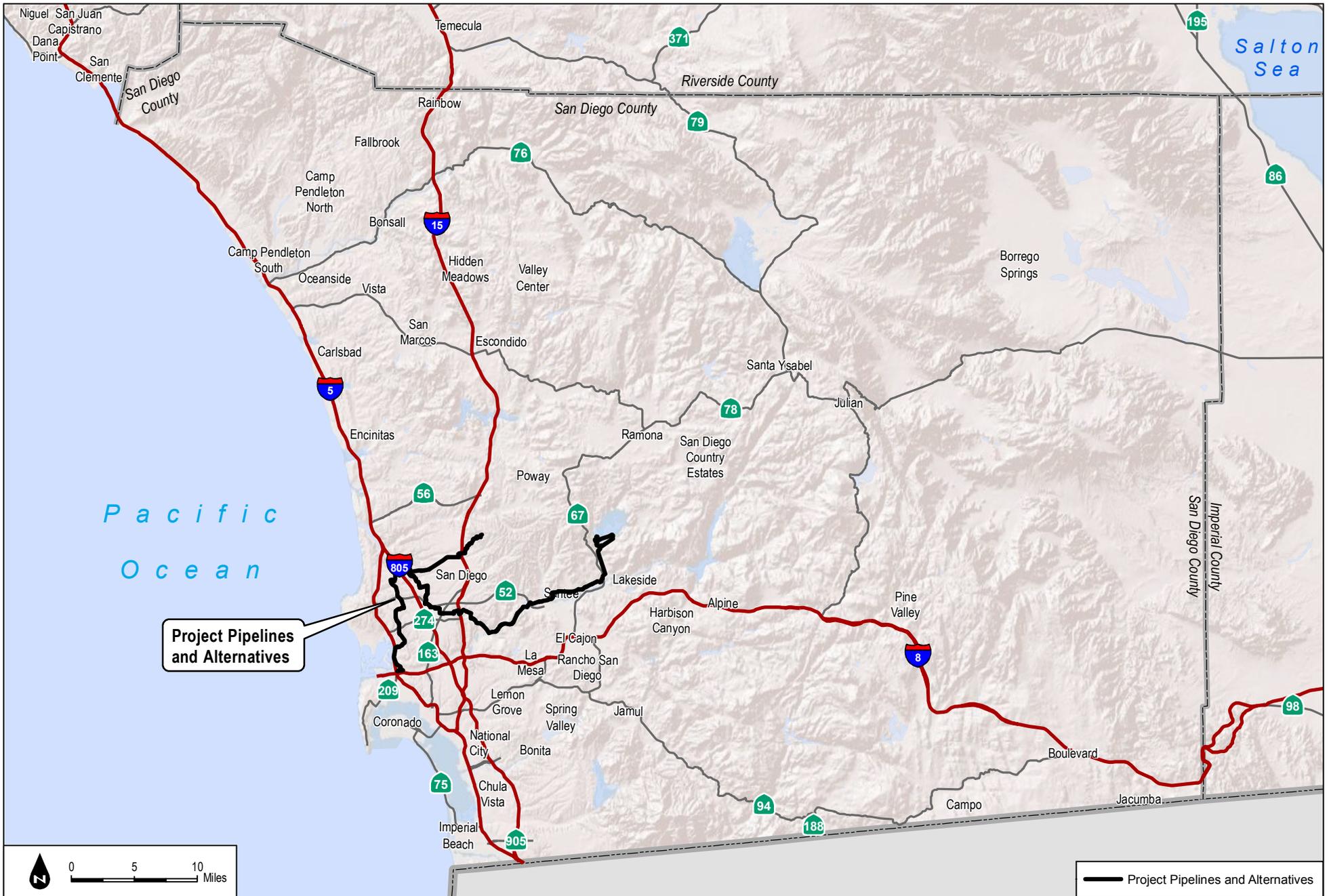
Subject: 2016 Focused Coastal California Gnatcatcher Survey Report for the Pure Water San Diego Program North City Project, County of San Diego, California

Holland, R.F. 1986. *Preliminary Descriptions of the Terrestrial Natural Communities of California*. Sacramento, California: Nongame-Heritage Program, California Department of Fish and Game. October 1986.

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Project Pipelines and Alternatives

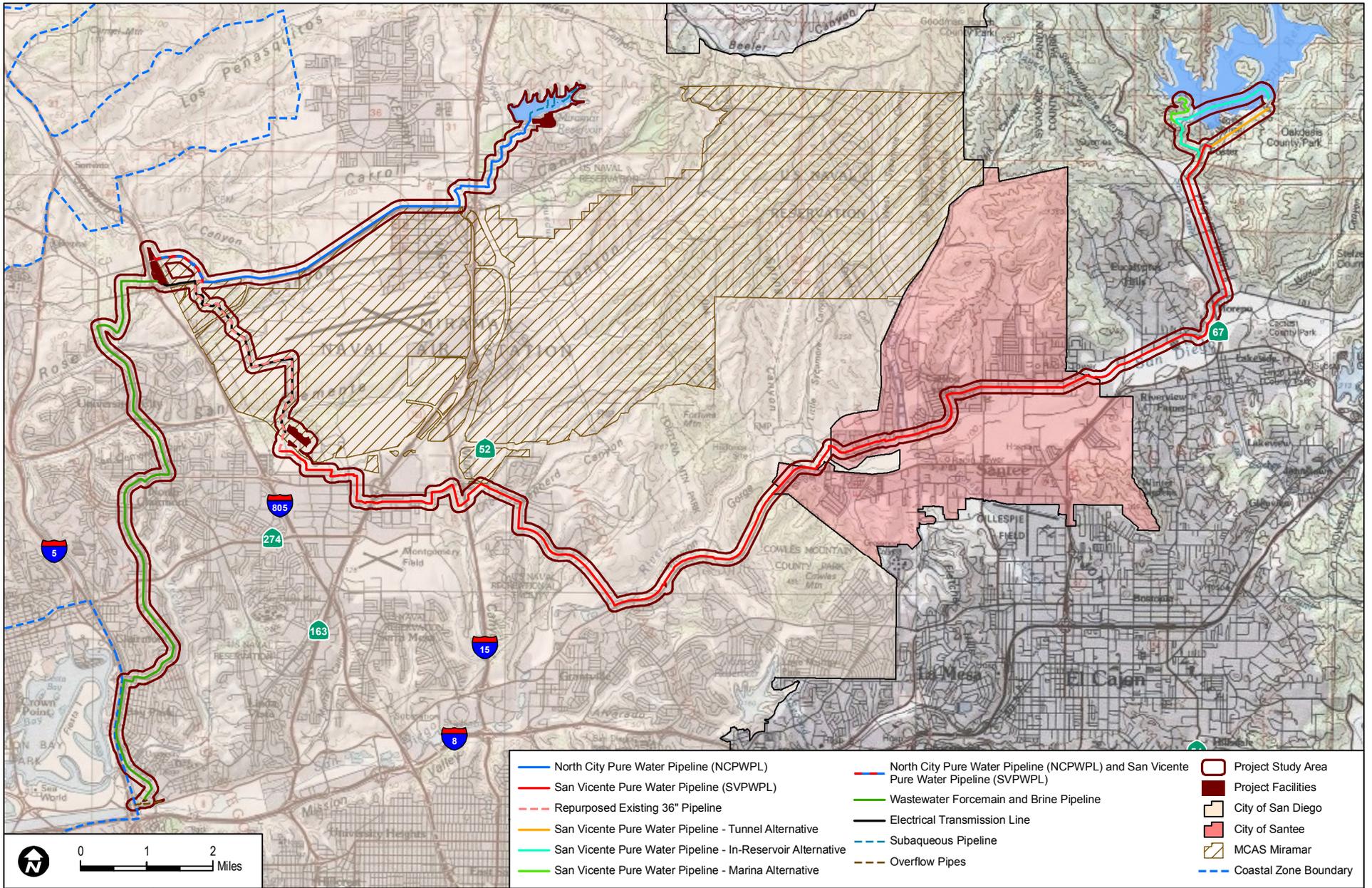
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SOURCE: City San Diego 2016; ESRI 2016

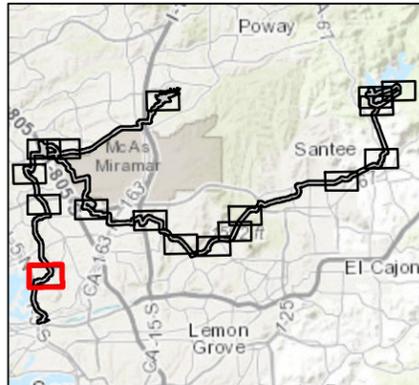
2016 Coastal California Gnatcatcher Survey Report - Pure Water San Diego North City Project

FIGURE 1
Regional Map



SOURCE: USGS 7.5-Minute Series Del Mar, Poway, San Vicente Reservoir, La Jolla, La Mesa, El Cajon Quadrangles; City of San Diego 2016; CA Coastal Commission

FIGURE 2
Vicinity Map



- Project Study Area
- ➔ CAGN Survey Routes
- Survey Areas**
- Survey Area 1
- Vegetation Communities
- CSS - Diegan Coastal Sage Scrub

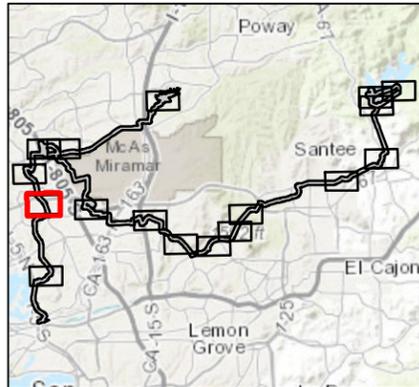


10/11/2016 10:11:11 AM - Bing Maps - Pure Water San Diego North City Project - 2016 Coastal California Gnatcatcher Survey Results - Map 1

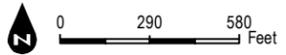


SOURCE: Bing Maps

FIGURE 3-1
2016 Coastal California Gnatcatcher Survey Results - Map 1



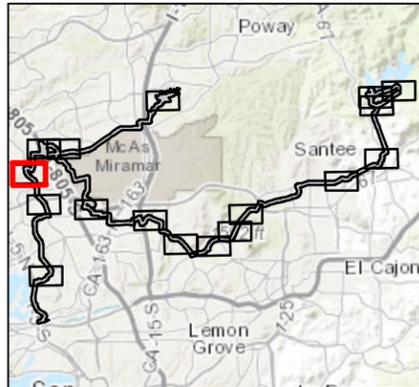
- Project Study Area
- Survey Results**
- + Male
- CAGN Survey Routes
- CAGN Territory
- Survey Areas**
- Survey Area 1
- Vegetation Communities
- CSS - Diegan Coastal Sage Scrub
- CSSB - Diegan Coastal Sage Scrub: Baccharis-dominated
- dCSS - disturbed Diegan Coastal Sage Scrub



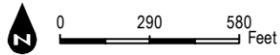
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FIGURE 3-2
2016 Coastal California Gnatcatcher Survey Results - Map 2



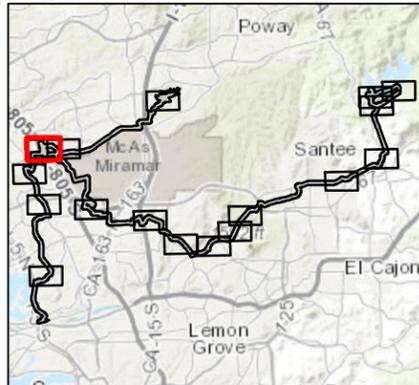
- Project Study Area
- CAGN Survey Routes
- Suitable CAGN Habitat- No Permission to Access
- Survey Areas**
- Survey Area 1
- Vegetation Communities
- CSS - Diegan Coastal Sage Scrub
- dCSS - disturbed Diegan Coastal Sage Scrub



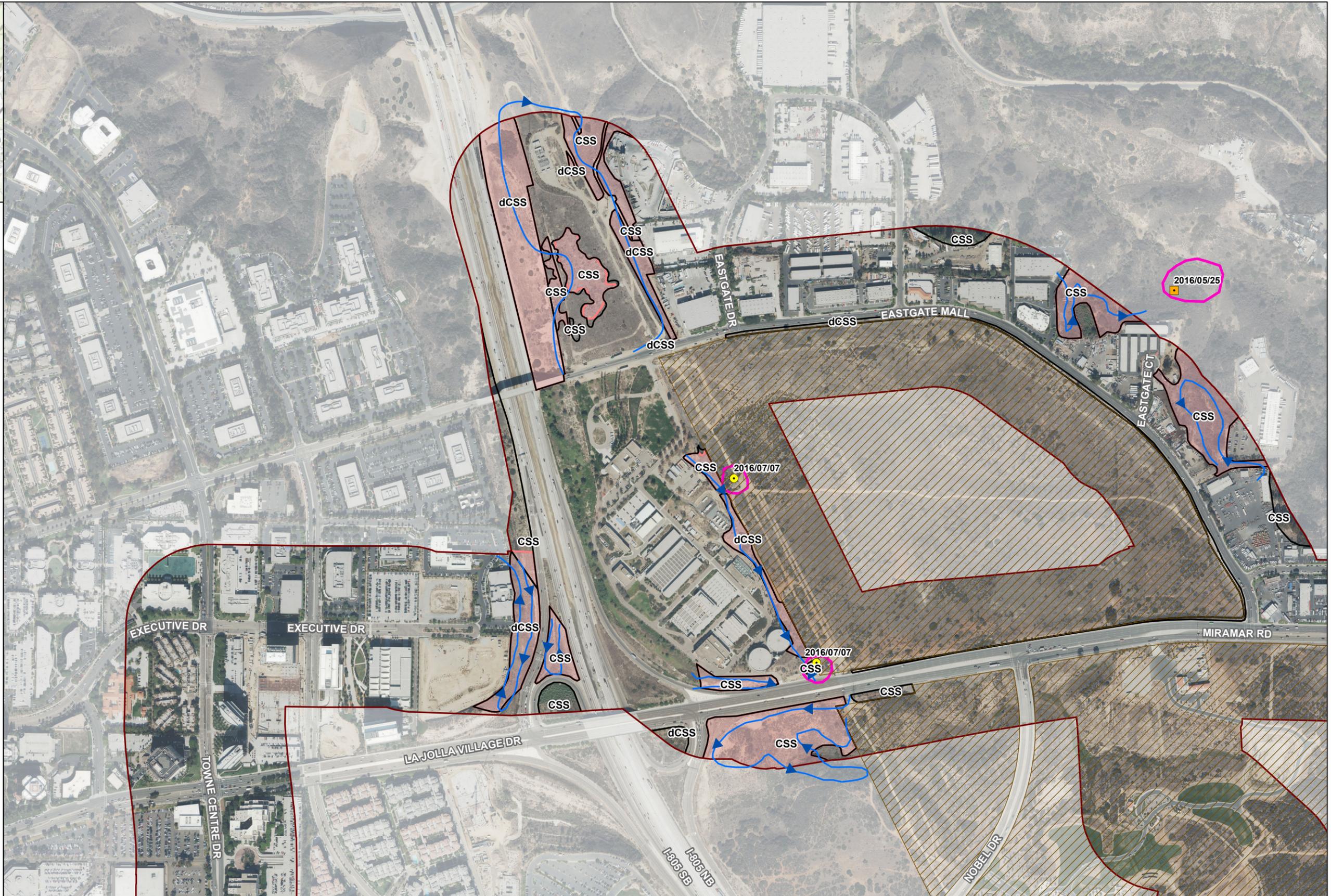
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FIGURE 3-3
2016 Coastal California Gnatcatcher Survey Results - Map 3



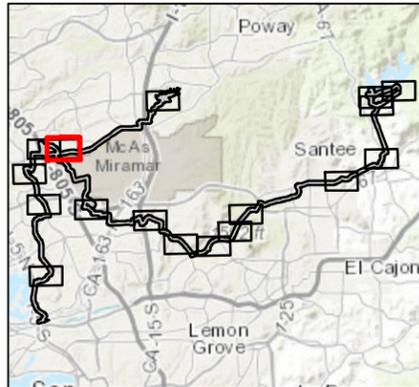
- Project Study Area
- Survey Results**
- Female
- Unknown
- CAGN Survey Routes
- CAGN Territory
- MCAS Miramar
- Survey Areas**
- Survey Area 1
- Vegetation Communities
- CSS - Diegan Coastal Sage Scrub
- dCSS - disturbed Diegan Coastal Sage Scrub



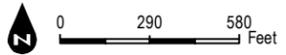
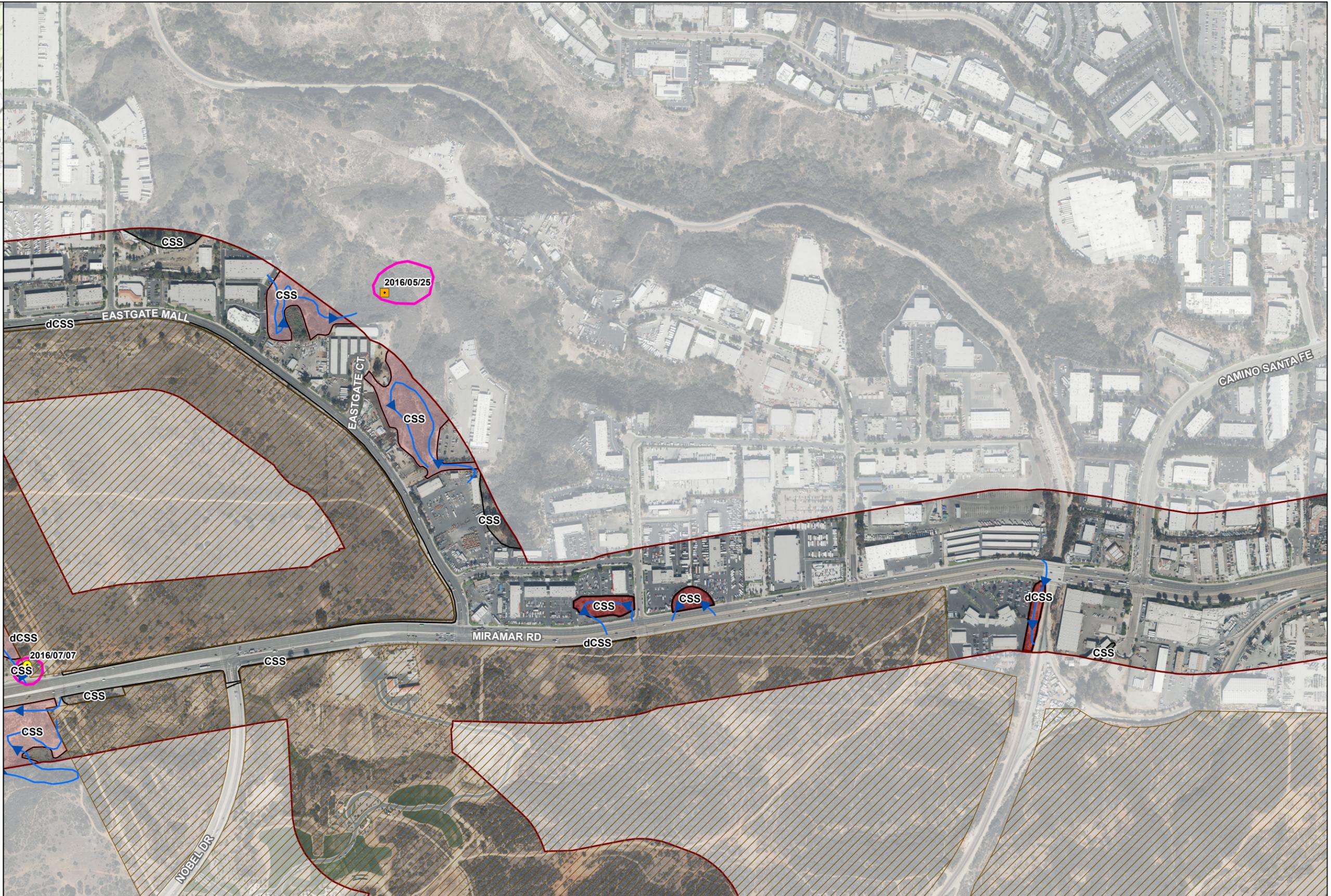
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FIGURE 3-4
2016 Coastal California Gnatcatcher Survey Results - Map 4



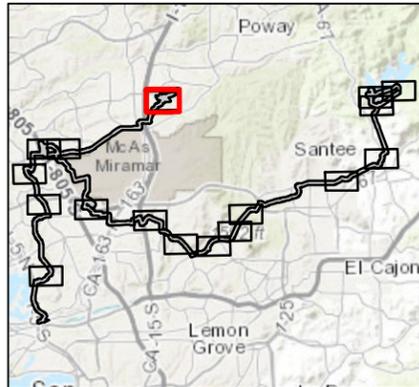
- Project Study
- Survey Results**
- Female
- Unknown
- CAGN Survey Routes
- CAGN Territory
- MCAS Miramar
- Survey Areas**
- Survey Area 1
- Survey Area 2
- Vegetation Communities
- CSS - Diegan Coastal Sage Scrub
- dCSS - disturbed Diegan Coastal Sage Scrub



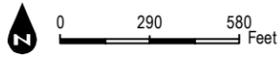
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FIGURE 3-5
2016 Coastal California Gnatcatcher Survey Results - Map 5



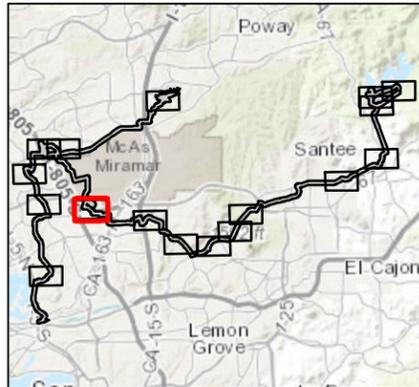
- Project Study
- CAGN Survey Routes
- Survey Areas**
- Survey Area 2
- Vegetation Communities
- dCSS - disturbed Diegan Coastal Sage Scrub



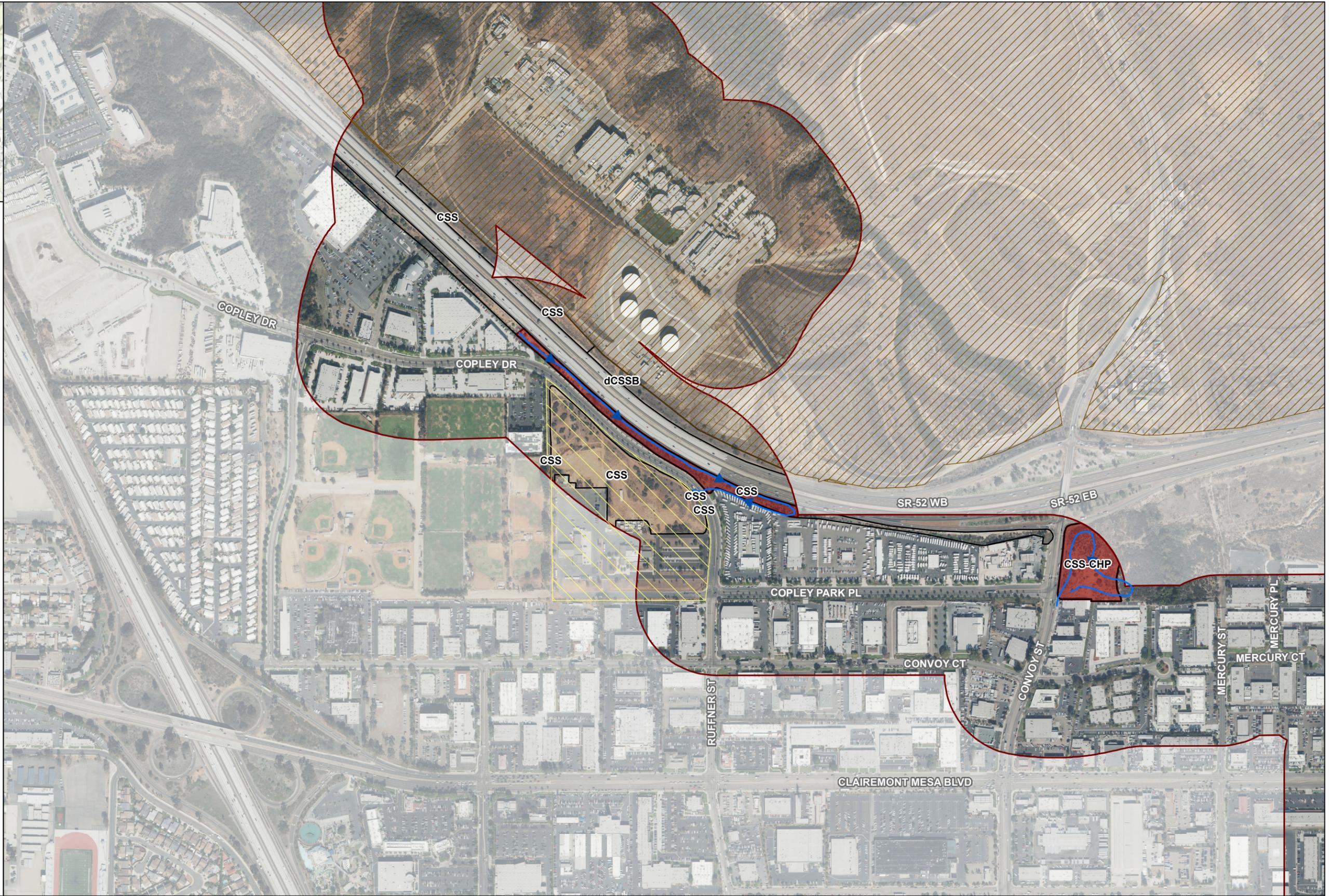
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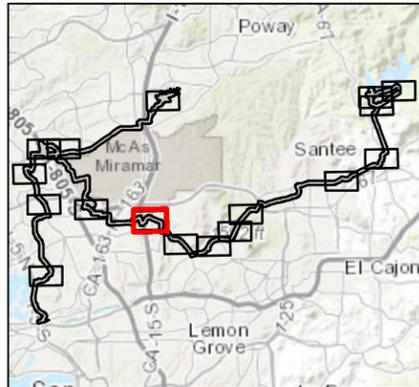
FIGURE 3-6
2016 Coastal California Gnatcatcher Survey Results - Map 6



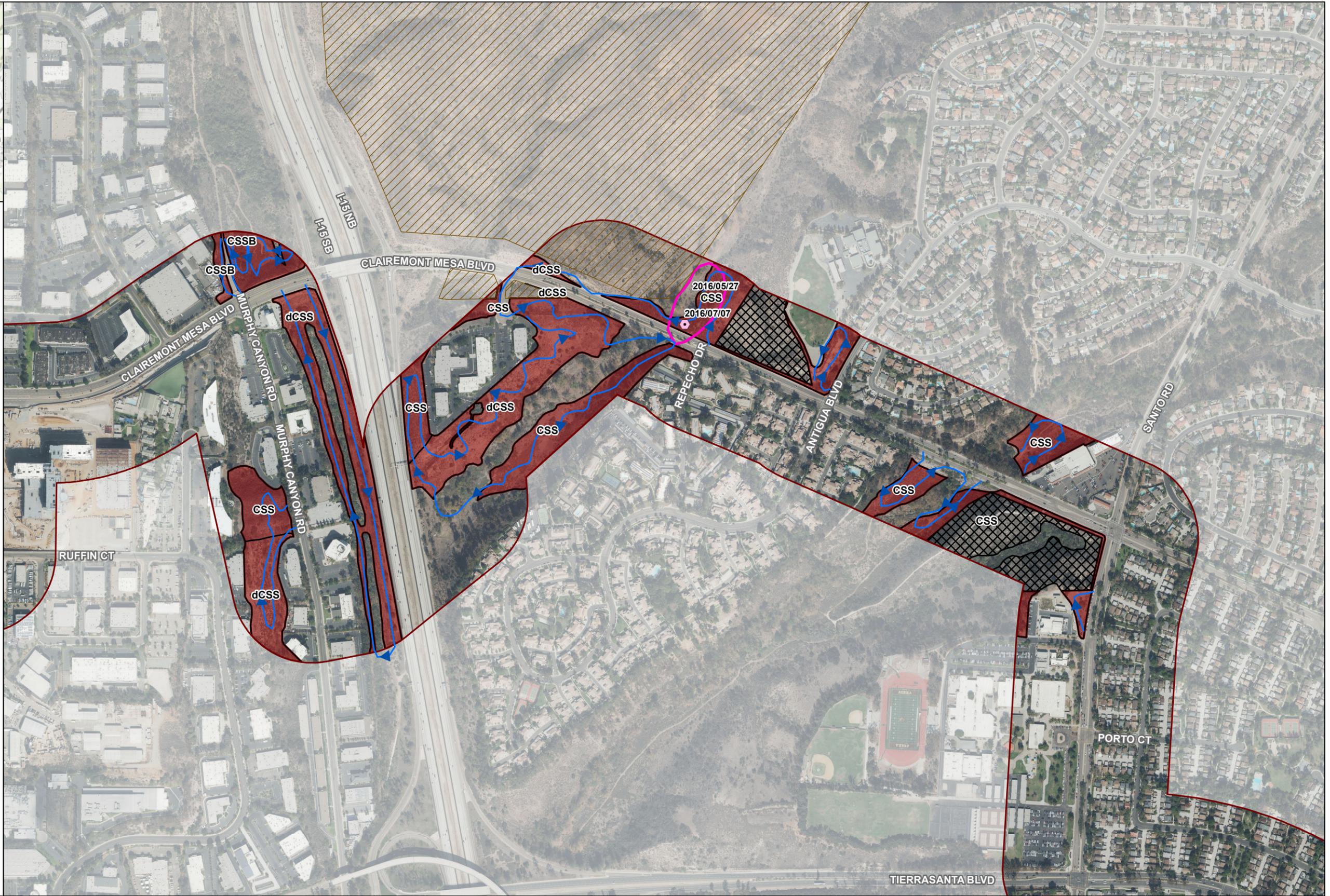
- Project Study Area
- CAGN Survey Routes
- MCAS Miramar
- Military Ownership - Air National Guard
- Survey Areas**
- Survey Area 2
- Vegetation Communities
- CSS - Diegan Coastal Sage Scrub
- CSS-CHP - Coastal Sage-Chaparral Transition
- dCSSB - disturbed Diegan Coastal Sage Scrub: Baccharis-dominated



10/11/2017 10:00 AM - 10:00 AM - Bing Maps - 2016 Coastal California Gnatcatcher Survey Report - Pure Water San Diego North City Project - CSSA - Results.mxd



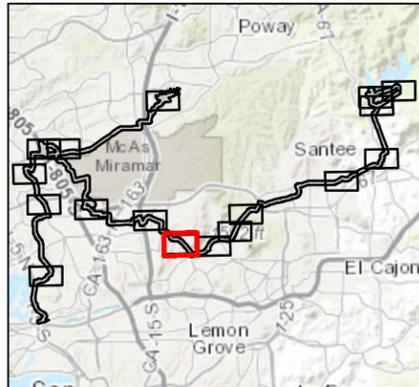
- Project Study Area
- Survey Results**
- Male
- Pair
- CAGN Survey Routes
- CAGN Territory
- Suitable CAGN Habitat- No Permission to Access
- MCAS Miramar
- Survey Areas**
- Survey Area 2
- Vegetation Communities
- CSS - Diegan Coastal Sage Scrub
- CSSB - Diegan Coastal Sage Scrub: Baccharis-dominated
- dCSS - disturbed Diegan Coastal Sage Scrub



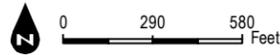
SOURCE: Bing Maps



FIGURE 3-8
2016 Coastal California Gnatcatcher Survey Results - Map 8



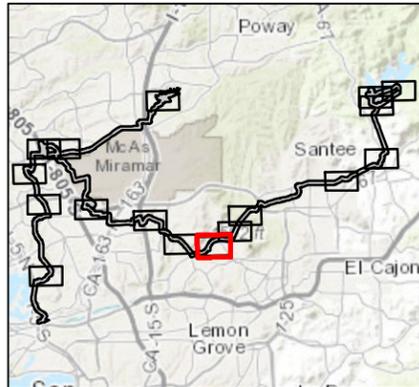
- Project Study
- CAGN Survey Routes
- Suitable CAGN Habitat- No Permission to Access
- Survey Areas**
- Survey Area 3
- Vegetation Communities
- CSS - Diegan Coastal Sage Scrub
- dCSS - disturbed Diegan Coastal Sage Scrub



SOURCE: Bing Maps



FIGURE 3-9
2016 Coastal California Gnatcatcher Survey Results - Map 9



- Project Study Area
- Survey Results**
- Female
- ◆ Pair
- + Juvenile
- Unknown
- CAGN Survey Routes
- CAGN Territory
- Survey Areas**
- Survey Area 3
- Survey Area 4
- Vegetation Communities
- CSS - Diegan Coastal Sage Scrub
- dCSS - disturbed Diegan Coastal Sage Scrub

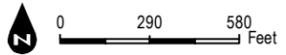
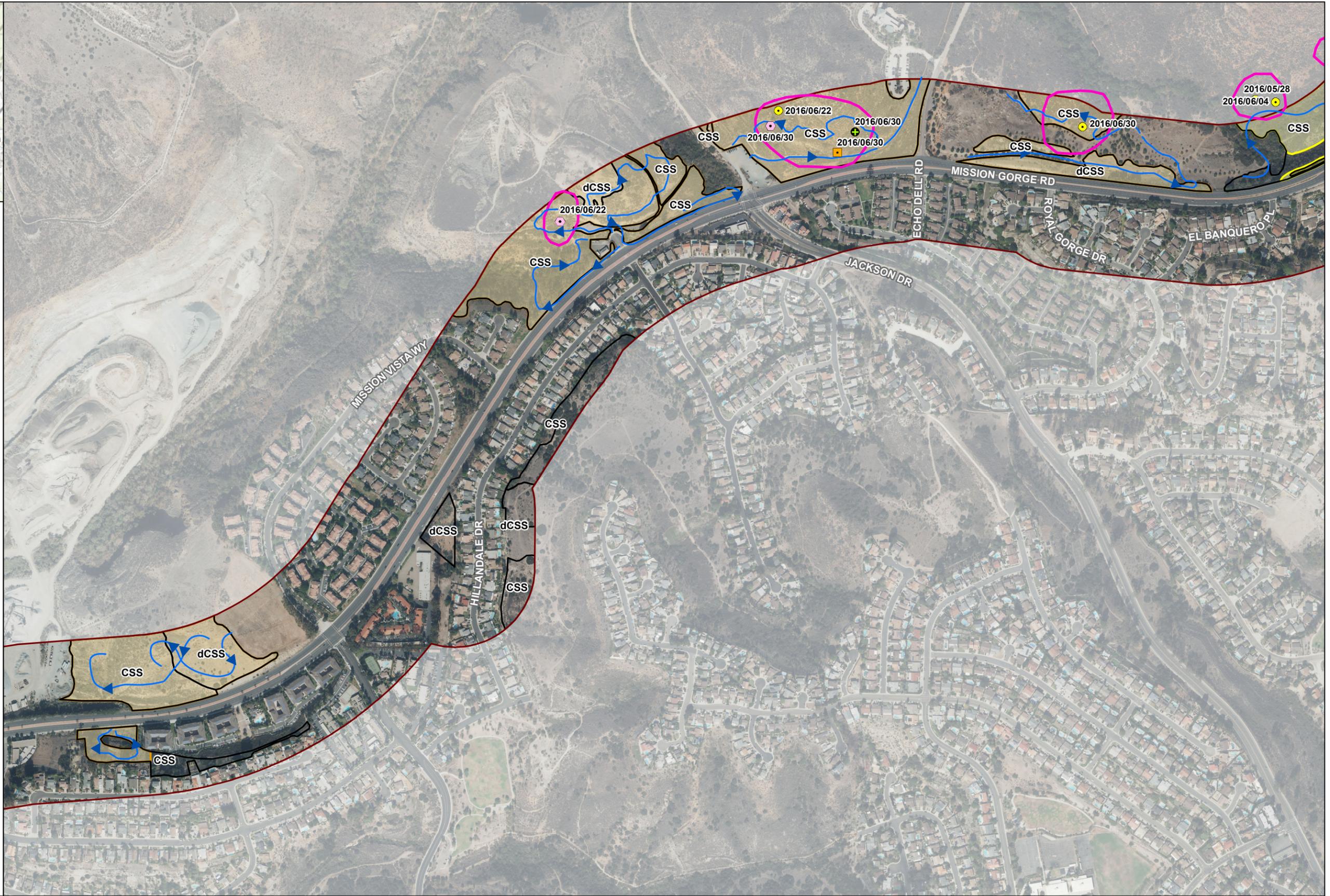
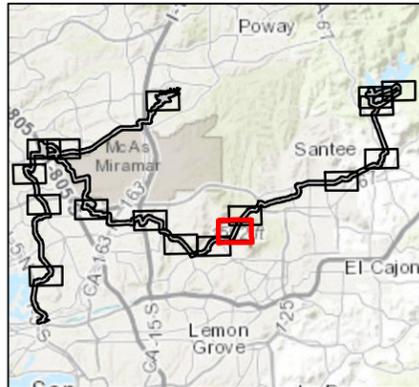
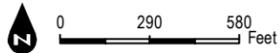


FIGURE 3-10
 2016 Coastal California Gnatcatcher Survey Results - Map 10



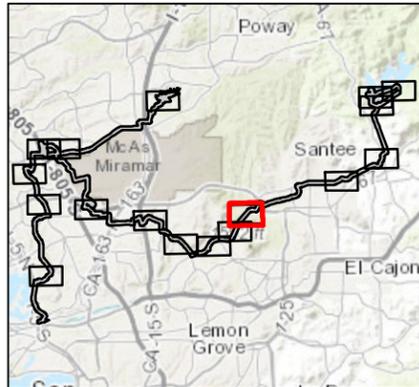
- Project Study Area
- Survey Results**
- Female
- ⊕ Male
- ⊕ Pair
- ⊕ Juvenile
- ⊕ Male with Juvenile
- ⊕ Pair with Juvenile
- Unknown
- CAGN Survey Routes
- CAGN Territory
- Survey Areas**
- Survey Area 3
- Survey Area 4
- Survey Area 5
- Vegetation Communities
- CSS - Diegan Coastal Sage Scrub
- dCSS - disturbed Diegan Coastal Sage Scrub



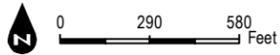
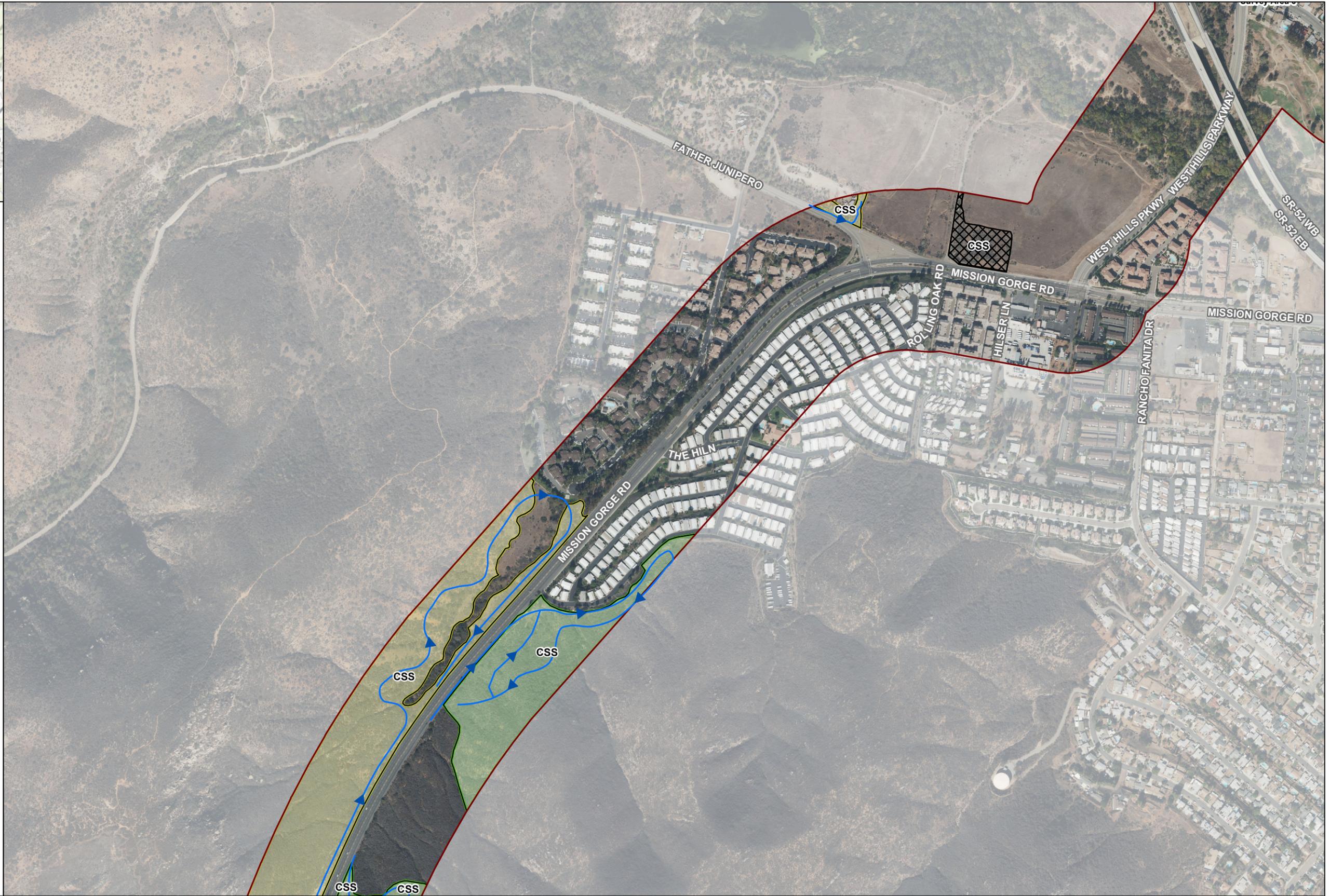
SOURCE: Bing Maps



FIGURE 3-11
2016 Coastal California Gnatcatcher Survey Results - Map 11



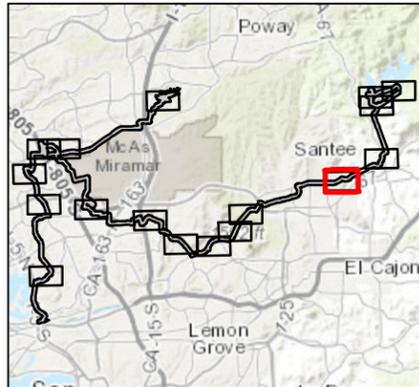
- Project Study
- CAGN Survey Routes
- Suitable CAGN Habitat- No Permission to Access
- Survey Areas**
- Survey Area 4
- Survey Area 5
- Vegetation Communities
- CSS - Diegan Coastal Sage Scrub



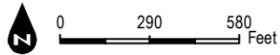
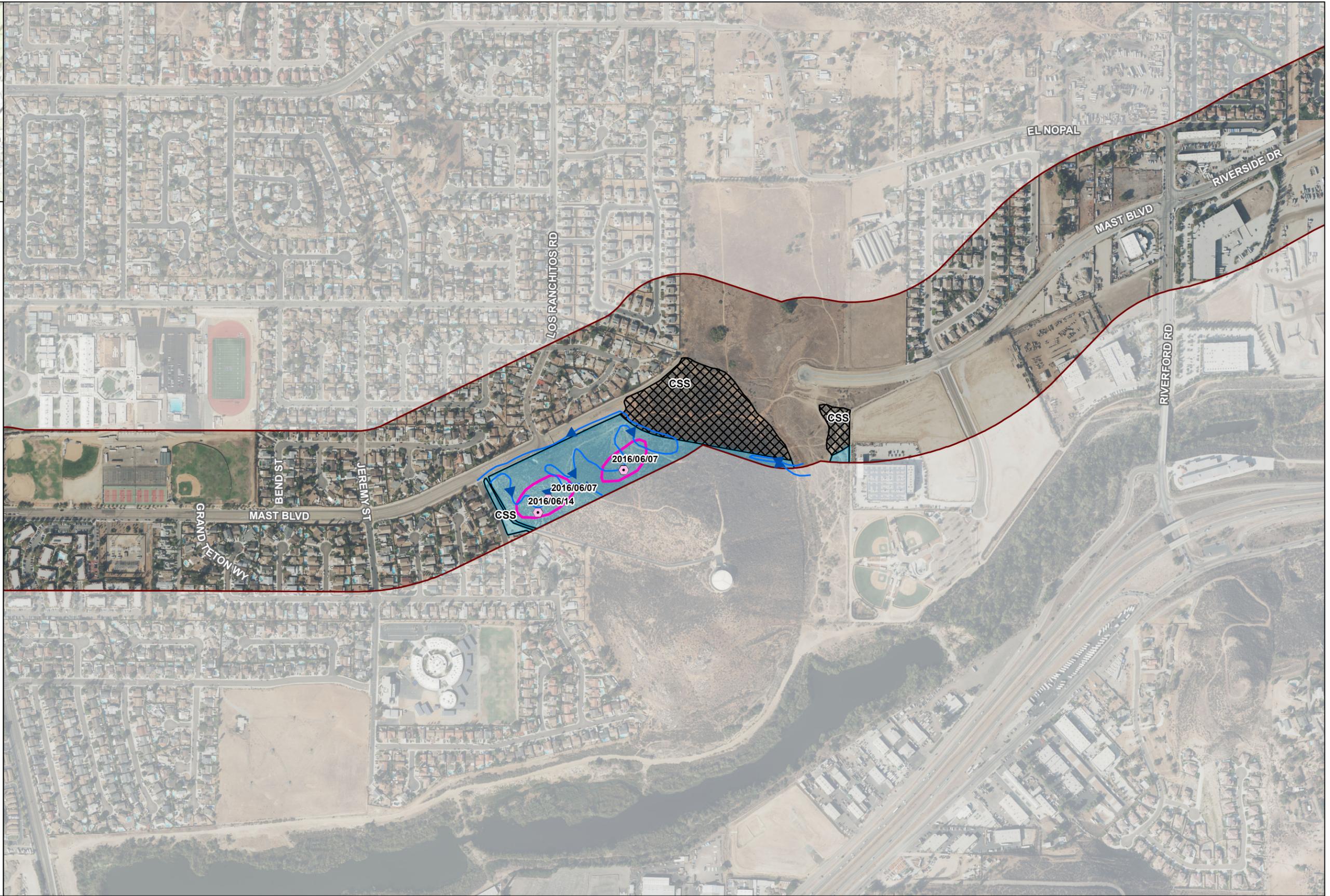
SOURCE: Bing Maps



FIGURE 3-12
2016 Coastal California Gnatcatcher Survey Results - Map 12



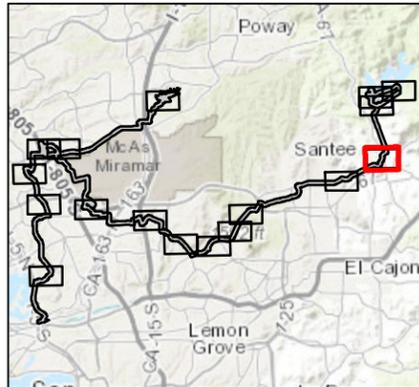
- Project Study
- Survey Results**
- ◆ Pair
- CAGN Survey Routes
- CAGN Territory
- Suitable CAGN Habitat- No Permission to Access
- Survey Areas**
- Survey Area 6
- Vegetation Communities
- CSS - Diegan Coastal Sage Scrub



SOURCE: Bing Maps



FIGURE 3-13
2016 Coastal California Gnatcatcher Survey Results - Map 13



- Project Study
- CAGN Survey Routes
- Suitable CAGN Habitat- No Permission to Access
- Survey Areas**
- Survey Area 6
- Vegetation Communities
- CSS - Diegan Coastal Sage Scrub

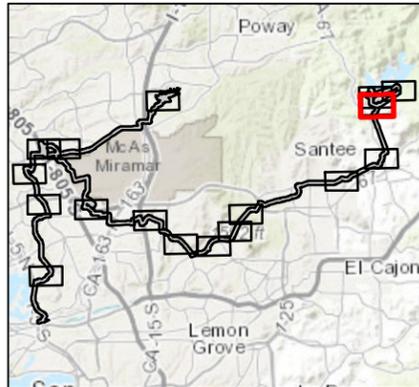


FIGURE 3-14

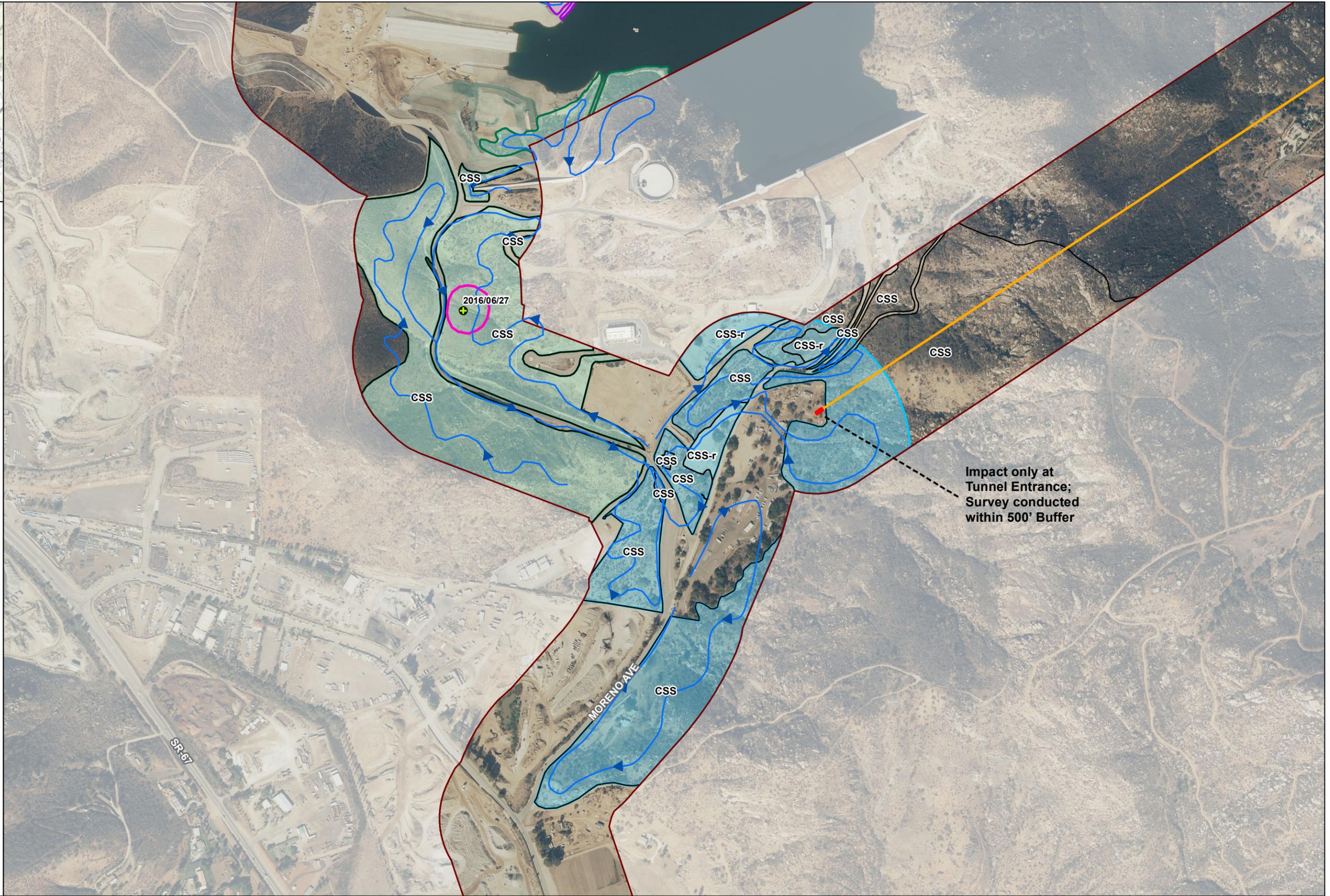
2016 Coastal California Gnatcatcher Survey Results - Map 14

SOURCE: Bing Maps





- Project Study Area
- San Vicente Pure Water Pipeline - Tunnel Alternative
- Tunnel Entrance (Impact only at Entrance location; Survey conducted within 500' Buffer)
- Survey Results**
- + Juvenile
- CAGN Survey Routes
- CAGN Territory
- Survey Areas**
- Survey Area 6
- Survey Area 7
- Survey Area 8
- Vegetation Communities
- CSS - Diegan Coastal Sage Scrub
- CSS-r - Diegan Coastal Sage Scrub-Restored

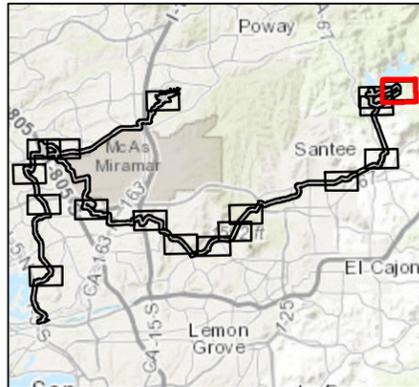


Impact only at Tunnel Entrance; Survey conducted within 500' Buffer

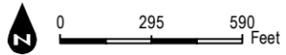


SOURCE: Bing Maps

FIGURE 3-15
2016 Coastal California Gnatcatcher Survey Results - Map 15



- Project Study Area
- San Vicente Pure Water Pipeline - Tunnel Alternative
- Tunnel Exit
- CAGN Survey Routes
- Survey Areas**
- Survey Area 8
- Vegetation Communities
- CSS - Diegan Coastal Sage Scrub



ATTACHMENT A

Wildlife Species Observed in Study Area

ATTACHMENT A
Wildlife Species Observed in Study Area

BIRD

BLACKBIRDS, ORIOLES, AND ALLIES

ICTERIDAE—BLACKBIRDS

Icterus bullockii—Bullock's oriole

* *Molothrus ater*—brown/headed cowbird

BUSHTITS

AEGITHALIDAE—LONG/TAILED TITS AND BUSHTITS

Psaltriparus minimus—bushtit

CARDINALS, GROSBEAKS, AND ALLIES

CARDINALIDAE—CARDINALS AND ALLIES

Pheucticus melanocephalus—black/headed grosbeak

EMBERIZINES

EMBERIZIDAE—EMBERIZIDS

Melospiza melodia—song sparrow

Melospiza crissalis—California towhee

Pipilo maculatus—spotted towhee

FALCONS

FALCONIDAE—CARACARAS AND FALCONS

Falco sparverius—American kestrel

FINCHES

FRINGILLIDAE—FRINGILLINE AND CARDUELINE FINCHES AND ALLIES

Spinus psaltria—lesser goldfinch

Haemorhous mexicanus—house finch

FLYCATCHERS

TYRANNIDAE—TYRANT FLYCATCHERS

Contopus sordidulus—western wood/pewee

Myiarchus cinerascens—ash/throated flycatcher

ATTACHMENT A (Continued)

Sayornis nigricans—black phoebe
Sayornis saya—Say’s phoebe
Tyrannus verticalis—western kingbird
Tyrannus vociferans—Cassin’s kingbird

HAWKS

ACCIPITRIDAE—HAWKS, KITES, EAGLES, AND ALLIES

Buteo jamaicensis—red/tailed hawk
Buteo lineatus—red/shouldered hawk

HUMMINGBIRDS

TROCHILIDAE—HUMMINGBIRDS

Calypte anna—Anna’s hummingbird
Selasphorus sasin—Allen’s hummingbird

JAYS, MAGPIES, AND CROWS

CORVIDAE—CROWS AND JAYS

Apelocoma californica—western scrub/jay
Corvus brachyrhynchos—American crow
Corvus corax—common raven

MOCKINGBIRDS AND THRASHERS

MIMIDAE—MOCKINGBIRDS AND THRASHERS

Mimus polyglottos—northern mockingbird
Toxostoma redivivum—California thrasher

NEW WORLD QUAIL

ODONTOPHORIDAE—NEW WORLD QUAIL

Callipepla californica—California quail

NEW WORLD VULTURES

CATHARTIDAE—CARDINALS AND ALLIES

Cathartes aura—turkey vulture

ATTACHMENT A (Continued)

OLD WORLD WARBLERS AND GNATCATCHERS

SYLVIIDAE—SYLVIID WARBLERS

Polioptila caerulea—blue/gray gnatcatcher

Polioptila californica californica—coastal California gnatcatcher

PIGEONS AND DOVES

COLUMBIDAE—PIGEONS AND DOVES

Zenaida macroura—mourning dove

* *Columba livia*—rock pigeon (rock dove)

ROADRUNNERS AND CUCKOOS

CUCULIDAE—CUCKOOS, ROADRUNNERS, AND ANIS

Geococcyx californianus—greater roadrunner

SILKY FLYCATCHERS

PTILOGONATIDAE—SILKY/FLYCATCHERS

Phainopepla nitens—phainopepla

SWALLOWS

HIRUNDINIDAE—SWALLOWS

Hirundo rustica—barn swallow

Petrochelidon pyrrhonota—cliff swallow

Stelgidopteryx serripennis—northern rough-winged swallow

SWIFTS

APODIDAE—SWIFTS

Aeronautes saxatalis—white/throated swift

WOOD WARBLERS AND ALLIES

PARULIDAE—WOOD/WARBLERS

Geothlypis trichas—common yellowthroat

Oreothlypis celata—orange/crowned warbler

ATTACHMENT A (Continued)

WOODPECKERS

PICIDAE—WOODPECKERS AND ALLIES

Melanerpes formicivorus—Acorn woodpecker

Picoides nuttallii—Nuttall's woodpecker

Colaptes auratus—northern flicker

WRENS

TROGLODYTIDAE—WRENS

Salpinctes obsoletus—rock wren

Thryomanes bewickii—Bewick's wren

Troglodytes aedon—house wren

Campylorhynchus brunneicapillus—cactus wren

WRENTITS

TIMALIIDAE—BABBLERS

Chamaea fasciata—wrentit

INVERTEBRATE

BUTTERFLIES

NYMPHALIDAE—BRUSH/FOOTED BUTTERFLIES

Junonia coenia—common buckeye

Limenitis lorquini—Lorquin's admiral

RIODINIDAE—METALMARKS

Apodemia mormo virgulti—Behr's metalmark

HESPERIIDAE—SKIPPERS

Erynnis funeralis—funereal duskywing

PAPILIONIDAE—SWALLOWTAILS

Papilio zelicaon—anise swallowtail

PIERIDAE—WHITES AND SULFURS

Pieris rapae—cabbage white

Pontia protodice—checkered white

ATTACHMENT A (Continued)

MAMMAL

CANIDS

CANIDAE—WOLVES AND FOXES

Canis latrans—coyote

HARES AND RABBITS

LEPORIDAE—HARES AND RABBITS

Sylvilagus audubonii—desert cottontail

Sylvilagus bachmani—brush rabbit

RACCOONS

PROCYONIDAE—RACCOONS AND RELATIVES

Procyon lotor—raccoon

RATS AND MICE

MURIDAE—RATS AND MICE

Neotoma fuscipes—dusky/footed woodrat

SQUIRRELS

SCIURIDAE—SQUIRRELS

Spermophilus (Otospermophilus) beecheyi—California ground squirrel

UNGULATES

CERVIDAE—DEERS

Odocoileus hemionus—mule deer

REPTILE

LIZARDS

PHRYNOSOMATIDAE—IGUANID LIZARDS

Sceloporus occidentalis—western fence lizard

Uta stansburiana—common side/blotched lizard

ATTACHMENT A (Continued)

SNAKES

VIPERIDAE—VIPERS

Crotalus ruber—red diamondback rattlesnake

* signifies introduced (non/native) species