Appendix B
Biological Survey Reports

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Attachment I

Biological Constraints Study

Conducted 2013

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October 24, 2013

Mr. Robert Fletcher
Environmental Specialist-Biologist
San Diego Gas & Electric
8315 Century Park Court
San Diego, CA 92123

Reference: Biological Constraints Study for the Reconfigure TL 674A at Del Mar and Remove from Service TL 666D Project (RECON Number 7203-1)

Dear Mr. Fletcher:

This letter summarizes the results of the biological constraints study conducted for the Reconfigure Tie Line (TL) 674A at Del Mar and Remove from Service (RFS) TL 666D Project (project). The purpose of the constraints study was to report occurrences of or identify suitable habitat for state or federally listed plant or wildlife (T&E) species and SDG&E Natural Community Conservation Plan narrow endemic (NE) species, in order to identify resources with a high priority for avoidance during project design. This letter discusses observations of T&E and NE species, suitable habitat for T&E and NE species, U.S. Fish and Wildlife Service (USFWS) critical habitat that occurs within the study area, biological constraints, and recommendations. A reconnaissance-level jurisdictional wetlands/waters assessment was also conducted by RECON, and submitted under separate cover, as part of the constraints study for this project.

Project Description

This proposed San Diego Gas and Electric (SDG&E) project includes two major components:

1) Remove TL 666D from service in order to eliminate the need for ongoing Operations and Maintenance work in coastal environmentally sensitive areas (San Dieguito Lagoon, Torrey Pines State Reserve, and Los Peñasquitos Marsh), and

2) Replace the existing TL 674A North City West (NCW)-RFS tap with a new 69-kilovolt (kV) TL (TL 69XX) from NCW to Del Mar to support removal of TL 666.

The approximately seven-linear-mile project will be conducted in four phases:

1) Phase I involves installation of approximately one mile of underground TL (TL 69XX) along Via de la Valle to connect the Del Mar Substation to the NCW Substation and replace the existing TL 674A tap that will be eliminated in Phase II as part of the Rancho Santa Fe tap reconfiguration.

2) Phase II will connect TL 69XX with TL 674A and remove the Rancho Santa Fe tap from service.

3) Phase III will complete the undergrounding of TL69XX within the Del Mar Substation, de-energize TL 666D and remove TL 666D from its position in Del Mar, and terminate TL 69XX into the vacant bay position left by TL 666D.

4) In Phase IV, all overhead transmission along TL 666D between the Del Mar Substation and pole Z191287, on the west side of Interstate 5 and one span away from the Del Mar tap, will be removed from service. All associated structures will either be removed from service or topped between the existing distribution conductors and the removed transmission conductors.

The entire project involves removal of 34 existing transmission poles, topping of 55 transmission poles, and replacement of 2 poles. A total of 23 pole removals will occur within either upland biological preserves or coastal estuarine wetlands.

Survey Methods

RECON biologists Brenna Ogg, Mandy Weston, and Andrew Smisek, and Balk Biological biologist Michelle Balk surveyed the approximately 100-foot-wide transmission corridor. A minimum 50-foot buffer was surveyed around each project structure. Due to the increased potential for access challenges within the two estuaries (San Dieguito and Los Peñasquitos), the study area in the estuaries was expanded to also include potential site access routes. The biologists covered the study area by walking meandering transects, and all existing structure locations were directly accessed except for poles Z90291, Z90290, Z90289, Z90260, and Z90259. Poles Z90291, Z90290, and Z90289 are located on islands, and steep terrain and unstable cliffs prevented safe pedestrian access to poles Z90260 and Z90259. Portions of the study area that could not be directly accessed were assessed using binoculars, aerial imagery, and soil survey maps (U.S. Department of Agriculture 1973).

Surveys were conducted on September 27, October 1, October 4, and October 8, 2013, to provide a baseline of T&E and NE species that occur or have the potential to occur within the study area. Surveys were conducted between the hours of 0800 and 1700. Weather conditions were fair, with air temperatures ranging between 60 and 79 degrees Fahrenheit, winds below 15 miles per hour, and no cloud cover. Potential suitable habitat for T&E and NE species was mapped using 1-inch-equals-70-feet aerial imagery. Observed individuals of these species were mapped using 1-inch-equals-70-feet aerial imagery or a sub-meter accuracy global positioning system unit.

Constraints Study Results

This constraints study focused on recording observations of and mapping suitable habitat for T&E and NE species within the project study area. Table 1 provides the complete list of species evaluated and summarizes the study results. The T&E and NE plant and wildlife species that were evaluated for this study include the following:

- Species that were observed during the constraints study surveys,
- Species that have been known to occur within one mile of the study area according to a California Natural Diversity Database (CNDDB) and USFWS records search (State of California 2013, USFWS 2013), and
- Species for which a desktop review determined that potentially suitable habitat may be present within the study area.

T&E and NE species that were not observed were analyzed to determine their potential to occur within the study area. Potential to occur was assessed based on the data collected and habitat evaluations conducted during the September and October 2013 surveys, known CNNDB and USFWS database occurrences, and a literature review. The Constraints Study Map Book provides

locations of these observations and suitable habitat. Each point location presented in the map book represents one individual unless otherwise noted. Total acreages of suitable habitat identified within the study area are presented in Table 2 by species.

Threatened, Endangered, and Narrow Endemic Plant Species Observed

One federally endangered plant species, Del Mar manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*), was observed within the study area during the constraints surveys. A total of 50 individuals were observed in two areas within the central portion of the study area (see Maps 16–18, 22, and 23). The areas are found on coastal mesas or slopes and are characterized by southern maritime chaparral and Torrey pine forest, often on iron-rich sandstone substrate. As Del Mar manzanita is a conspicuous perennial species, the extent of suitable habitat within the study area is defined by the distribution of individual plants.

Threatened, Endangered, and Narrow Endemic Plant Species with Potential to Occur

The following five T&E and/or NE plant species were not observed but have potential to occur within the study area: Orcutt's spineflower (*Chorizanthe orcuttiana*), short-leaved dudleya (*Dudleya brevifolia*), salt marsh bird's-beak (*Chloropyron maritimum* ssp. *maritimum*), coast wallflower (*Erysimum ammophilum*), and aphanisma (*Aphanisma blitoides*). Occurrences of Orcutt's spineflower, short-leaved dudleya, and aphanisma have been reported within one mile of the study area (State of California 2013). The constraints surveys were conducted outside the optimal detection period (e.g., blooming period) for each of these species. Therefore, the extent of suitable habitat was determined by the observed vegetation, topography, and soil types.

Orcutt's spineflower and coast wallflower have a moderate potential to occur within the 7.1 acres of suitable habitat mapped within the study area, and short-leaved dudleya has a moderate potential to occur within the 5.0 acres of suitable habitat mapped within the study area. Areas mapped as suitable habitat for Orcutt's spineflower, short-leaved dudleya, and coast wallflower, depicted on Maps 15–18 and 22–26, typically consist of open chaparral with sandstone substrate. Within these areas, suitable habitat for short-leaved dudleya was further restricted to areas with pebbly and iron-rich sandstone substrate.

Salt marsh bird's beak has a moderate potential to occur within the 79.3 acres of suitable habitat mapped within the study area. Areas mapped as suitable habitat for salt marsh bird's beak consist of coastal salt marsh and typically comprise a mix of pickleweed (*Salicornia pacifica*), salt grass (*Distichlis spicata*), alkali heath (*Frankenia salina*), and spreading alkali-weed (*Cressa truxillensis*), and are shown on Maps 9–14 and 26–33.

Aphanisma has a low potential to occur within the study area. As depicted on Maps 1, 2, 3, 5, 9–17, and 24–34, a total of 105.4 acres of suitable habitat was mapped within the study area for aphanisma. The study area contains potentially suitable coastal scrub or bluffs with saline sand, or salt marsh to support this species. However, aphanisma is presumed extirpated or close to extirpation in San Diego County by some experts (Reiser 2001, Jepson Flora Project 2013). Although reported within one mile of the study area, the most recent occurrence reported by the CNDDB is from a 1973 herbarium collection made from the "vicinity of a beach trail in Torrey Pines State Park" (State of California 2013).

Threatened, Endangered, and Narrow Endemic Plant Species Not Expected to Occur

The following seven T&E and/or NE plant species are not expected to occur in the study area: Shaw's agave (*Agave shawii* var. *shawii*), coastal dunes milk-vetch (*Astragalus tener* var. *titi*), San Diego button celery (*Eryngium aristulatum* var. *parishii*), California Orcutt grass (*Orcuttia californica*), Encinitas baccharis (*Baccharis vanessae*), Nevin's barberry (*Berberis nevinii*), and Palmer's ericameria (*Ericameria palmeri* var. *palmeri*).

Although potentially suitable habitat for Shaw's agave occurs within the study area, no naturally occurring populations are known north of Point Loma (Reiser 2001). The CNDDB occurrence from Torrey Pines State Reserve represents an introduced population (Reiser 2001, State of California 2013). In addition, as this species is a conspicuous perennial, it would have likely been apparent if present.

Coastal dunes milk-vetch is not expected to occur within the study area due to the lack of suitable coastal dune habitat (Reiser 2001). In addition, coastal dunes milk-vetch is presumed extirpated in southern California by some local experts (Reiser 2001). Although recorded within one mile of the study area, the most recent occurrence reported by the CNDDB is from 1975 (State of California 2013).

The study area lacks vernal pools or mima mounds with vernally moist conditions to support San Diego button celery or California Orcutt grass.

Within the study area, potentially suitable habitat for Encinitas baccharis occurs within the southern maritime chaparral, and potentially suitable habitat for Palmer's ericameria occurs along the drainages. However, these species are perennial shrubs, which would likely have been apparent if present. For conspicuous species such as these, the extent of suitable habitat within the study area is largely determined by the observed occurrences. As none were observed, no suitable habitat has been mapped.

Nevin's barberry is not expected to occur in the study area due to the lack of the primary habitat for this species, which is chaparral with strong desert affinities (Reiser 2001). The CNDDB occurrence within Torrey Pines State Reserve represents a planted population (Reiser 2001, State of California 2013).

Threatened, Endangered, and Narrow Endemic Wildlife Species Observed

As shown above, the following three T&E and/or NE wildlife species were observed during the constraints surveys: salt marsh skipper (*Panoquina errans*), coastal California gnatcatcher (*Polioptila californica californica;* gnatcatcher), and Belding's savannah sparrow (*Passerculus sandwichensis beldingi;* savannah sparrow). The occurrences and suitable habitat for each are discussed below.

Approximately 12 salt marsh skippers were observed at San Dieguito Lagoon, and 20.7 acres of suitable habitat were mapped within the study area (see Maps 9–14 and 26–33). The extent of suitable habitat was determined by the presence this species' larval host plant, saltgrass, within coastal salt marsh. Other common plant species within these areas include pickleweed, spreading alkali-weed, and alkali heath.

A total of four gnatcatcher occurrences were recorded during the constraints surveys, and 9.6 acres of suitable nesting habitat were mapped within the study area (see Maps 1, 2, 3, 10, 12–17, 24, 25, 26, 33, and 34). The northernmost observation (see Map 1) consisted of a pair, and the observation adjacent to the San Dieguito estuary consisted of one individual (see Map 14). The gnatcatcher observations in the southern portion of the study area comprised two individuals within close proximity, which may indicate a pair or a single individual foraging (see Map 34). These observations likely represent a minimum of three gnatcatcher use areas within or adjacent to the study area. Suitable habitat for gnatcatcher within the study area is largely characterized as coastal sage scrub or coastal sage scrub/chaparral mix with a moderate to high density of native shrubs. Dominant native shrub species vary throughout the study area, but generally include California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), and black sage (*Salvia mellifera*).

Three savannah sparrow observations were recorded during the surveys, and 91.9 acres of suitable nesting habitat were mapped within the study area in the San Dieguito and Los

Peñasquitos estuaries (Maps 9–14 and 26–33). From north to south, these observations included one solitary bird, one pair, and one bird detected by call only (see Maps 11, 30, 31, and 32). These observations likely represent a minimum of three savannah sparrow use areas within or adjacent to the study area. Within the study area, suitable habitat for savannah sparrow is characterized as coastal salt marsh and generally comprises a mix of pickleweed, broad-leaved cattail (*Typha latifolia*), southern bulrush (*Schoenoplectus californicus),* fleshy jaumea (*Jaumea carnosa*), sedge (*Carex* sp.), salt grass, spreading alkali-weed, and alkali heath.

Threatened, Endangered, and Narrow Endemic Wildlife Species with Potential to Occur

The following six T&E and/or NE wildlife species were not detected during surveys but have potential to occur within the study area: western snowy plover (*Charadrius alexandrinus nivosus*), California black rail (*Laterallus jamaicensis coturniculus*), light-footed clapper rail (*Rallus longirostris levipes*), California least tern (*Sternula antillarum browni*), least Bell's vireo (*Vireo bellii pusillus*), and Pacific pocket mouse (*Perognathus longimembris pacificus*). Each species is discussed below.

A total of 7.6 acres of suitable nesting habitat was mapped within the study area for western snowy plover and California least tern. Western snowy plover and California least tern have a moderate potential to occur within the San Dieguito and Los Peñasquitos estuaries, as the salt pans and cleared areas with little vegetative cover provide suitable open sand or friable soils to support nesting by both species, and the tidal waters provide foraging habitat for California least tern (see Maps 9, 13, 15, and 28–33). In addition, occurrences of both species have been reported within one mile of the study area (State of California 2013, USFWS 2013).

A total of 91.9 acres of suitable nesting habitat was mapped within the study area for black rail. Although it is thought that black rail is extirpated from San Diego County, there is a low potential for this species to occur and nest in the San Dieguito and Los Peñasquitos estuaries due to the presence of suitable salt marsh habitat dominated by pickleweed, which is the black rail's preferred nesting substrate (see Maps 9–14 and 26–33). This species has been recorded within one mile of the study area (State of California 2013). However, no sightings of this species have been reported in San Diego County since 1983 (Unitt 2004).

A total of 40.0 acres of suitable nesting habitat was mapped within the study area for light-footed clapper rail. Light-footed clapper rail has a high potential to nest in the San Dieguito and Los Peñasquitos estuaries due to the presence of coastal salt marsh dominated by pickleweed, and freshwater marsh characterized by cattails (*Typha* sp.) and bulrush (*Scirpus* sp.), providing suitable nesting habitat (see Maps 10–14, 26–28, and 33). Multiple occurrences of this species have been reported to the CNDDB within the San Dieguito and Los Peñasquitos estuaries (State of California 2013, USFWS 2013). Specifically within Los Peñasquitos estuary, light-footed clapper rail has been recorded as nesting in the freshwater marsh (State of California 2013).

A total of 0.5 acre of suitable nesting habitat was mapped within the study area for least Bell's vireo. Least Bell's vireo has a moderate potential to nest within two small patches of southern willow scrub within the upper reach of Los Peñasquitos estuary and the southern portion of San Dieguito estuary (see Maps 12 and 32). The southern willow scrub consists of riparian tree species, including black willow (*Salix gooddingii*), arroyo willow (*Salix lasiolepis*), and mule fat (*Baccharis salicifolia*) and provides marginally suitable nesting habitat. Multiple occurrences of this species have been reported within one mile of the study area (State of California 2013, USFWS 2013).

Pacific pocket mouse has a low potential to occur within the 22.5 acres of suitable habitat mapped within the study area. As there are no recent reports of this species within the vicinity of the study area, suitable habitat mapping for Pacific pocket mouse was largely determined by habitat characteristics and includes portions of the study area that support coastal sage scrub, coastal sage scrub/chaparral mix, or southern maritime chaparral with sandstone substrate (see Maps 1–

3, 5, 9–18, 22–26, 33, 34, and 36). One unsubstantiated occurrence of this species has been reported within one mile of the study area, and Los Peñasquitos Lagoon is one of four historic localities known from San Diego County (State of California 2013, USFWS 1998).

Threatened, Endangered, and Narrow Endemic Wildlife Species Not Expected to Occur

San Diego fairy shrimp is not expected to occur in the study area. This species is restricted to vernal pools, which were not observed in the study area.

USFWS Critical Habitat

USFWS-designated critical habitat for San Diego fairy shrimp and western snowy plover occurs within one mile of the study area. However, no USFWS-designated critical habitat occurs within the study area boundary.

Biological Constraints and Recommendations

T&E and NE Plants

As shown in Table 2 above, 21 project structures and 4 stringing sites occur within or adjacent to areas mapped as suitable habitat for Orcutt's spineflower and coast wallflower; 14 project structures and 2 stringing sites occur within or adjacent to suitable habitat for short-leaved dudleya; 13 project structures and 1 stringing site occur within suitable habitat for salt marsh bird's-beak; 39 project structures and 5 stringing sites occur within suitable habitat for aphanisma; and 7 project structures occur adjacent to observed Del Mar manzanita shrubs. If impacts to suitable habitat for Orcutt's spineflower, short-leaved dudleya, salt marsh bird's-beak, coast wallflower, aphanisma, or Del Mar manzanita cannot be avoided, the following measures are recommended to determine presence or absence of these species and avoid or minimize potential impacts to these species:

- A pre-construction focused survey for Orcutt's spineflower shall be conducted within suitable habitat during the optimal survey period for this species. The optimal survey period is March to May, which coincides with its typical blooming period. This species is a small annual herb, which is most visible when in flower.

- A pre-construction focused survey for short-leaved dudleya and aphanisma shall be conducted within suitable habitat during the optimal survey period for these species, which is between April and May. Although short-leaved dudleya is a perennial herb, it is deciduous in summer.

- A pre-construction focused survey for salt marsh bird's-beak shall be conducted within suitable habitat during the optimal survey period. The typical blooming period for this species extends from May to October; however, higher likelihood of detection is anticipated earlier in the blooming period.

- A pre-construction focused survey for coast wallflower shall be conducted within suitable habitat during the optimal survey period for this species, which coincides with its blooming period of March to April, as this is a biennial or short-lived perennial herb.

- A pre-construction survey for Del Mar manzanita shall be conducted at the structure locations listed in Table 2 in order to flag individual Del Mar manzanita shrubs for avoidance.

T&E and NE Wildlife

As shown in Table 2, 10 project structures and 1 stringing site occur within or adjacent to areas mapped as suitable habitat for salt marsh skipper. If impacts to suitable habitat for salt marsh

skipper cannot be avoided, the following measures are recommended to avoid or minimize potential impacts to this species:

- Prior to initiation of project-related activities within or immediately adjacent to San Dieguito or Los Peñasquitos estuaries, a qualified biologist shall survey the proposed work area and flag stands of saltgrass. This will avoid or minimize direct impacts to the salt marsh skipper's larval host plant, thereby avoiding or minimizing direct impacts to salt marsh skipper eggs and/or larvae.

- As direct impacts to this species' larval host plant may be difficult to avoid at some project locations due to the broad distribution of saltgrass, a pre-construction focused survey for this species is also recommended, where feasible. A qualified biologist shall conduct a focused pre-construction survey within the coastal salt marsh during the peak flight season (July to September) in order to identify which stands of saltgrass are occupied by salt mash skipper and, therefore, have highest priority for avoidance.

As shown in Table 2, 21 project structures and 4 stringing sites occur within or adjacent to areas mapped as suitable habitat for coastal California gnatcatcher. If impacts to suitable habitat for coastal California gnatcatcher cannot be avoided, the following measures are recommended to avoid potential impacts to nesting coastal California gnatcatcher:

- Construction at these locations shall occur outside the coastal California gnatcatcher breeding season (February 15 through August 31).

- If construction occurs within the coastal California gnatcatcher breeding season, a pre-construction survey shall be conducted by a qualified biologist within one week prior to work to identify active coastal California gnatcatcher nests within potential impact areas and the surrounding areas.

- If construction occurs within the bird breeding season, a qualified biologist shall monitor construction activities within the suitable habitat throughout the duration of the bird breeding season to avoid impacts to active gnatcatcher nests.

As shown in Table 2, 21 project structures and 2 stringing sites occur within or adjacent to areas mapped as suitable habitat for Belding's savannah sparrow and California black rail, and 10 project structures and 1 stringing site occur within or adjacent to suitable habitat for light-footed clapper rail. If impacts to suitable habitat for Belding's savannah sparrow, California black rail, and light-footed clapper rail cannot be avoided, the following measures are recommended to avoid potential impacts to nesting savannah sparrows, black rails, or clapper rails:

- Construction at these locations shall occur outside the combined breeding season of February 15 through July 15.

- If construction occurs within the breeding season listed above, a pre-construction survey shall be conducted by a qualified biologist within one week prior to work to identify active nests within potential impact areas and the surrounding areas.

- If construction occurs within the bird breeding season, a qualified biologist shall monitor construction activities within the suitable habitat throughout the duration of the bird breeding season to avoid impacts to active Belding's savannah sparrow, black rail, or light-footed clapper rail nests.

As shown in Table 2, 6 project structures, 2 stringing sites, and 1 staging yard occur within or adjacent to areas mapped as suitable habitat for western snowy plover and California least tern. If

impacts to suitable habitat for western snowy plover and California least tern cannot be avoided, the following measures are recommended to avoid potential impacts to nesting plovers or terns:

- Construction at these locations shall occur outside the combined breeding season of March 1 through September 15.

- If construction occurs within the breeding season listed above, a pre-construction survey shall be conducted by a qualified biologist within one week prior to work to identify active nests within potential impact areas and the surrounding areas.

- If construction occurs within the bird breeding season, a qualified biologist shall monitor construction activities within the suitable habitat throughout the duration of the bird breeding season to avoid impacts to active western snowy plover or California least tern nests.

As shown in Table 2, no project structures occur within or adjacent to areas mapped as suitable habitat least Bell's vireo. However, if impacts to suitable habitat for least Bell's vireo are anticipated from project-related activities and cannot be avoided, the following measures are recommended to avoid potential impacts to nesting least Bell's vireo:

- Construction within or adjacent to suitable habitat for least Bell's vireo shall occur outside the least Bell's vireo breeding season (March 15 through September 15).

- If construction occurs within the least Bell's vireo breeding season, a pre-construction survey shall be conducted by a qualified biologist within one week prior to work to identify active vireo nests within potential impact areas and the surrounding areas.

- If construction occurs within the bird breeding season, a qualified biologist shall monitor construction activities within the suitable habitat throughout the duration of the bird breeding season to avoid impacts to active least Bell's vireo nests.

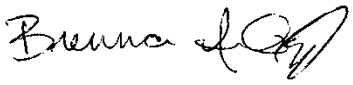
As shown in Table 2, 37 project structures and 7 stringing sites occur within or adjacent to areas mapped as suitable habitat for Pacific pocket mouse. If impacts to suitable habitat for Pacific pocket mouse cannot be avoided, the following measures are recommended to avoid or minimize potential impacts to Pacific pocket mouse:

- A qualified biologist shall monitor excavation activities at these locations to minimize direct impacts to potential pocket mouse burrows.

- All holes or trenches shall be properly covered to prevent entrapment of wildlife, and all open holes or trenches shall be checked for wildlife by a qualified biologist prior to the start of work each day.

The shapefiles associated with the Constraints Study Map Book were submitted under separate cover on October 23, 2013. Please contact me at bogg@reconenvironmental.com or (619) 308-9333 should you have any questions.

Sincerely,



Brenna Ogg
Senior Biologist

BAO:sh

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1998 Recovery Plan for the Pacific Pocket Mouse (*Perognathus longimembris pacificus*). September 28.

TABLE 1
THREATENED, ENDANGERED, AND NARROW ENDEMIC SPECIES EVALUATED FOR THE RECONFIGURE TL 674A AND REMOVE FROM SERVICE TL 666D PROJECT STUDY AREA

T&E and NE Species		Listing	Observed During the Survey	Suitable Habitat Observed	Potential to Occur
Common Name	Scientific Name				
Plants					
Shaw's agave	*Agave shawii* var. *shawii*	NE	No	No	N
aphanisma	*Aphanisma blitoides*	NE	No	Yes	L
Del Mar manzanita	*Arctostaphylos glandulosa* ssp. *crassifolia*	FE	Yes	Yes‡	O
coastal dunes milk-vetch	*Astragalus tener* var. *titi*	FE/CE/NE	No	No	N
Encinitas baccharis	*Baccharis vanessae*	FT/CE/NE	No	No‡	N
Nevin's barberry	*Berberis nevinii*	FE/CE/NE	No	No	N
salt marsh bird's-beak	*Chloropyron maritimum* ssp. *maritimum*	FE/CE/NE	No	Yes	M
Orcutt's spineflower	*Chorizanthe orcuttiana*	FE/CE/NE	No	Yes	M
short-leaved dudleya	*Dudleya brevifolia*	CE/NE	No	Yes	M
San Diego button celery	*Eryngium aristulatum* var. *parishii*	FE/CE	No	No	N
Palmer's ericameria	*Ericameria palmeri* var. *palmeri*	NE	No	No‡	N
coast wallflower	*Erysimum ammophilum*	NE	No	Yes	M
California Orcutt grass	*Orcuttia californica*	FE/CE	No	No	N
Wildlife					
San Diego fairy shrimp	*Branchinecta sandiegonensis*	FE	No	No	N
salt marsh skipper	*Panoquina errans*	NE	Yes	Yes	O
western snowy plover	*Charadrius alexandrinus nivosus*	FT	No	Yes	M
California black rail	*Laterallus jamaicensis coturniculus*	CT	No	Yes	L
Belding's savannah sparrow	*Passerculus sandwichensis beldingi*	CE	Yes	Yes	O
coastal California gnatcatcher	*Polioptila californica californica*	FT	Yes	Yes	O
light-footed clapper rail	*Rallus longirostris levipes*	FE/CE	No	Yes	H
California least tern	*Sternula antillarum browni*	FE/CE	No	Yes	M
least Bell's vireo	*Vireo bellii pusillus*	FE/CE	No	Yes	M
Pacific pocket mouse	*Perognathus longimembris pacificus*	FE/NE	No	Yes	L

FE = Federal Endangered; FT = Federal Threatened; CE = California Endangered; CT = California Threatened; NE = Narrow Endemic per SDG&E's Natural Communities Conservation Plan.

‡Potentially suitable habitat for these species is defined by the presence and distribution of individuals on site. While potentially suitable habitat may be present, if no individuals were detected, no suitable habitat was mapped for that species.

O = Observed, H = High, M = Moderate, L = Low, N = Not expected to occur.

TABLE 2
SUITABLE HABITAT FOR THREATENED, ENDANGERED, AND NARROW ENDEMIC SPECIES WITHIN THE RECONFIGURE TL 674A AND REMOVE FROM SERVICE TL 666D PROJECT STUDY AREA

Species	Suitable Habitat On-Site	Acres	Adjacent Structures, Stringing Sites, or Staging Yards
Plants			
Aphanisma	Coastal scrub or bluffs, and coastal salt marsh	105.4	Z119809, Z12322, Z12323, Z247034, U108923, U108922, U108920, Z419463, Z12303, Z90296, Z90295, Z90710, Z90294-Z90288, Z90286, Z33135, Z90283-Z90280, Z90259, Z90258, Z90257, Z90253, Z90252, Z90251, Z90249, Z90248, Z90247, Z90245, Z90244, Z60229, Z191297, Z191296; Stringing Sites 9–12, 19
Del Mar manzanita	Southern maritime chaparral	‡	Z90280, Z95792, Z95790, Z90265-62
Salt marsh bird's-beak	Coastal salt marsh	79.3	Z419463, Z90294-89, Z90249, Z90248, Z90247, Z90245, Z90244, Z60229; Stringing Site 19
Orcutt's spineflower	Open chaparral with sandstone substrate	7.1	Z90286, Z33135, Z90283-80, Z95792, Z95790, Z95789, Z90265-56, Z90258, Z191297; Stringing Sites 9–12
Short-leaved dudleya	Open chaparral with iron-rich sandstone substrate	5.0	Z90283-80, Z95792, Z95790, Z95789, Z90265-60, Z191297; Stringing Sites 11, 12
Coast wallflower	Open chaparral with sandstone substrate	7.1	Z90286, Z33135, Z90283-80, Z95792, Z95790, Z95789, Z90265-57, Z90258, Z191297; Stringing Sites 9–12
Wildlife			
salt marsh skipper	Coastal salt marsh with salt grass (*Distichlis spicata*)	20.7	Z12304, Z419463, Z90710, Z90294-91, Z90245, Z60229, Z90243; Stringing Site 19
Western snowy plover	Salt pans and cleared areas near water's edge	7.6	Z90250, Z97304, Z12304, Z419463, Z90245, Z90244; Stringing Sites 3, 4; Fly Yard
California black rail	Coastal salt marsh with pickleweed (*Salicornia pacifica*)	91.9	Z419463, Z12303, Z90295, Z90710, Z90294-89, Z90253-47, Z90245, Z90244, Z60229, Z90243; Stringing Sites 18, 19
Belding's savannah sparrow	Coastal salt marsh	91.9	Z419463, Z12303, Z90295, Z90710, Z90294-89, Z90253-47, Z90245, Z90244, Z60229, Z90243; Stringing Sites 18, 19
coastal California gnatcatcher	Coastal sage scrub and coastal sage scrub/chaparral mix	9.6	Z119809, Z12322, Z12323, U108923, U108922, Z90296, Z90288, Z90286, Z33135, Z90283-80, Z95792, Z90261, Z90259-56, Z191297, Z191296; Stringing Sites 9–12
Light-footed clapper rail	Coastal salt marsh with pickleweed or freshwater marsh	40.0	Z90294-89, Z90253, Z90252, Z90251, Z90250; Stringing Site 18
California least tern	Salt pans and cleared areas near water's edge	7.6	Z90250, Z97304, Z12304, Z419463, Z90245, Z90244; Stringing Sites 3, 4; Fly Yard
Least Bell's vireo	Southern willow scrub	0.5	None
Pacific pocket mouse	Coastal sage scrub, scrub/chaparral mix, and southern maritime chaparral	22.5	Z119809, Z12322, Z12323, U108923, U108922, U108920, Z12313, Z12303, Z90296, Z90295, Z90710, Z90288, Z90287, Z90286, Z33135, Z90283-80, Z95792, Z95790-87, Z90265-56, Z191298, Z191297, Z191296; Stringing Sites 7, 9–14

‡Potentially suitable habitat for these species is defined by the presence and distribution of individuals on site.

Attachment II

Aquatic Resources Survey

Conducted 2013

Note: A 2016/2017 Jurisdictional Waters Assessment was conducted to verify and update information in this survey report. Therefore, the content contained in the attached report reflects data collected during both 2013 and 2016/2017 surveys.

SDG&E Aquatic Resources

Date	12/17/13
eTS Number	25975
Project Name	Reconfigure Tie-Line 674A at Del Mar and RFS TL666D
Address / Location	Del Mar, CA
Contract Number	56600-15709
Reviewer	Tamara Spear

Consultant Comments	RECON Project Number 7203

Proposed Work Description

San Diego Gas and Electric (SDG&E) proposes to remove Transmission Line (TL) 666D from service in order to eliminate the need for ongoing Operations and Maintenance work in coastal environmentally sensitive areas (San Dieguito Lagoon, Torrey Pines State Reserve, and Los Peñasquitos lagoon). The approximately seven-linear-mile project involves the removal of 34 existing transmission poles, the topping of 55 transmission poles, and the replacement of two poles. A total of 23 pole removals will occur within either upland biological preserves or coastal estuarine wetlands.

Access to electric poles within the either of the two lagoons within the project area will require additional effort to avoid and minimize impacts to likely jurisdictional waters. For poles which are surrounded by coastal wetlands and inaccessible from the existing roads (islands within San Dieguito lagoon and all poles within Peñasquitos lagoon), crews and material will be long-lined via helicopter to a designated drop zone within 50 feet of the pole. To minimize impacts to jurisdictional coastal salt marsh, plywood sheeting will be placed on the work area surrounding each pole and along the pathway to the pole from the drop zone. Poles will be cut at grade and removed via helicopter. During pole cutting activities, plastic sheeting and handheld plywood barriers will be used to contain saw dust and chainsaw oil. After the pole is removed, all debris and construction material will be removed from the site. Poles within jurisdictional salt marsh within the two lagoons that are readily accessible from an existing road (San Dieguito Drive) will be accessed on foot and include the same impact minimization measures described for helicopter accessed poles.

As the project area has the potential to contain federal and state jurisdictional waters, SDG&E requested a wetland assessment to be conducted. RECON wetland specialists Michael Nieto, Jason Sundberg, and Cailin O'Meara visited the project site on August 19–23, 2013, to conduct a formal assessment of potential jurisdictional waters/wetland resources. After preliminary mapping was completed, RECON wetland specialist Michael Nieto met with SDG&E staff on-site on October 7, 2013, to discuss preferred contractor access to poles within the two estuaries in the survey area (San Dieguito and Los Penasquitos). This memo report will describe jurisdictional constraints associated with estimated design features and access assumptions based on field visits with SDG&E staff. Upon final project design, a formal jurisdictional delineation report will be produced describing specific project jurisdictional impacts and permitting requirements.

SDG&E Aquatic Resources

Methods

RECON conducted a waters and wetland survey for the project to identify the boundaries, types, and acreages of all aquatic resources that are potentially under the jurisdiction of the U.S. Army Corps of Engineers (ACOE), Regional Water Quality Control Board (RWQCB), California Department of Fish and Wildlife (CDFW), and California Coastal Commission (CCC). In order to account for all potential project impact areas, the survey area includes the transmission line right-of-way 50 feet on either side of the transmission centerline. Due to the increased potential for access challenges within the two estuaries (San Dieguito and Peñasquitos lagoons), the survey area was expanded to include jurisdictional resources within potential site access routes.

Potential waters and wetland locations observed within the survey area were evaluated using the methodology set forth in the ACOE Wetland Delineation Manual (ACOE 1987) and the Arid West Regional Delineation Supplement (ACOE 2008). Wetland hydrology indicators included evidence of inundation, saturation, watermarks, drift lines, and sediment deposits. Vegetation was analyzed using dominant species' Wetland Indicator Status (ACOE 2012). Suspected jurisdictional areas were evaluated for the presence of definable channels, wetland vegetation, an ordinary high water mark, and connectivity to a traditional navigable waterway (TNW). CCC wetlands were determined using the "one parameter definition" established in California Code of Regulations (14 CCR Section 13577).

CCC Environmentally Sensitive Habitat Areas (ESHA) were determined using the definition from Section 30107.5 of the California Coastal Act: "Any area in which plant or animal life or their habitats are either especially rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments." In addition, a previous CCC ESHA determination for the Marblehead development was used as guidance (CCC 2003). This report identified ESHA within the project area as "1) all wetlands in the coastal zone; 2) areas of suitable habitat observed to be used by California gnatcatcher during the breeding season, immediately contiguous habitat, and inclusions of coastal bluff scrub; 5) areas containing needlegrass grassland; 6) areas containing California sagebrush…"

Jurisdictional Assessment

The proposed project area has an approximately seven-mile linear footprint which runs north to south within two watersheds (San Dieguito and Peñasquitos) in the cities of San Diego and Del Mar, California. Topography within the project area is dissected and includes steep canyon slopes, coastal mesas, and alluvial floodplains. Hydrology within the survey area includes ephemeral drainages, channelized concrete drainages, erosional scour, and features associated with the upper and lower tidal estuaries, including tidal inlets, salt pannes, and perennial marshlands. The project area is surrounded by commercial and residential development. In general, coastal mesa tops within the project area have been developed for commercial and residential uses. Exceptions to this are the Crest Canyon Open Space Park and portions of the Torrey Pines State Reserve, which are managed as open space preserved lands by the City of San Diego and the State of California, respectively. Undeveloped canyon slopes are vegetated with a matrix of remnant coastal sage scrub. Of the two alluvial floodplains within the project area, San Dieguito contains significant stands of coastal salt marsh, but has been partially filled and developed for historic commercial uses. The Peñasquitos estuary within the project area is relatively intact, with the entire flood plain occupied by emergent and salt marshlands. Drainages and wetlands within the project area either drain into the San Dieguito River or Peñasquitos Creek. Both the San Dieguito River and Peñasquitos Creek have direct hydrologic connectivity to the Pacific Ocean (a TNW 0.75–2 miles west of the project site).

SDG&E Aquatic Resources

Of a total of 34 hydrologic features identified in the surveys, 28 were identified as likely under the jurisdiction of ACOE, CDFW, RWQCB, and/or CCC. The hydrologic features observed during the survey are shown on Figure 1.

Potential Jurisdictional Waters

Hydrologic Features

Feature 1 is a non-jurisdictional erosional feature approximately 10 feet east of Z119809 (Photograph 1, Figure 1-1). This feature drains an access road, dissipates into upland, lacks a hydrologic connection to a TNW, and is, therefore, exempt from aquatic resource agency jurisdiction.

Feature 2 is a non-jurisdictional brow ditch approximately 15 feet west of Z247034 (Photograph 2, Figure 1-1). Although this brow ditch drains into the San Dieguito River, according to historical photographs the brow ditch was excavated from upland areas and is, therefore, exempt from aquatic resource agency jurisdiction.

Feature 3 is an unvegetated, ephemeral drainage approximately 50 feet east of vault U108923 (Photograph 3, Figure 1-1). This feature drains into a culvert beneath Via de la Valle and is likely considered an ACOE non-wetland water of the U.S., CDFW streambed, RWQCB water of the state, and CCC wetland. As this feature is outside any proposed project activities, no impacts are anticipated.

Feature 4 is an unvegetated, ephemeral drainage approximately 800 feet east of vault U108922 (Photograph 4, Figure 1-2). This feature drains into a culvert beneath Via de la Valle and is likely considered an ACOE non-wetland water of the U.S., CDFW streambed, RWQCB water of the state, and CCC wetland. As this feature is outside any proposed project activities, no impacts are anticipated.

Feature 5 is an unvegetated, ephemeral drainage approximately 350 feet east of vault U108923 (Photograph 5, Figure 1-3). This feature drains into a culvert beneath Via de la Valle and is likely considered an ACOE non-wetland water of the U.S., CDFW streambed, RWQCB water of the state, and CCC wetland. As this feature is outside any proposed project activities, no impacts are anticipated.

Feature 6 is a non-jurisdictional brow ditch which bounds the Del Mar substation near poles Z26862, Z26863, and Z22414 (Photograph 6, Figures 1-6 and 1-7). According to historical photographs, this brow ditch was excavated from upland areas and is, therefore, exempt from aquatic resource agency jurisdiction.

Feature 7 is a non-jurisdictional brow ditch downslope of Feature 6 and the Del Mar substation (Photograph 7, Figures 1-6 and 1-7). According to historical photographs, this brow ditch was excavated from upland areas and is, therefore, exempt from aquatic resource agency jurisdiction.

Feature 8 is a jurisdictional salt panne associated with a restoration area north of Z419463 (Photographs 8 and 9, Figure 1-14). Extensive salt crusts were observed throughout a topographical depression connected to the Pacific Ocean via tidal water movement through a culvert to the south. As this feature is below the high tide line, it is likely considered an ACOE non-wetland water of the U.S., RWQCB water of the state, and CCC wetland. Construction activities may potentially impact this feature. Pole removal impact avoidance and minimization measures are recommended (Table 1).

Feature 9 consists of coastal salt marsh dominated by pickleweed (*Salicornia pacifica* — Obligate [OBL]) (Photographs 8 and 9, Figure 1-14). Feature 9 is three feet east and downslope of Z419463. Z419463 is located on an upland berm which crosses over the top of a culvert which connects the feature to the Pacific Ocean via tides. This feature is likely considered an ACOE wetland water of the U.S., CDFW wetland, RWQCB water of the state, and a CCC wetland. Construction activities may potentially impact this feature. Pole removal impact avoidance and minimization measures are recommended (Table 1).

Feature 10 is open water within the San Dieguito River channel (Photographs 10 through 17, Figure 1-14). This feature drains into a culvert beneath Via de la Valle and is likely considered an ACOE non-wetland water of the U.S., CDFW streambed, RWQCB water of the state, and CCC wetland. As this feature is outside any proposed project activities, no impacts are anticipated.

Features 11–19: San Dieguito Estuary

Hydrologic features 11 through 19 occur within or near the tidal influence of San Dieguito estuary. The estuary is a matrix of vegetation types and aquatic sites which are determined by salinity, substrate, hydrology, and history of disturbance. As many features within the estuary are dependent and interconnected, they will be analyzed here as feature types within a single unit (Figure 2). Feature numbers have been assigned to assist with pole-specific jurisdictional constraints (Photographs 11-19, Figures 1-16 to 1-21, Table 1).

Open water within the estuary is composed of the San Dieguito river channel and tidal inlets. Open water within the estuary is likely considered an ACOE non-wetland water of the US, CDFW streambed, RWQCB water of the state, and CCC wetland.

Mudflats are unvegetated and occur within the littoral zone. Mudflats are considered a Special Aquatic site by ACOE, RWQCB water of the state, and CCC wetland.

Salt marsh vegetation is dense with relatively few exotic species within the San Dieguito estuary. Salt marsh vegetation at lower elevations is dominated by two species of pickleweed (*Salifcornia pacifica* — OBL, and *Arthrocnemum subterminale* — OBL). Upper salt marsh vegetation within the estuary is dominated by alkali heath (*Frankenia salina* — Facultative Wet [FACW]). All salt marsh vegetation with the San Dieguito estuary is likely considered an ACOE wetland water of the U.S., CDFW wetland, RWQCB water of the state, and CCC wetland.

Utility poles Z90296 and Z90710 are located on an upland terrace west of the estuary (100 and 28 feet from jurisdictional waters, respectively; Photographs 12, and 14, Figure 1-16). These poles can be accessed via a route outside of any jurisdictional waters from San Dieguito Drive to the east (see Table 1). As no federal or state waters occur near the pole sites or access routes, no impacts to jurisdictional waters are anticipated as a result of project activities.

Utility poles Z90295 is located approximately 50 feet northwest of jurisdictional saltmarsh vegetation (Figure 1-16, Photograph 13). Access to this pole is overland from San Dieguito Drive. As the jurisdictional saltmarsh southeast of the pole can be avoided by pole removal activities, no impacts to jurisdictional waters are anticipated as a result of the project.

Utility poles Z90294, Z90293, and Z90292 are located within salt marsh vegetation (Figure 1-17, Photographs 15, and 16). Pedestrian access overland through jurisdictional wetlands is available via San

Dieguito Drive to the west of the pole. Temporary impacts (vegetation trampling) to jurisdictional salt marsh vegetation are anticipated to access these poles. Pole removal impact avoidance and minimization measures are recommended (Table 1).

Utility pole Z90291 is surrounded by jurisdictional salt marsh vegetation and is located on a small island in the estuary (Photograph 17, Figure 1-19). As the island is separated from the mainland by an approximately 70-foot-wide tidal inlet, direct pedestrian access is not available. Pole removal impact avoidance and minimization measures are recommended (Table 1).

Utility poles Z90290 and Z90289 are located within the jurisdictional salt marsh fringe of a small island within the estuary (Photographs 18 and 20, Figures 1-20 and 1-21). As the island is separated from the mainland by an approximately 100-foot-wide tidal inlet, direct pedestrian access is not available. The center of the island is, however, at a relatively high elevation, dominated by non-native upland vegetation, is outside of tidal influence, and may make an appropriate non-jurisdictional landing zone for any potential helicopter use. Pole removal impact avoidance and minimization measures are recommended (Table 1).

Feature 20 is a non-jurisdictional brow ditch downslope of residential development (Photograph 20, Figure 1-28). This brow ditch is located on and drains fill sloped, and is therefore exempt from aquatic resource agency jurisdiction.

Feature 21 is an unvegetated, ephemeral drainage approximately 150 feet south of pole Z902269 (Photograph 21, Figure 1-36). This feature drains west toward Peñasquitos Lagoon and is likely considered an ACOE non-wetland water of the U.S., CDFW streambed, RWQCB water of the state, and CCC wetland. As this feature is outside any proposed project activities, no impacts are anticipated.

Features 22–31: Peñasquitos Estuary

Hydrologic features 22 through 31 occur within or near the tidal influence of the Peñasquitos estuary. The estuary is a matrix of vegetation types and aquatic sites which are determined by salinity, hydrology, substrate, and history of disturbance. As many features within the estuary are dependent and interconnected, they will be analyzed here as feature types within a single unit (Figure 3). Feature numbers have been assigned to assist with pole-specific jurisdictional constraints (Photographs 22-31, Figure 1-40 to 1-52, Table 1).

Open water within the estuary is composed of the Peñasquitos Creek channel and tidal inlets. Open water within the estuary is likely considered an ACOE non-wetland water of the US, CDFW streambed, RWQCB water of the state, and CCC wetland.

Mudflats ware unvegetated and occur within the littoral zone. Mudflats are considered a Special Aquatic site by ACOE, RWQCB water of the state, and CCC wetland.

Salt marsh vegetation is dense with relatively few exotic species within the San Dieguito estuary. Salt marsh vegetation at lower elevations is dominated by pickleweed (*Salicornia pacifica* — OBL) and marsh jaumea (*Jaumea carnosa* — OBL). Upper salt marsh vegetation within the estuary is moderately disturbed and is dominated by alkali heath and perennial ryegrass (*Lolium perenne* — Facultative [FAC]). All salt marsh vegetation within the Peñasquitos estuary is likely considered an ACOE wetland water of the U.S., CDFW wetland, RWQCB water of the state, and CCC wetland.

Emergent freshwater marsh vegetation is common in the upper reaches of the Peñasquitos estuary near fresh water inputs from the Peñasquitos and Soledad Canyon creeks. The emergent freshwater marsh vegetation is within Peñasquitos Creek is dominated by southern cattail (*Typha domingensis* — OBL). All emergent freshwater marsh vegetation with the Peñasquitos estuary is likely considered an ACOE wetland water of the U.S., CDFW wetland, RWQCB water of the state, and CCC wetland.

Southern willow scrub vegetation was observed in a small area in the upper reach of the Peñasquitos marsh. The southern willow scrub is dominated by black willow (*Salix gooddingii* — FACW) and mule fat (*Baccharis salicifolia* — FAC). All southern willow scrub vegetation with the Peñasquitos estuary is likely considered an ACOE wetland water of the U.S., CDFW wetland, RWQCB water of the state, and CCC wetland.

Salt pannes are temporary tidal ponds which are located throughout the upper marsh of the Peñasquitos estuary. Salt pannes are formed by the tidal inundation of spring tides in winter (Zedler and Norby 1986) While inundated (wet phase), salt pannes act as habitat for algae, aquatic insects, and waterfowl. After the water evaporates, the salinity inhibits vegetation growth and a barren area is formed. As the salt pannes are under the influence of tidal waters, they are likely considered an ACOE non-wetland water of the U.S., RWQCB water of the state, and CCC wetland.

Utility poles Z90253, Z90252, Z90251, Z90248, Z90247, and Z90245 are located within lower salt marsh vegetation (Photographs 22, 23, 24, 27, 28, and 29; Figures 1-40, 1-42, 1-43, and 1-46). Pedestrian access overland through jurisdictional wetlands is available from the south. Temporary impacts (vegetation trampling) to jurisdictional salt marsh vegetation are anticipated to access these poles. Pole removal impact avoidance and minimization measures are recommended (Table 1).

Utility pole Z90244 is located within salt marsh vegetation (Photograph 30, Figure 1-49). Access to this pole is available from the southeast overland through jurisdictional salt marsh vegetation from Sorrento Valley Road. Temporary impacts (vegetation trampling) to jurisdictional salt marsh vegetation are anticipated to access this pole. Pole removal impact avoidance and minimization measures are recommended (Table 1).

Utility pole Z90250 is located adjacent to a salt panne within freshwater emergent marsh vegetation (Photograph 25, Figure 1-44). Access to this pole is available from the south overland through jurisdictional salt marsh vegetation. A total 25 feet of 8-foot-tall jurisdictional emergent marsh vegetation will need to be walked through in order to access the pole. Temporary impacts to jurisdictional vegetation (salt marsh trampling, emergent freshwater marsh access trimming) are anticipated in order to access these poles. Pole removal impact avoidance and minimization measures are recommended (Table 1).

Utility pole Z90249 is located within freshwater emergent marsh vegetation (Photograph 26, Figure 1-45). Access to this pole is available from the south overland through jurisdictional salt marsh vegetation. Approximately 15 feet of 8-foot-tall jurisdictional emergent marsh vegetation will need to be walked through in order to access the pole. Temporary impacts to jurisdictional vegetation (salt marsh trampling, emergent freshwater marsh access trimming) are anticipated in order to access these poles. Pole removal impact avoidance and minimization measures are recommended (Table 1).

Utility pole Z60229 is located within emergent freshwater marsh vegetation (Photograph 31, Figure 1-50). Access to this pole is available from the southeast overland through jurisdictional salt marsh vegetation from Sorrento Valley Road. Temporary impacts (vegetation trampling) to jurisdictional salt marsh vegetation

are anticipated to access this pole. Pole removal impact avoidance and minimization measures are recommended (Table 1).

Feature 32 is a concrete-lined drainage approximately 45 feet south of Z191293 (Photograph 32, Figure 1-55). This feature drains west into the Peñasquitos estuary and is likely considered an ACOE non-wetland water of the U.S., CDFW streambed, RWQCB water of the state, and CCC wetland. As this feature is outside any proposed project activities, no impacts are anticipated.

Feature 33 is a concrete-lined drainage that flows approximately 20 feet south of poles Z191289, Z191288, and Z191287 (Photograph 33, Figure 1-56). This feature drains west into the Peñasquitos estuary and is likely considered an ACOE non-wetland water of the U.S., CDFW streambed, RWQCB water of the state, and CCC wetland. As this feature is outside any proposed project activities, no impacts are anticipated.

Feature 34 is a non-jurisdictional brow draining a cut slope east of the Interstate 5 freeway approximately 10 feet north of pole Z164283 (Figure 1-57). This brow ditch is located on and drains an upland fill slope, and is therefore exempt from aquatic resource agency jurisdiction.

CCC ESHAs

Coastal sage scrub, a vegetation community considered sensitive by state and local agencies, was observed within open space portions of the survey area. All areas containing suitable habitat for sensitive species within the Coastal Zone, including coastal sage scrub, maritime chaparral, and wetlands, will likely be determined to be ESHA (Figure 4).

Potential Impacts to Jurisdictional Waters/Wetlands

Jurisdictional waters/wetlands impacts within the project would be temporary and associated with the removal of existing wooden poles from wetlands in the two project estuaries (Table 1). Temporary project impacts include: drop zones (designated areas for helicopters to long line personnel and boxes of equipment), footpaths (overland pedestrian travel – 2 feet wide), plywood pathways (pathways created to minimize soil compaction by placement of plywood boards – 4 feet wide), and a 10-foot-radius work area around each pole.

ACOE, CDFW, RWQCB, and CCC wetlands are regulated by the federal, state, and local governments under a no-net-loss policy, and all impacts are considered significant and should be avoided to the greatest extent possible. Impacts to ACOE, CDFW, RWQCB, and CCC jurisdictional waters would require a Section 404 permit authorization from ACOE, a 1600 Streambed Alteration Agreement from CDFW, a 401 State Water Quality Certification from RWQCB, and/or a Coastal Development Permit from the CCC.

Potential Impacts to CCC ESHAs

Impacts to CCC ESHAs were estimated based on proposed project impacts and likely ESHA boundaries. Final ESHA determination will be made by the CCC. Temporary impacts to ESHAs include drop zones, footpaths, plywood pathways, and temporary work areas in both wetland and upland ESHAs.

TABLE 1
TEMPORARY IMPACTS (ACRES) TO JURSIDICTIONAL WETLANDS/WATERS ON TL 666

Jurisdiction	Drop zone	Footpath	Plywood pathway	Work area	Total
ACOE					0.233
non-wetland waters of US	0.001		0.005	0.003	0.009
wetland waters of US	0.024	0.008	0.078	0.105	0.216
special aquatic sites	-	0.001	-	0.007	0.008
RWQCB					
waters of the State	0.025	0.009	0.084	0.115	0.233
CDFW					0.219
riparian	0.024	0.008	0.078	0.105	0.216
streambed	-	-	-	0.003	0.003
CCC					
wetlands	0.025	0.009	0.084	0.115	0.233
ESHA					0.240

References Cited

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TABLE 1
POTENTIAL IMPACTS TO JURISDICTIONAL WATERS AND RECOMMENDED AVOIDANCE AND MINIMIZATION MEASURES ON THE TL666 RFS PROJECT

Project Structure	Water Feature Number	Photo Number	Likely Jurisdiction	Proposed Work	Potential Impact	Type of Jurisdictional Waters	Avoidance/Minimization Measures
Z419463	8, 9, 10	8, 9, 10	ACOE wetland water of the U.S., CDFW riparian, RWQCB water of the state, CCC wetland	Pole topping	Pole is located on a bern between two jurisdictional features: a wetland to the north and a stream to the south	coastal sat marsh, salt panne, and open water	• Pedestrian access to pole along existing berm. • Tools and equipment will be flown in by helicopter. • Pole butt cut at grade and left in ground. • Pole lifted out by helicopter. • Minimize work area. • Plywood on work area to prevent soil compaction. • During pole cutting, plastic sheeting and handheld plywood will be used to contain sawdust and chainsaw oil. • All debris and material will be removed from site and disposed of properly.
Z12303	10	11	ACOE non-wetland water of the U.S., CDFW streambed, RWQCB water of the state, CCC wetland	Pole topping	Pole is located upslope from to jurisdictional boundaries	open water	• All work is to stay 20 feet from the stream bank. • BMPs will be employed downslope of the work area.
Z90296	10, 11	12, 13	ACOE non-wetland water of the U.S., CDFW streambed, RWQCB water of the state, CCC wetland	Pole removal	Pole is located within 50 of jurisdictional boundaries	open water	• All work is to stay 20 feet from the stream bank. • BMPs will be employed downslope of the work area.
Z90295	10, 12	13	ACOE non-wetland water of the U.S., CDFW streambed, RWQCB water of the state, CCC wetland	Pole removal	Pole is located within 50 of jurisdictional boundaries	open water	• Pole will be accessed overland from San Dieguito Road. • Coastal saltmarsh to 50 feet southwest of the pole will be avoided. • All work is to stay 20 feet from the stream bank. • BMPs will be employed downslope of the work area.
Z90710	10, 13	14	ACOE non-wetland water of the U.S., CDFW streambed, RWQCB water of the state, CCC wetland	Pole removal	Pole is located within 50 of jurisdictional boundaries	open water	• Pole will be accessed from paved turnout to ecological preserve from San Dieguito Road. • All work is to stay 20 feet from the stream bank. • BMPs will be employed downslope of the work area.
Z90294	10, 14	15	ACOE wetland water of the U.S., CDFW riparian, RWQCB water of the state, CCC wetland	Pole removal	Pole is located within a jurisdictional area. Trampling may cause impact.	coastal salt marsh, mudflat	• Equipment and personnel will walk to the site on an existing pathway from ecological preserve overlook turnout • Work area will be minimized. • Plywood will be used within work area to prevent soil compaction. • Pole butt will be cut at grade and left in ground. • During pole cutting, plastic sheeting and handheld plywood will be used to contain sawdust and chainsaw oil. • Pole lifted out by helicopter. • All debris and material will be removed from site and disposed of properly.
Z90293	10, 15	15	ACOE wetland water of the U.S., CDFW riparian, RWQCB water of the state, CCC wetland	Pole removal	Pole is located within a jurisdictional area. Trampling may cause impact.	coastal salt marsh, mudflat	• Personnel will walk to the site on a plywood path via San Dieguito Road. • Pedestrian pathways through jurisdictional waters and wetlands will be demarcated with plywood to minimize soil compaction. • Work area will be minimized. • Plywood will be used within the work area to prevent soil compaction. • Pole butt will be cut at grade and left in ground. • During pole cutting, plastic sheeting and handheld plywood will be used to contain sawdust and chainsaw oil. • Pole lifted out by helicopter. • All debris and material will be removed from site and disposed of properly.

TABLE 1
POTENTIAL IMPACTS TO JURISDICTIONAL WATERS AND RECOMMENDED AVOIDANCE AND MINIMIZATION MEASURES ON THE TL666 REMOVAL PROJECT
(continued)

Project Structure	Water Feature Number	Photo Number	Likely Jurisdiction	Proposed Work	Potential Impact	Type of Jurisdictional Waters	Avoidance/Minimization Measures
Z90292	10, 16	16	ACOE wetland water of the U.S., CDFW riparian, RWQCB water of the state, CCC wetland	Pole removal	Pole is located within a jurisdictional area. Trampling may cause impact.	coastal salt marsh, mudflat	• Personnel will walk to site on a plywood path via San Dieguito Road. • Pedestrian pathways through jurisdictional waters and wetlands will be demarcated with plywood to minimize soil compaction. • Work area will be minimized. • Plywood will be used within the work area to prevent soil compaction. • Pole butt will be cut at grade and left in ground. • During pole cutting, plastic sheeting and handheld plywood will be used to contain sawdust and chainsaw oil. • Pole will be lifted out by helicopter. • All debris and material will be removed from site and disposed of properly
Z90291	10, 17	16, 17	ACOE wetland water of the U.S., CDFW riparian, RWQCB water of the state, CCC wetland	Pole removal	Pole is located within a jurisdictional area. Trampling may cause impact.	coastal salt marsh	• Equipment and personnel will be flown to designated drop zone via helicopter. • Pedestrian pathways to the pole will be demarcated with plywood to minimize soil compaction. • Work area will be minimized. • Plywood will be used within the work area to prevent soil compaction. • Pole butt will be cut at grade and left in ground. • During pole cutting, plastic sheeting and handheld plywood will be used to contain sawdust and chainsaw oil. • Pole lifted out by helicopter. • All debris and material will be removed from site and disposed of properly.
Z90290	10, 18	16, 18	ACOE wetland water of the U.S., CDFW riparian, RWQCB water of the state, CCC wetland	Pole removal	Pole is located within a jurisdictional area. Trampling may cause impact.	coastal salt marsh	• Personnel and equipment will be flown to a designated landing zone outside of jurisdictional wetlands/waters • Pedestrian pathways through jurisdictional wetlands/waters will be demarcated with plywood to minimize soil compaction. • Pedestrian pathway through uplands will be demarked with pin flagging. • Work area will be minimized. • Plywood will be used within the work area to prevent soil compaction. • Pole butt will be cut at grade and left in ground. • During pole cutting, plastic sheeting and handheld plywood will be used to contain sawdust and chainsaw oil. • Pole lifted out by helicopter. • All debris and material will be removed from site and disposed of properly.
Z90289	10, 19	18	ACOE wetland water of the U.S., CDFW riparian, RWQCB water of the state, CCC wetland	Pole removal	Pole is located within a jurisdictional area. Trampling may cause impact.	coastal salt marsh	• Personnel and equipment will be flown to a designated Landing Zone outside of jurisdictional wetlands/waters. • Pedestrian pathways through jurisdictional wetlands/waters will be demarcated with plywood to minimize soil compaction. • Pedestrian pathway through uplands will be demarked with pin flagging. • Work area will be minimized. • Plywood will be used within the work area to prevent soil compaction. • Pole butt will be cut at grade and left in ground. • During pole cutting, plastic sheeting and handheld plywood will be used to contain sawdust and chainsaw oil. • Pole lifted out by helicopter. • All debris and material will be removed from site and disposed of properly.

TABLE 1
POTENTIAL IMPACTS TO JURISDICTIONAL WATERS AND RECOMMENDED AVOIDANCE AND MINIMIZATION MEASURES ON THE TL666 REMOVAL PROJECT
(continued)

Project Structure	Water Feature Number	Photo Number	Likely Jurisdiction	Proposed Work	Potential Impact	Type of Jurisdictional Waters	Avoidance/Minimization Measures
Z90262	21	20	ACOE non-wetland water of the U.S., CDFW streambed, RWQCB water of the state, CCC wetland	Pole removal	Pole is located adjacent to jurisdictional boundaries	ephemeral drainage	• All work can avoid he stream bank. • BMPs will be employed downslope of the work area.
Z90253	22	21	ACOE wetland water of the U.S., CDFW riparian, RWQCB water of the state, CCC wetland	Pole removal	Pole is located within a jurisdictional area. Trampling may cause impact.	coastal salt marsh	• Equipment and personnel will be flown to designated drop zone via helicopter. • Pedestrian pathways to pole will be demarcated with plywood to minimize soil compaction. • Work area will be minimized. • Plywood will be used within the work area to prevent soil compaction. • Pole butt will be cut at grade and left in ground. • During pole cutting, plastic sheeting and handheld plywood will be used to contain sawdust and chainsaw oil. • Pole lifted out by helicopter. • All debris and material will be removed from site and disposed of properly.
Z90252	23	22	ACOE wetland water of the U.S., CDFW riparian, RWQCB water of the state, CCC wetland	Pole removal	Pole is located within a jurisdictional area. Trampling may cause impact.	coastal salt marsh, open water	• Equipment and personnel will be flown to a designated drop zone via helicopter • Pedestrian pathways to the pole will be demarcated with plywood to minimize soil compaction • Work area will be minimized. • Plywood will be used within the work area to prevent soil compaction. • Pole butt will be cut at grade and left in ground. • During pole cutting, plastic sheeting and handheld plywood will be used to contain sawdust and chainsaw oil. • Pole lifted out by helicopter. • All debris and material will be removed from site and disposed of properly.
Z90251	24	23	ACOE wetland water of the U.S., CDFW riparian, RWQCB water of the state, CCC wetland	Pole removal	Pole is located within a jurisdictional area. Trampling may cause impact.	coastal salt marsh, open water	• Equipment and personnel will be flown to a designated drop zone via helicopter • Pedestrian pathways to the pole will be demarcated with plywood to minimize soil compaction. • Work area will be minimized. • Plywood will be used within the work area to prevent soil compaction. • Pole butt will be cut at grade and left in ground. • During pole cutting, plastic sheeting and handheld plywood will be used to contain sawdust and chainsaw oil. • Pole lifted out by helicopter. • All debris and material will be removed from site and disposed of properly.
Z90250	25	24	ACOE wetland water of the U.S., CDFW riparian, RWQCB water of the state, CCC wetland	Pole removal	Pole is located within a jurisdictional area. Trampling may cause impact.	freshwater marsh, salt panne	• Equipment and personnel will be flown to a designated drop zone via helicopter • Pedestrian pathways to the pole will be demarcated with plywood to minimize soil compaction. • Work area will be minimized. • Plywood will be used within the work area to prevent soil compaction. • Pole butt will be cut at grade and left in ground. • During pole cutting, plastic sheeting and handheld plywood will be used to contain sawdust and chainsaw oil. • Pole lifted out by helicopter. • All debris and material will be removed from site and disposed of properly.

TABLE 1
POTENTIAL IMPACTS TO JURISDICTIONAL WATERS AND RECOMMENDED AVOIDANCE AND MINIMIZATION MEASURES ON THE TL666 REMOVAL PROJECT
(continued)

Project Structure	Water Feature Number	Photo Number	Likely Jurisdiction	Proposed Work	Potential Impact	Type of Jurisdictional Waters	Avoidance/Minimization Measures
Z90249	26	25	ACOE wetland water of the U.S., CDFW riparian, RWQCB water of the state, CCC wetland	Pole removal	Pole is located within a jurisdictional area. Trampling may cause impact.	freshwater marsh	• Equipment and personnel will be flown to a designated drop zone via helicopter • Pedestrian pathways to the pole will be demarcated with plywood to minimize soil compaction. • Work area will be minimized. • Plywood will be used within the work area to prevent soil compaction. • Pole butt will be cut at grade and left in ground. • During pole cutting, plastic sheeting and handheld plywood will be used to contain sawdust and chainsaw oil. • Pole lifted out by helicopter. • All debris and material will be removed from site and disposed of properly.
Z90248	27	26, 27	ACOE wetland water of the U.S., CDFW riparian, RWQCB water of the state, CCC wetland	Pole removal	Pole is located within a jurisdictional area. Trampling may cause impact.	coastal salt marsh, freshwater marsh	• Equipment and personnel will be flown to a designated drop zone via helicopter. • Pedestrian pathways to the pole will be demarcated with plywood to minimize soil compaction. • Work area will be minimized. • Plywood will be used within the work area to prevent soil compaction. • Pole butt will be cut at grade and left in ground. • During pole cutting, plastic sheeting and handheld plywood will be used to contain sawdust and chainsaw oil. • Pole lifted out by helicopter. • All debris and material will be removed from site and disposed of properly.
Z90247	28	27	ACOE wetland water of the U.S., CDFW riparian, RWQCB water of the state, CCC wetland	Pole removal	Pole is located within a jurisdictional area. Trampling may cause impact.	coastal salt marsh	• Equipment and personnel will be flown to a designated drop zone via helicopter. • Pedestrian pathways to the pole will be demarcated with plywood to minimize soil compaction. • Work area will be minimized. • Plywood will be used within the work area to prevent soil compaction. • Pole butt will be cut at grade and left in ground. • During pole cutting, plastic sheeting and handheld plywood will be used to contain sawdust and chainsaw oil. • Pole lifted out by helicopter. • All debris and material will be removed from site and disposed of properly.
Z90245	29	28	ACOE wetland water of the U.S., CDFW riparian, RWQCB water of the state, CCC wetland	Pole removal	Pole is located within a jurisdictional area. Trampling may cause impact.	coastal salt marsh, freshwater marsh	• Equipment and personnel will be flown to a designated drop zone via helicopter. • Pedestrian pathways to the pole will be demarcated with plywood to minimize soil compaction. • Work area will be minimized. • Plywood will be used within the work area to prevent soil compaction. • Pole butt will be cut at grade and left in ground. • During pole cutting, plastic sheeting and handheld plywood will be used to contain sawdust and chainsaw oil. • Pole lifted out by helicopter. • All debris and material will be removed from site and disposed of properly.

TABLE 1
POTENTIAL IMPACTS TO JURISDICTIONAL WATERS AND RECOMMENDED AVOIDANCE AND MINIMIZATION MEASURES ON THE TL666 REMOVAL PROJECT
(continued)

Project Structure	Water Feature Number	Photo Number	Likely Jurisdiction	Proposed Work	Potential Impact	Type of Jurisdictional Waters	Avoidance/Minimization Measures
Z90244	30	29	ACOE wetland water of the U.S., CDFW riparian, RWQCB water of the state, CCC wetland	Pole topping	Pole is located within a jurisdictional area. Trampling may cause impact.	coastal salt marsh, freshwater marsh	• Equipment and personnel will be flown to a designated drop zone via helicopter. • Pedestrian pathways to the pole will be demarcated with plywood to minimize soil compaction. • Work area will be minimized. • Plywood will be used within the work area to prevent soil compaction. • Pole butt will be cut at grade and left in ground. • During pole cutting, plastic sheeting and handheld plywood will be used to contain sawdust and chainsaw oil. • Pole lifted out by helicopter. • All debris and material will be removed from site and disposed of properly.
Z60229	31	30	ACOE wetland water of the U.S., CDFW riparian, RWQCB water of the state, CCC wetland	Pole topping	Pole is located within a jurisdictional area. Trampling may cause impact.	coastal salt marsh, freshwater marsh	• Equipment and personnel will be flown to a designated drop zone via helicopter. • Pedestrian pathways to the pole will be demarcated with plywood to minimize soil compaction. • Work area will be minimized. • Plywood will be used within the work area to prevent soil compaction. • Pole butt will be cut at grade and left in ground. • During pole cutting, plastic sheeting and handheld plywood will be used to contain sawdust and chainsaw oil. • Pole lifted out by helicopter. • All debris and material will be removed from site and disposed of properly.
Z191293	32	31	ACOE wetland water of the U.S., CDFW riparian, RWQCB water of the state, CCC wetland	Pole topping	Pole is located upslope from to jurisdictional boundaries. Fill could fall from the work area into jurisdictional resources.	concrete lined drainage	• No work will occur within 10 feet of the jurisdictional feature. • BMPs will be employed downslope of the work area. • All spoils will be compacted or removed from the site upon completion of the work.
Z191289	33	32	ACOE wetland water of the U.S., CDFW riparian, RWQCB water of the state, CCC wetland	Pole topping	Pole is located upslope from to jurisdictional boundaries. Fill could fall from the work area into jurisdictional resources.	concrete lined drainage	• No work will occur within 10 feet of the jurisdictional feature. • BMPs will be employed downslope of the work area. • All spoils will be compacted or removed from the site upon completion of the work.
Z19188	33	32	ACOE wetland water of the U.S., CDFW riparian, RWQCB water of the state, CCC wetland	Pole topping	Pole is located upslope from to jurisdictional boundaries. Fill could fall from the work area into jurisdictional resources.	concrete lined drainage	• No work will occur within 10 feet of the jurisdictional feature. • BMPs will be employed downslope of the work area. • All spoils will be compacted or removed from the site upon completion of the work.
Z19187	33	32	ACOE wetland water of the U.S., CDFW riparian, RWQCB water of the state, CCC wetland	Replace with new steel pole	Pole is located upslope from to jurisdictional boundaries. Fill could fall from the work area into jurisdictional resources.	concrete lined drainage	• No work will occur within 10 feet of the jurisdictional feature. • BMPs will be employed downslope of the work area. • All spoils will be compacted or removed from the site upon completion of the work.

PHOTOGRAPH 1: Hydrologic Feature 1: Non-jurisdictional erosional feature near Z119809, facing south.

PHOTOGRAPH 2: Hydrologic Feature 2: Non-jurisdictional brow ditch, facing south.

PHOTOGRAPH 3: Non-jurisdictional brow ditch, south of Via de la Valle, facing east.

PHOTOGRAPH 4: Hydrologic Feature 3: Jurisdictional ephemeral drainage, north of vault U108923, facing north.

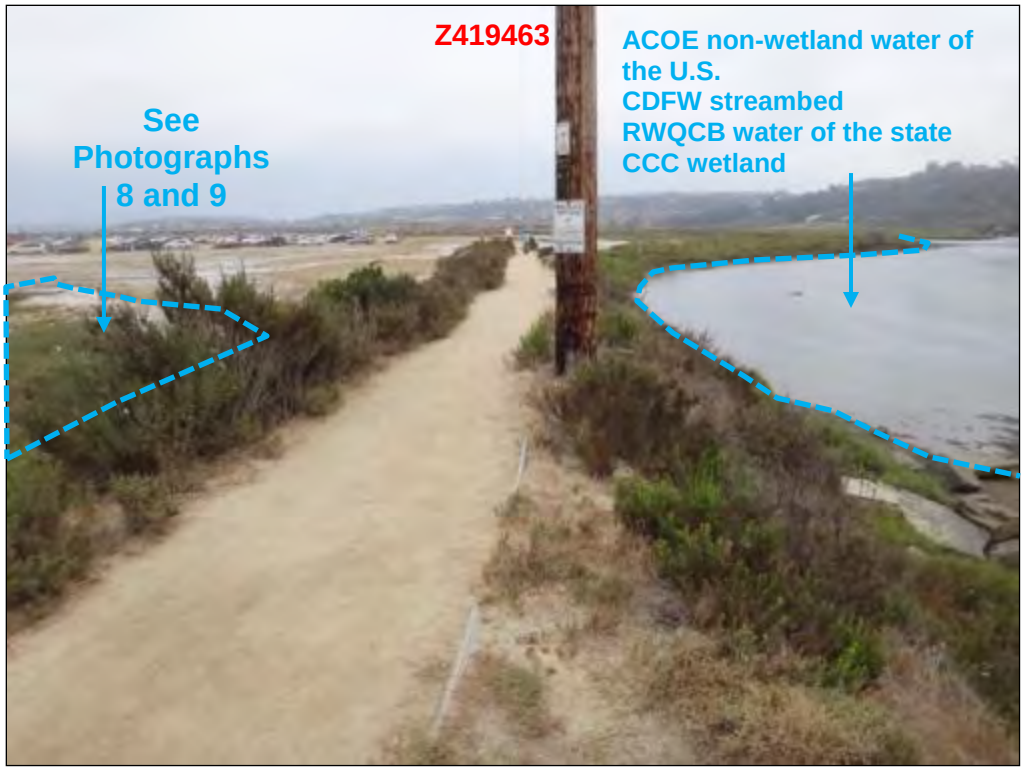
PHOTOGRAPH 5: Hydrologic Feature 5: Jurisdictional ephemeral drainage north of Via de la Valle, east of vault U108922, facing north.

PHOTOGRAPH 6: Hydrologic Feature 6: Non-jurisdictional brow ditch, adjacent to poles Z22414 and Z26863, facing north.

PHOTOGRAPH 7: Hydrologic Feature 7: Non-jurisdictional brow ditch, east of pole Z12313, facing south.

PHOTOGRAPH 8: Hydrologic Feature 8: Jurisdictional coastal salt marsh and salt panne, north of pole Z419463, facing south.

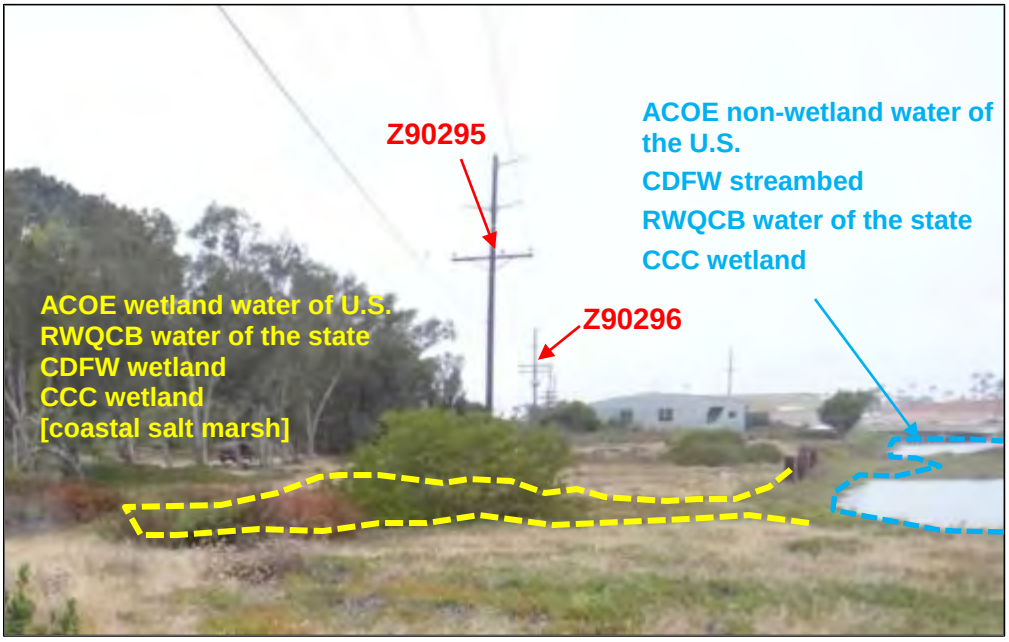
PHOTOGRAPH 9: Hydrologic Feature 9: Jurisdictional coastal salt marsh and salt panne, north of pole Z419463, facing southeast.



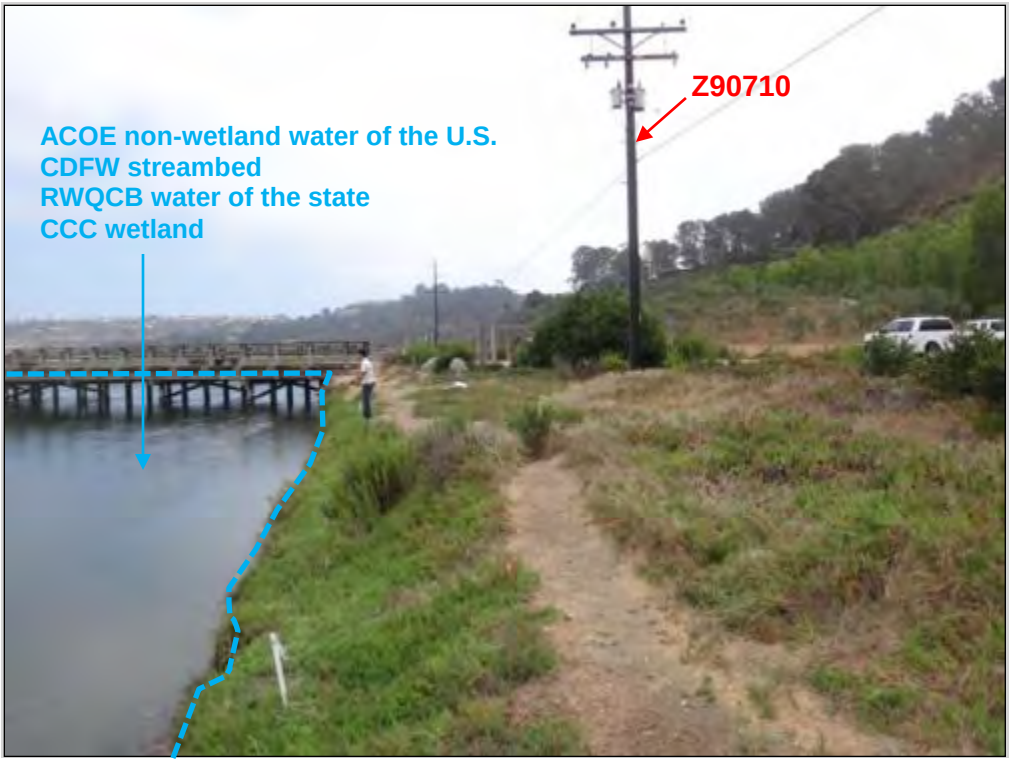
PHOTOGRAPH 10: Hydrologic Feature 10: Jurisdictional stream south of pole Z419463 (San Dieguito River), facing east.

PHOTOGRAPH 11: Hydrologic Feature 10: Jurisdictional stream north of pole Z12303 (San Dieguito River), facing east.

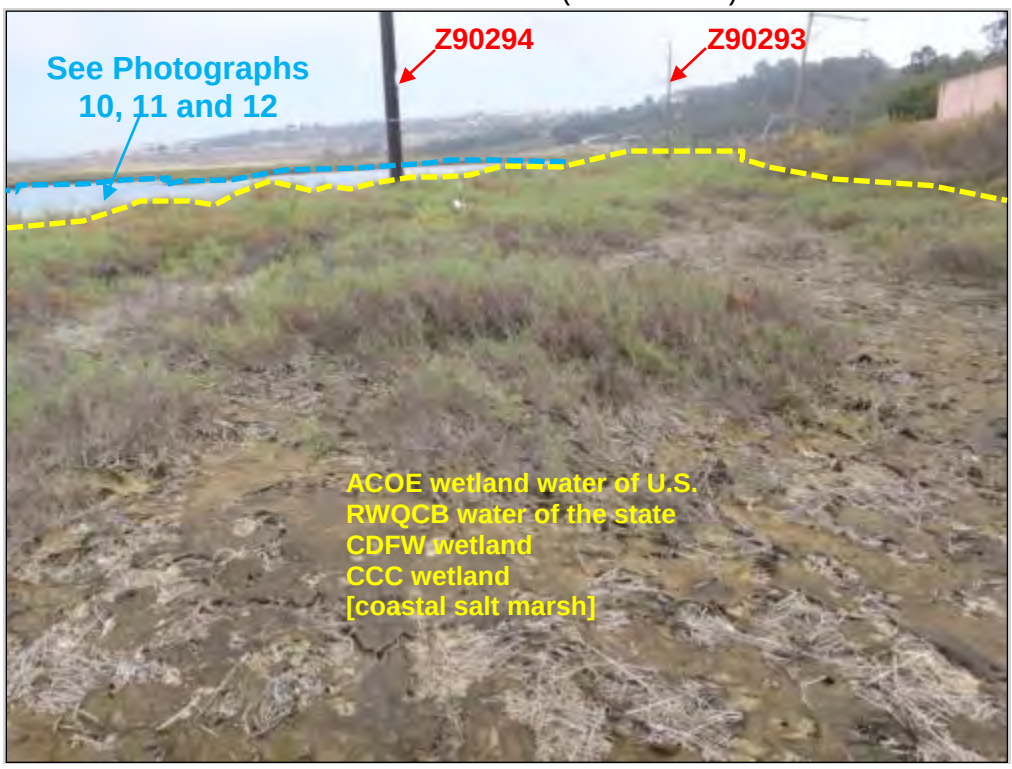
PHOTOGRAPH 12: Hydrologic Features 10 and 11: Pole Z90296 and jurisdictional stream (San Dieguito River), facing northeast.



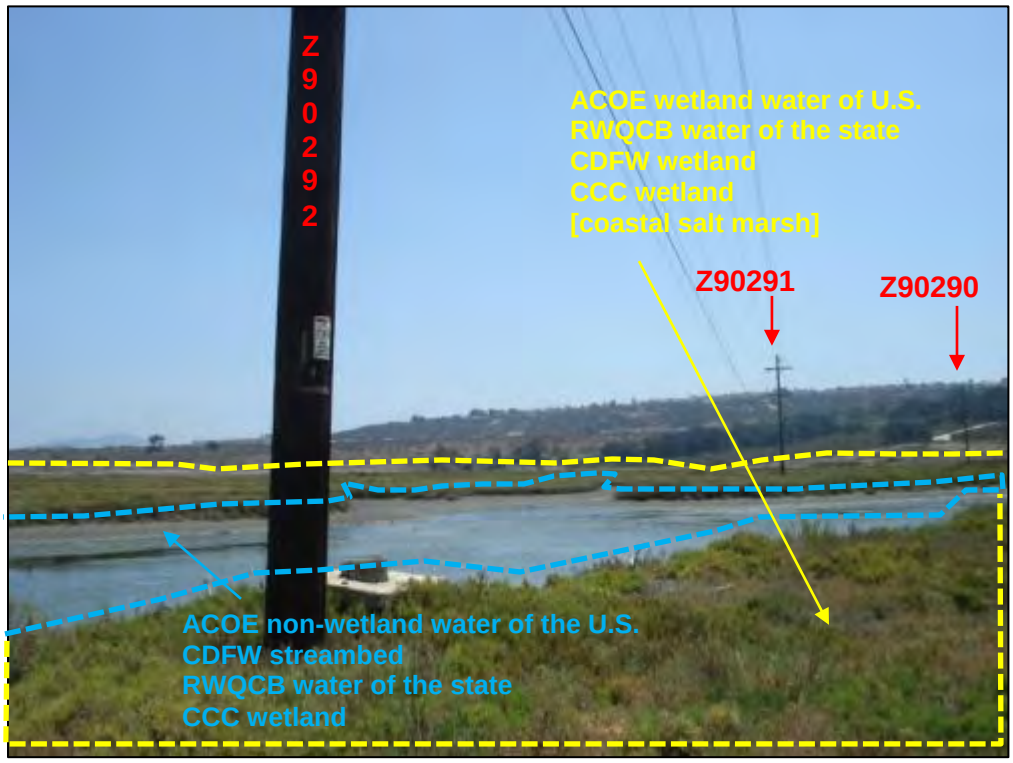
PHOTOGRAPH 13: Hydrologic Features 10 and 12: Pole Z90295 and jurisdictional stream (San Dieguito River), facing west.



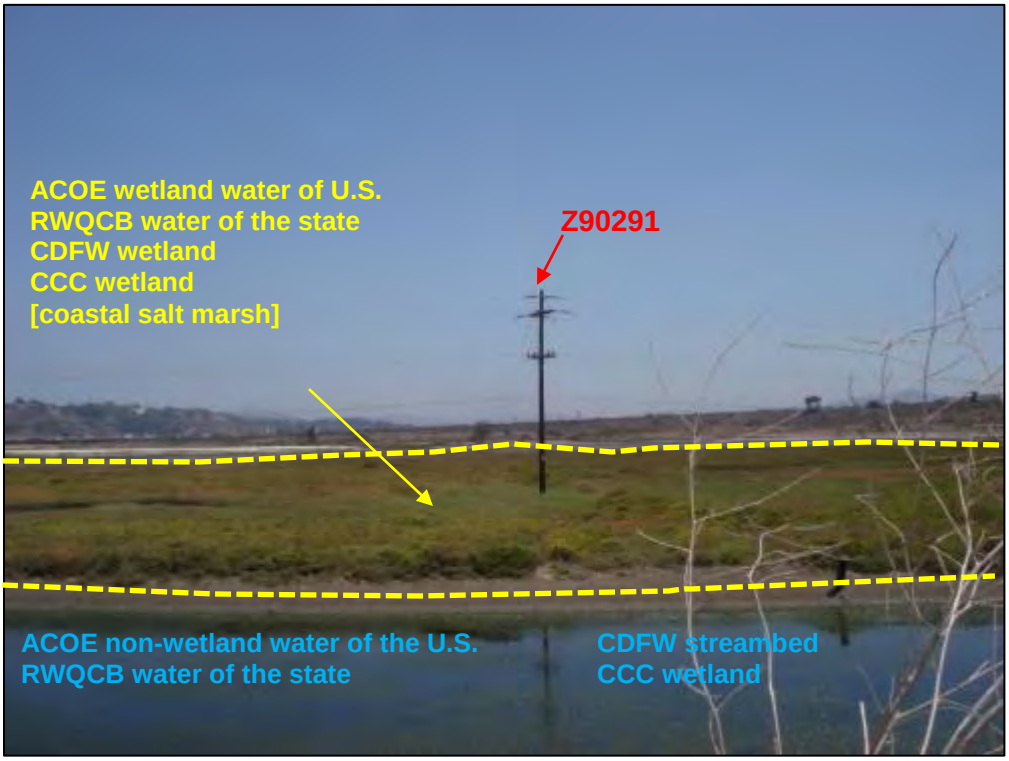
PHOTOGRAPH 14: Hydrologic Features 10 and 13: Jurisdictional stream (San Dieguito River) and pole Z90710, facing east.



PHOTOGRAPH 15: Hydrologic Features 14, 15, and 10: Jurisdictional coastal saltmarsh vegetation dominated by pickleweed surrounding poles Z90294 and Z90293, and jurisdictional stream (San Dieguito River). Facing east.



PHOTOGRAPH 16: Hydrologic Features 16, 17, 18, and 10: Jurisdictional coastal saltmarsh vegetation dominated by pickleweed surrounding poles Z90292, Z90291, and Z90290, and jurisdictional stream (San Dieguito River). Facing east.

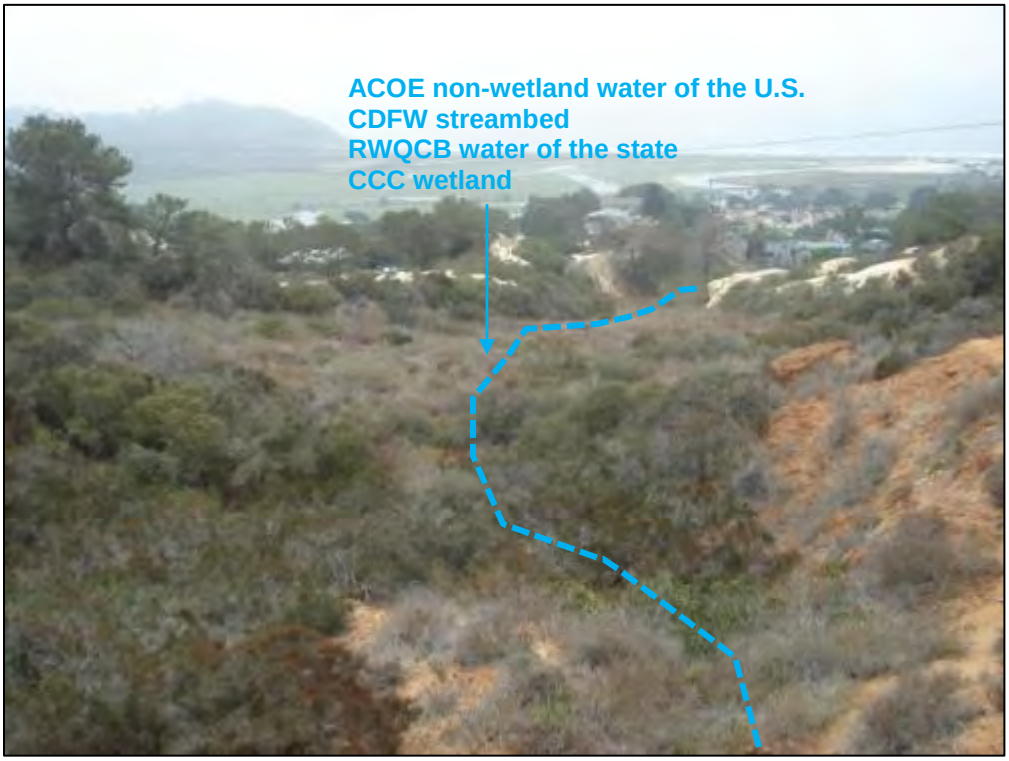


PHOTOGRAPH 17: Hydrologic Features 17 and 10: Jurisdictional coastal saltmarsh vegetation dominated by pickleweed surrounding pole Z90291, and jurisdictional stream (San Dieguito River). Facing northeast.

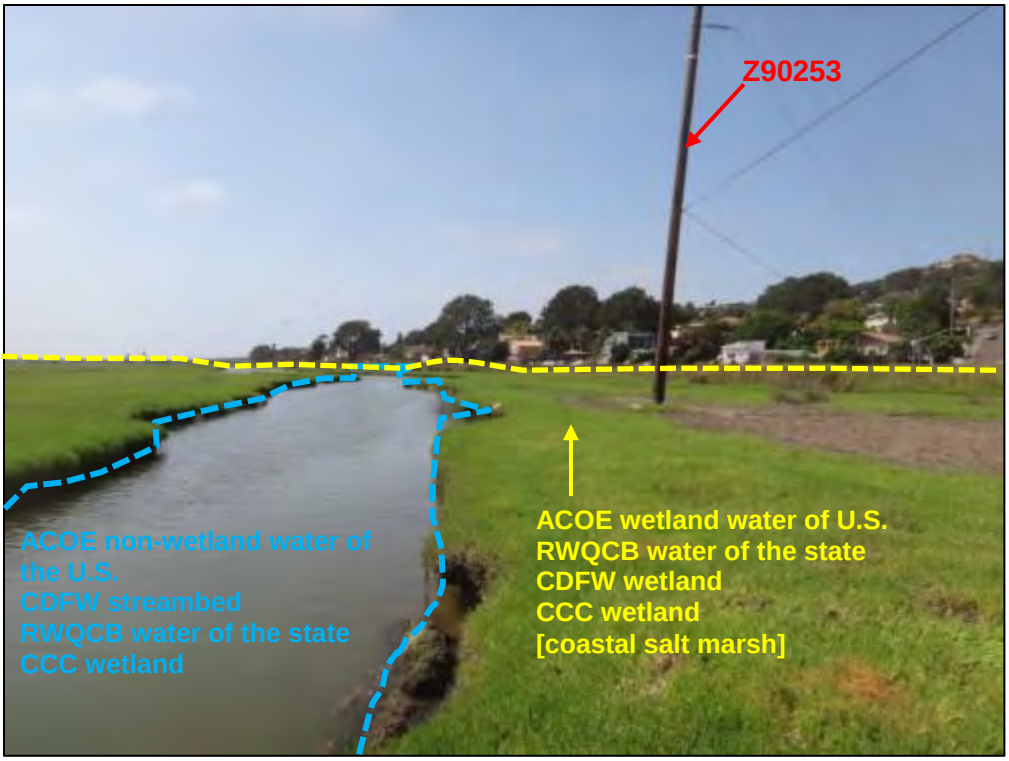
PHOTOGRAPH 18: Hydrologic Features 17, 18 and 10: Jurisdictional coastal saltmarsh vegetation dominated by pickleweed surrounding pole Z90290, and jurisdictional stream (San Dieguito River). Facing southeast.

PHOTOGRAPH 19: Hydrologic Features 19 and 10: Jurisdictional coastal saltmarsh vegetation dominated by pickleweed surrounding pole Z90289, and jurisdictional stream (San Dieguito River). Facing south.

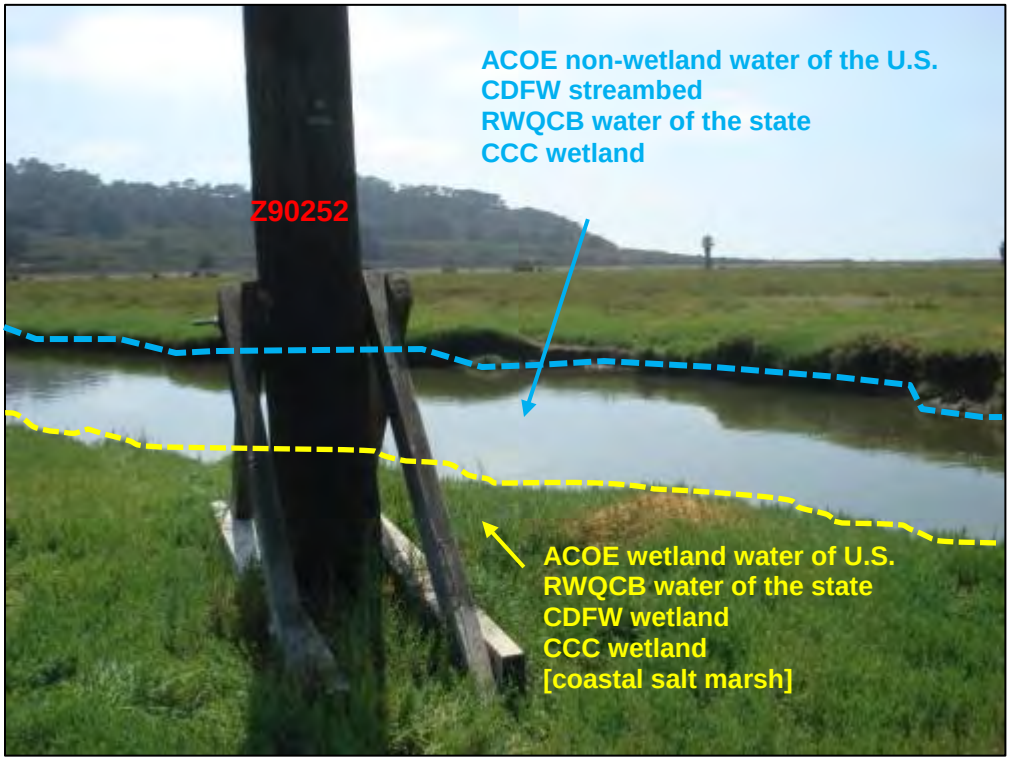
PHOTOGRAPH 20: Hydrologic Feature 20: Non-jurisdictional brow ditch between poles Z95787 and Z95786, facing west.



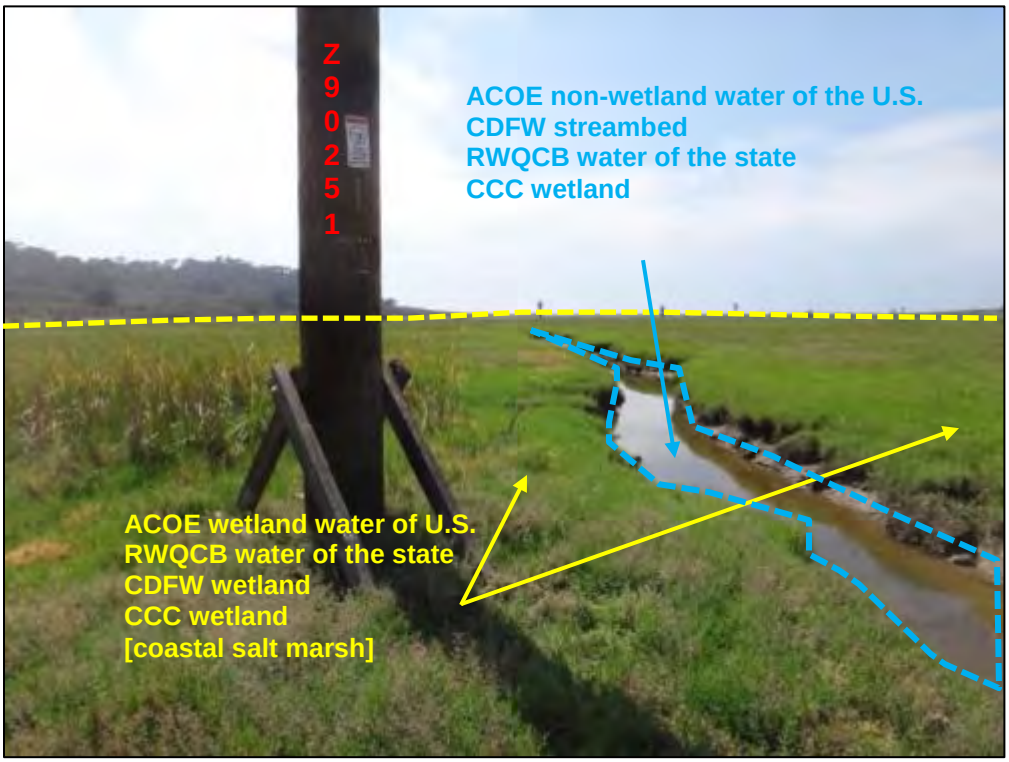
PHOTOGRAPH 21: Hydrologic Feature 21: Jurisdictional ephemeral drainage, west of pole Z90262, facing southwest.



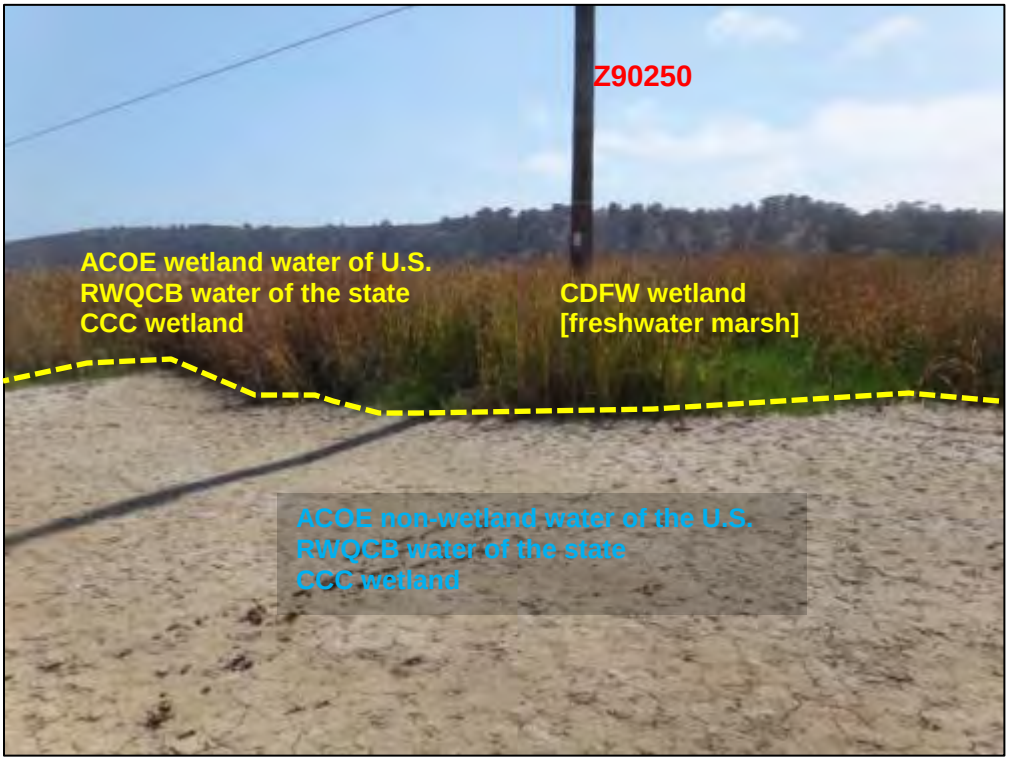
PHOTOGRAPH 22: Hydrologic Feature 22: Jurisdictional coastal saltmarsh vegetation dominated by jaumea surrounding pole Z90253, with Poway Creek to the south. Facing west.



PHOTOGRAPH 23: Hydrologic Feature 23: Jurisdictional coastal saltmarsh vegetation dominated by jaumea surrounding pole Z90252, with Poway Creek to the west. Facing west.



PHOTOGRAPH 24: Hydrologic Feature 24: Jurisdictional coastal saltmarsh vegetation dominated by jaumea surrounding pole Z90251, with Poway Creek to the north. Facing west.



PHOTOGRAPH 25: Hydrologic Feature 25: Jurisdictional freshwater marsh vegetation dominated by cattails surrounding pole Z90250, with a salt panne to the west. Facing northeast.

PHOTOGRAPH 26: Hydrologic Feature 26: Jurisdictional freshwater marsh vegetation dominated by cattails surrounding pole Z90249. Facing northeast.

PHOTOGRAPH 27: Hydrologic Feature 27: Jurisdictional coastal salt marsh vegetation dominated by pickleweed and cocklebur surrounding pole Z90248, with jurisdictional freshwater marsh to the east. Facing east.

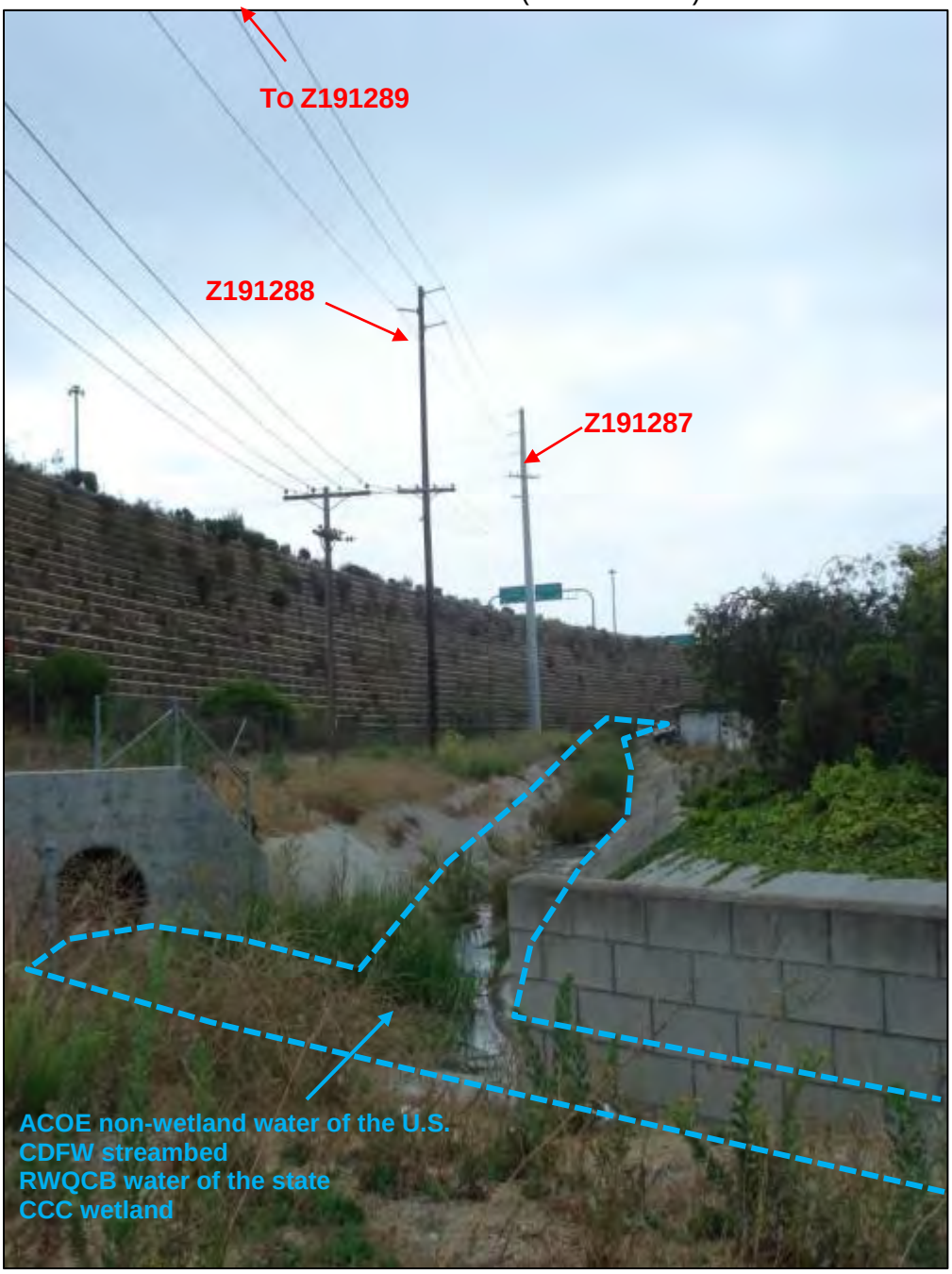
PHOTOGRAPH 28: Hydrologic Feature 28 and 27: Jurisdictional coastal salt marsh vegetation dominated by pickleweed and cocklebur surrounding poles Z90247 and Z90248. Facing northwest.

PHOTOGRAPH 29: Hydrologic Feature 29: Jurisdictional freshwater marsh vegetation dominated by tules surrounding pole Z90245. Facing north.

PHOTOGRAPH 30: Hydrologic Feature 30: Jurisdictional freshwater marsh vegetation dominated by tules and cattails surrounding pole Z90244. Facing north.

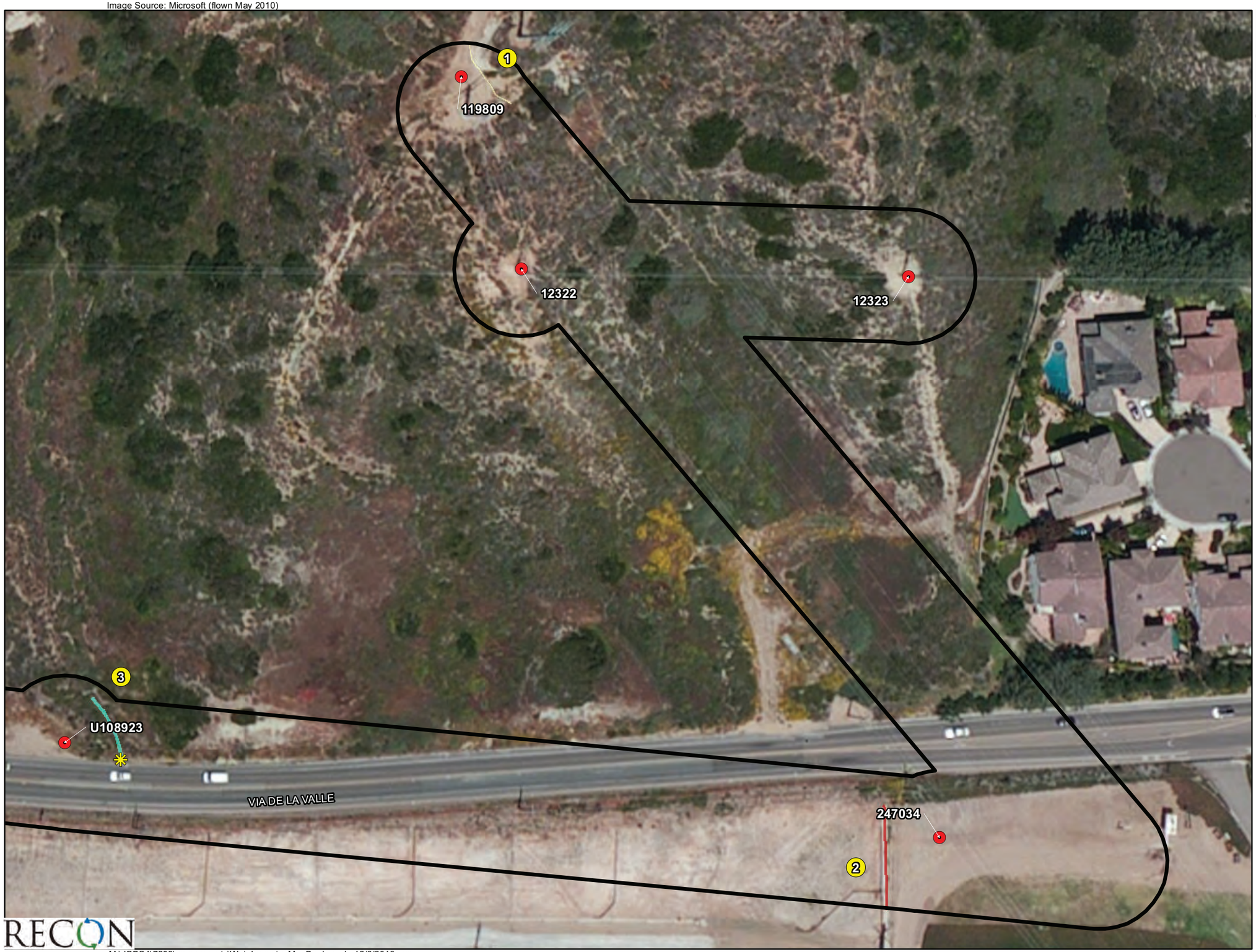
PHOTOGRAPH 31: Hydrologic Feature 31: Jurisdictional freshwater marsh vegetation dominated by tules and cattails surrounding pole Z60229. Facing southeast.

PHOTOGRAPH 32: Hydrologic Feature 32: Jurisdictional drainage ditch, south of pole Z191293, facing west.



PHOTOGRAPH 33: Hydrologic Feature 33: Jurisdictional drainage ditch, near poles Z191289, Z191288 and Z191287. Facing south.

Image Source: Microsoft (flown May 2010)



Survey Area

Transmission Pole

Culvert

Hydrologic Feature Number

Jurisdictional Assessment [Vegetation Community]

ACOE Non-wetland Water of the U.S., CDFW Streambed, RWQCB Water of the State, CCC Wetland [Bare Ground]

Non-jurisdictional [Brow Ditch]

Non-jurisdictional [Erosional Feature]

0 Feet 70

RECON

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FIGURE 1-1

Jurisdictional Resources on TL666

Image Source: Microsoft (flown May 2010)

Survey Area

Hydrologic Feature Number

Jurisdictional Assessment [Vegetation Community]

ACOE Non-wetland Water of the U.S., CDFW Streambed, RWQCB Water of the State, CCC Wetland [Bare Ground]

0 Feet 70

FIGURE 1-2

Jurisdictional Resources on TL666

RECON

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Image Source: Microsoft (flown May 2010)

Survey Area

Transmission Pole

Culvert

Hydrologic Feature Number

Jurisdictional Assessment [Vegetation Community]

ACOE Non-wetland Water of the U.S., CDFW Streambed, RWQCB Water of the State, CCC Wetland [Bare Ground]

0 Feet 70

FIGURE 1-3

Jurisdictional Resources on TL666

RECON

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Image Source: Microsoft (flown May 2010)

Survey Area

Transmission Pole

Hydrologic Feature Number

0 Feet 70

FIGURE 1-4

Jurisdictional Resources on TL666

RECON

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Image Source: Microsoft (flown May 2010)

Survey Area

Hydrologic Feature Number

0 Feet 70

FIGURE 1-5

Jurisdictional Resources on TL666

RECON

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Image Source: Microsoft (flown May 2010)

Survey Area

Transmission Pole

Culvert

Hydrologic Feature Number

Jurisdictional Assessment [Vegetation Community]

Non-jurisdictional [Brow Ditch]

0 Feet 70

FIGURE 1-6

Jurisdictional Resources on TL666

RECON

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Image Source: Microsoft (flown May 2010)

Survey Area

Transmission Pole

Culvert

Hydrologic Feature Number

Jurisdictional Assessment [Vegetation Community]

Non-jurisdictional [Brow Ditch]

0 Feet 70

RECON

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FIGURE 1-7

Jurisdictional Resources on TL666

Image Source: Microsoft (flown May 2010)

Survey Area

Transmission Pole

Hydrologic Feature Number

0 Feet 70

FIGURE 1-8

Jurisdictional Resources on TL666

RECON

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Image Source: Microsoft (flown May 2010)

Survey Area

Transmission Pole

Hydrologic Feature Number

0 Feet 70

FIGURE 1-9

Jurisdictional Resources on TL666

RECON

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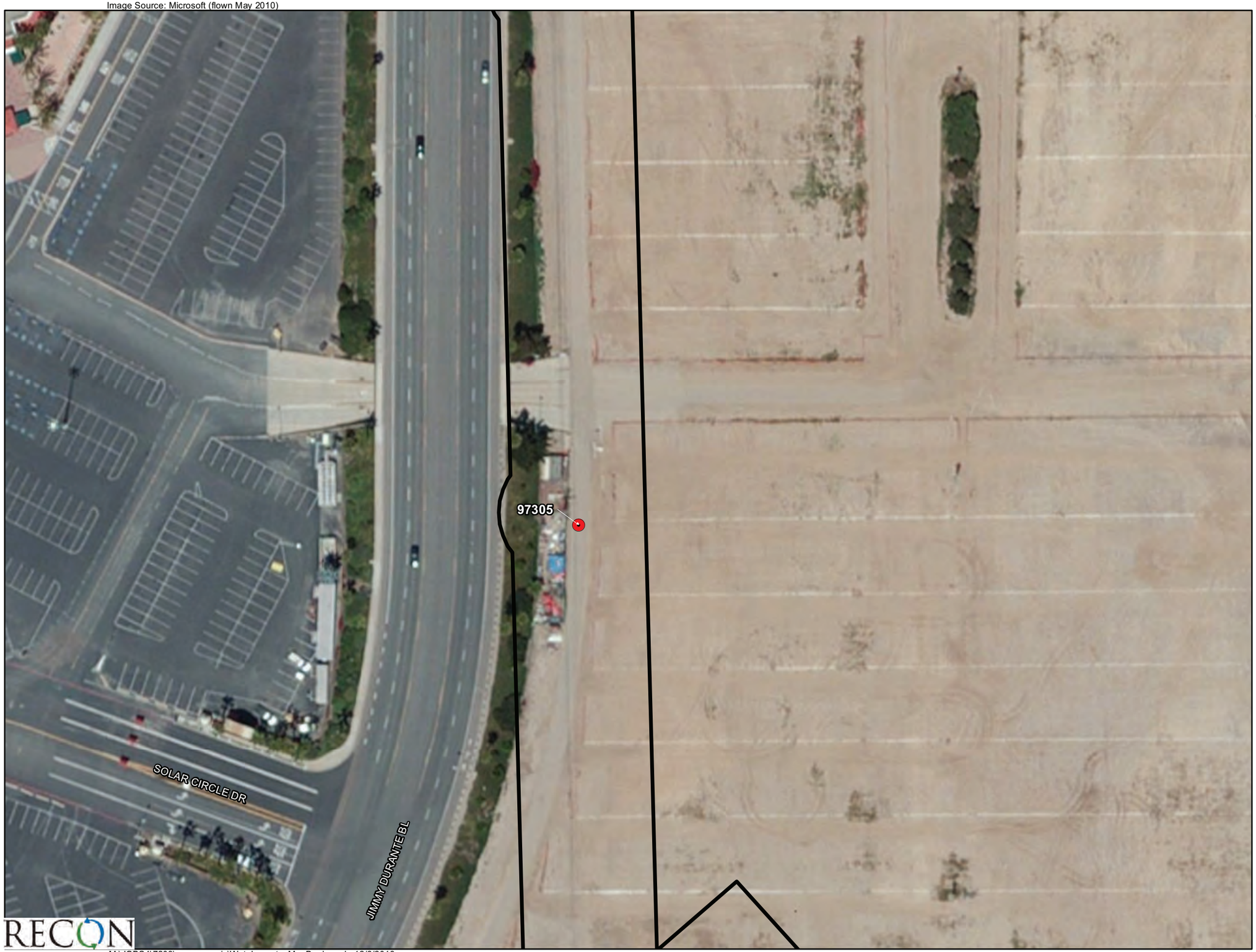
Image Source: Microsoft (flown May 2010)



Survey Area

Transmission Pole

Hydrologic Feature Number

0 Feet 70

FIGURE 1-10

Jurisdictional Resources on TL666

RECON

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Image Source: Microsoft (flown May 2010)

Survey Area

Transmission Pole

Hydrologic Feature Number

0 Feet 70

FIGURE 1-11

Jurisdictional Resources on TL666

RECON

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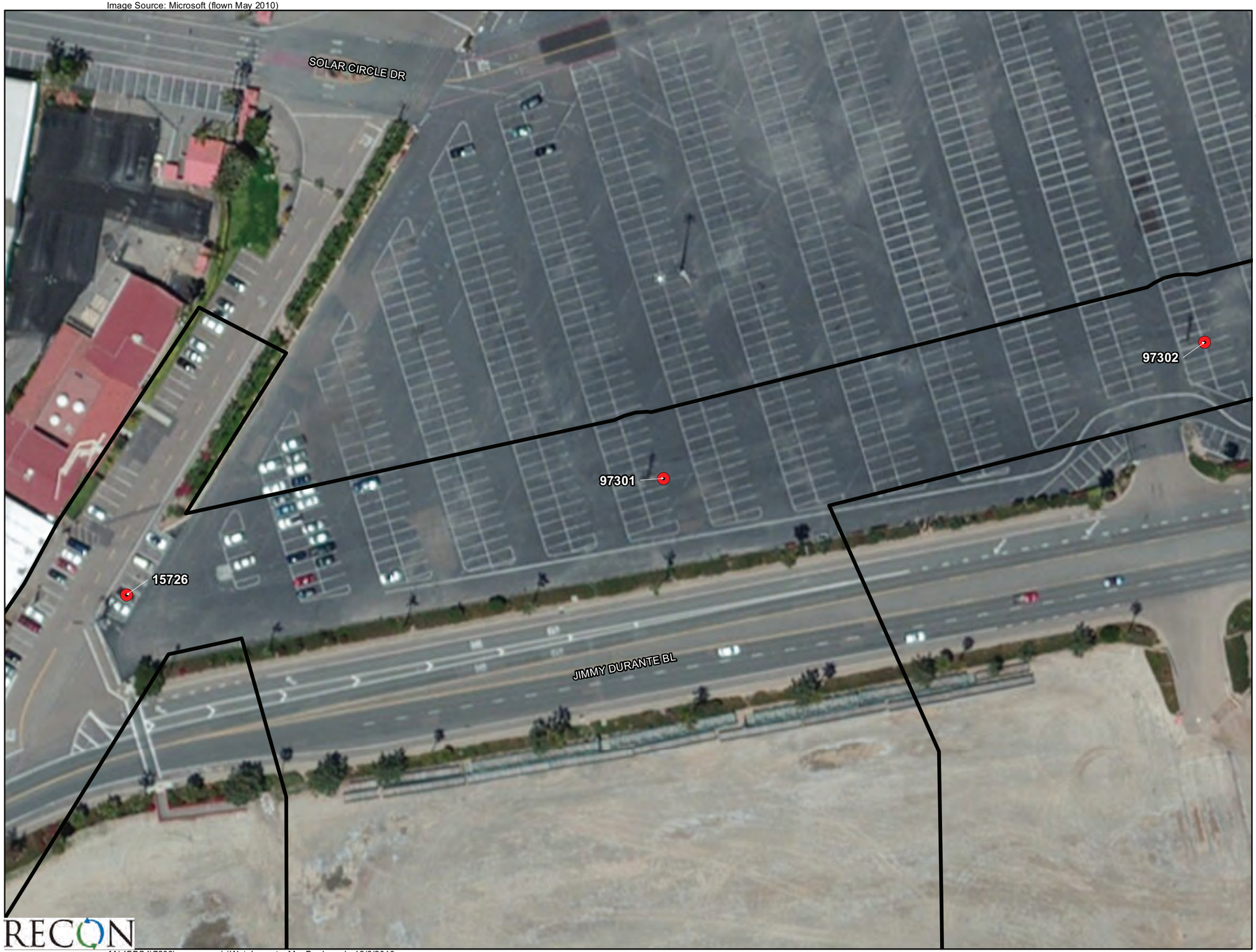
Image Source: Microsoft (flown May 2010)



Survey Area

Transmission Pole

Hydrologic Feature Number

0 Feet 70

FIGURE 1-12

Jurisdictional Resources on TL666

RECON

M:\JOBS4\7203\common_gis\Wet_Impacts_MapBook.mxd 12/6/2013 ccn

Image Source: Microsoft (flown May 2010)

Survey Area

Hydrologic Feature Number

Jurisdictional Assessment [Vegetation Community]

ACOE Non-wetland Water of the U.S., CDFW Streambed, RWQCB Water of the State, CCC Wetland [Open Water]

0 Feet 70

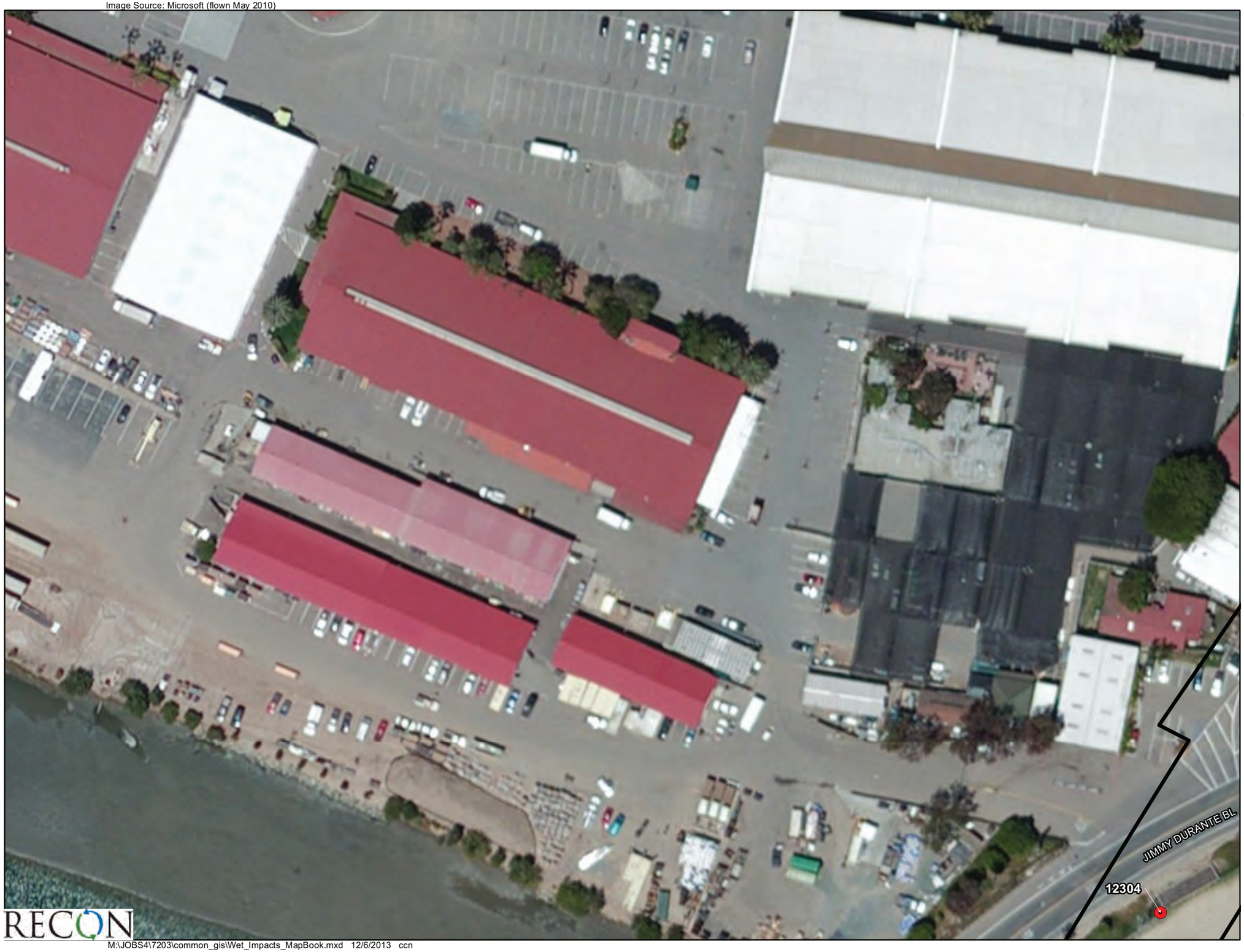
FIGURE 1-13

Jurisdictional Resources on TL666

RECON

M:\JOBS4\7203\common_gis\Wet_Impacts_MapBook.mxd 12/6/2013 ccn

Image Source: Microsoft (flown May 2010)



Survey Area

Transmission Pole

Hydrologic Feature Number

0 Feet 70

FIGURE 1-14

Jurisdictional Resources on TL666

RECON

M:\JOBS4\7203\common_gis\Wet_Impacts_MapBook.mxd 12/6/2013 ccn

Image Source: Microsoft (flown May 2010)

Survey Area

Transmission Pole

Culvert

Hydrologic Feature Number

Impacts

Foot Path

Work Area

Jurisdictional Assessment [Vegetation Community]

ACOE Wetland Water of the U.S., CDFW Wetland, RWQCB Water of the State, CCC Wetland [Coastal Salt Marsh]

ACOE Non-wetland Water of the U.S., CDFW Streambed, RWQCB Water of the State, CCC Wetland [Open Water]

ACOE Non-wetland Water of the U.S., RWQCB Water of the State, CCC Wetland [Salt Panne]

0 Feet 70

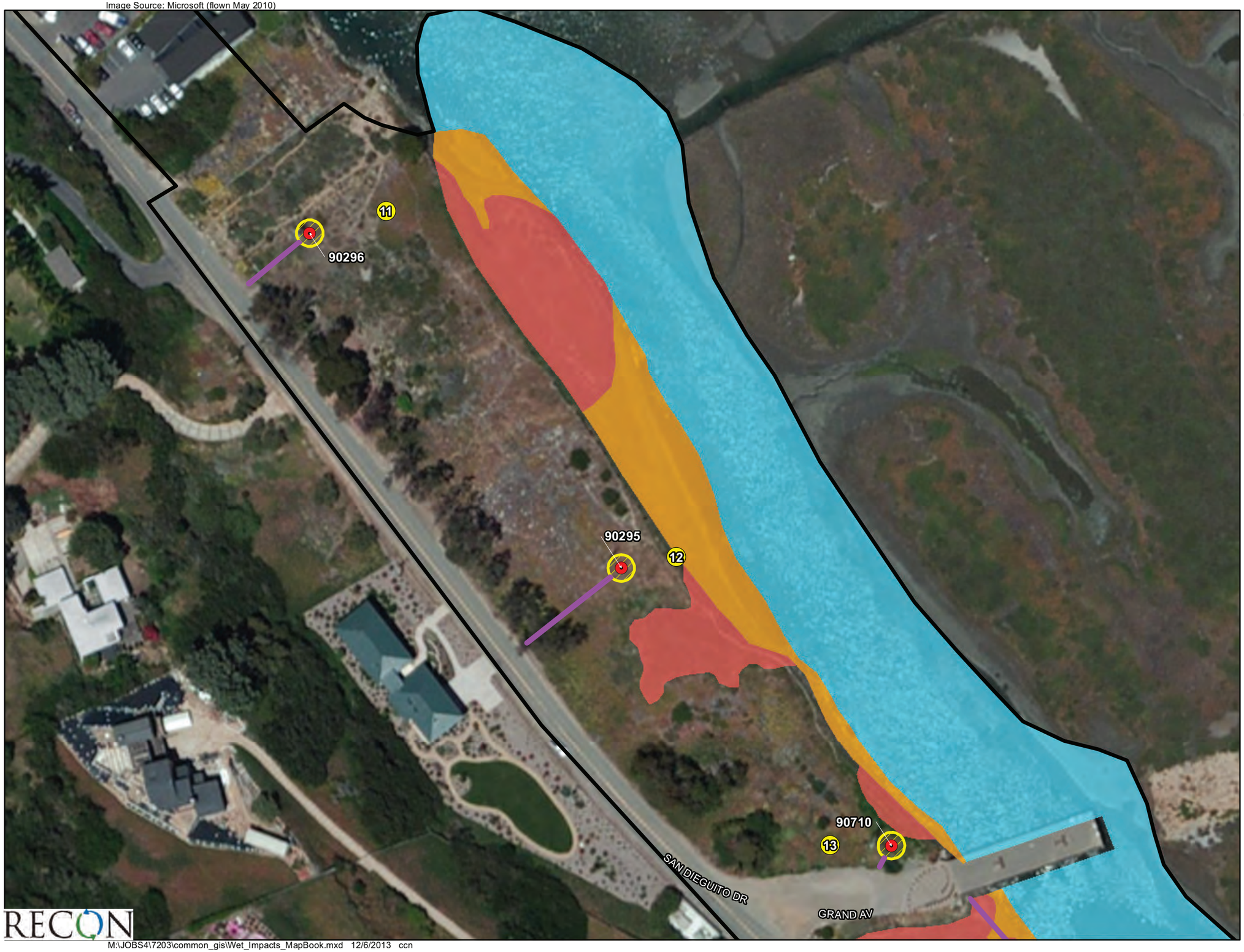
RECON

M:\JOBS4\7203\common_gis\Wet_Impacts_MapBook.mxd 12/6/2013 ccn

FIGURE 1-15

Jurisdictional Resources on TL666

Image Source: Microsoft (flown May 2010)



Survey Area

Transmission Pole

Hydrologic Feature Number

Impacts

Foot Path

Work Area

Jurisdictional Assessment [Vegetation Community]

ACOE Wetland Water of the U.S., CDFW Wetland, RWQCB Water of the State, CCC Wetland [Coastal Salt Marsh]

ACOE Special Aquatic Site, RWQCB Water of the State , CCC Wetland [Mudflat]

ACOE Non-wetland Water of the U.S., CDFW Streambed, RWQCB Water of the State, CCC Wetland [Open Water]

0 Feet 70

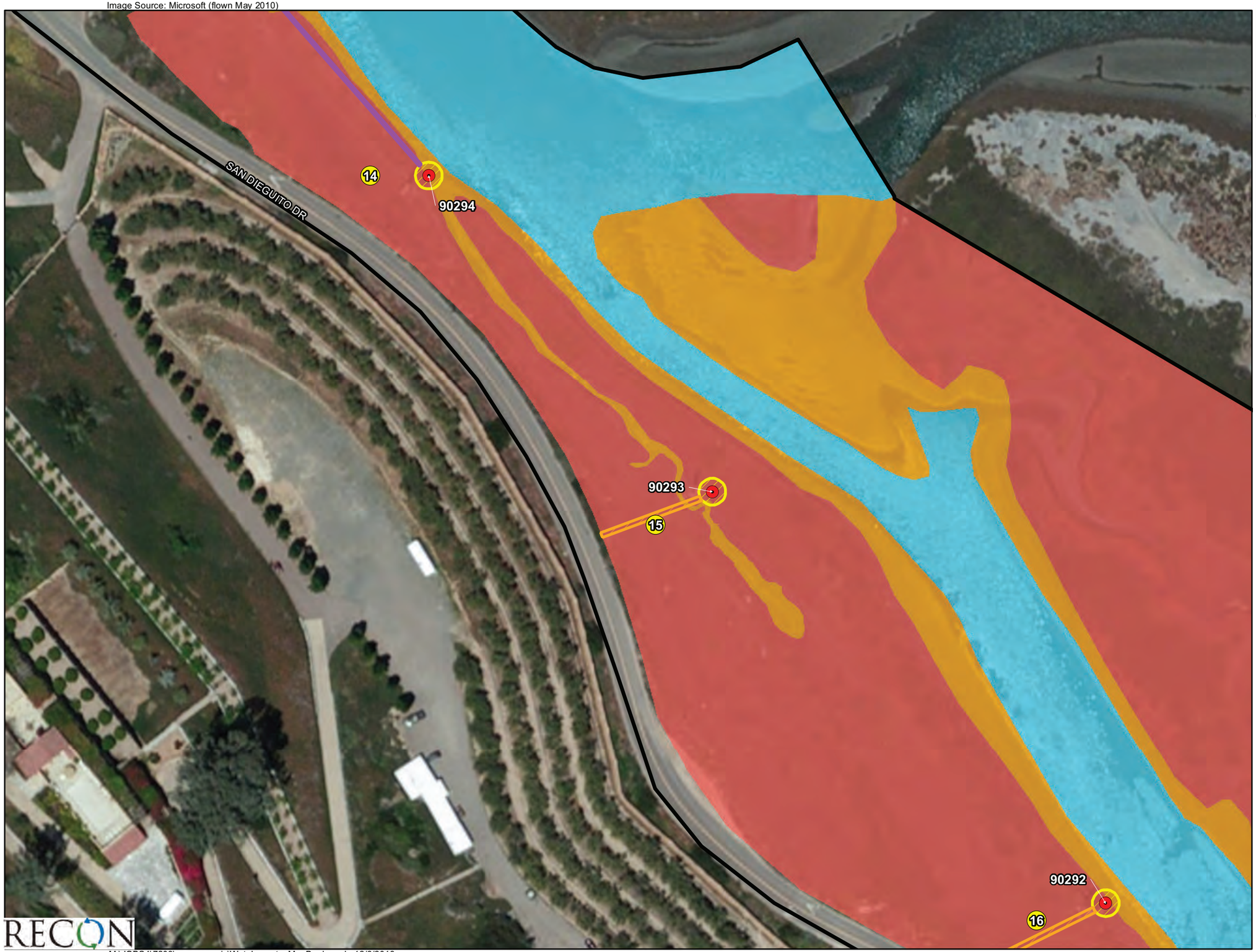
FIGURE 1-16

Jurisdictional Resources on TL666

RECON

M:\JOBS4\7203\common_gis\Wet_Impacts_MapBook.mxd 12/6/2013 ccn

Image Source: Microsoft (flown May 2010)



Survey Area

Transmission Pole

Hydrologic Feature Number

Impacts

Foot Path

Plywood Path

Work Area

Jurisdictional Assessment [Vegetation Community]

ACOE Wetland Water of the U.S., CDFW Wetland, RWQCB Water of the State, CCC Wetland [Coastal Salt Marsh]

ACOE Special Aquatic Site, RWQCB Water of the State , CCC Wetland [Mudflat]

ACOE Non-wetland Water of the U.S., CDFW Streambed, RWQCB Water of the State, CCC Wetland [Open Water]

0 Feet 70

RECON

M:\JOBS4\7203\common_gis\Wet_Impacts_MapBook.mxd 12/6/2013 ccn

FIGURE 1-17

Jurisdictional Resources on TL666

Image Source: Microsoft (flown May 2010)

Survey Area

Hydrologic Feature Number

Jurisdictional Assessment [Vegetation Community]

ACOE Wetland Water of the U.S., CDFW Wetland, RWQCB Water of the State, CCC Wetland [Coastal Salt Marsh]

ACOE Special Aquatic Site, RWQCB Water of the State , CCC Wetland [Mudflat]

ACOE Non-wetland Water of the U.S., CDFW Streambed, RWQCB Water of the State, CCC Wetland [Open Water]

0 Feet 70

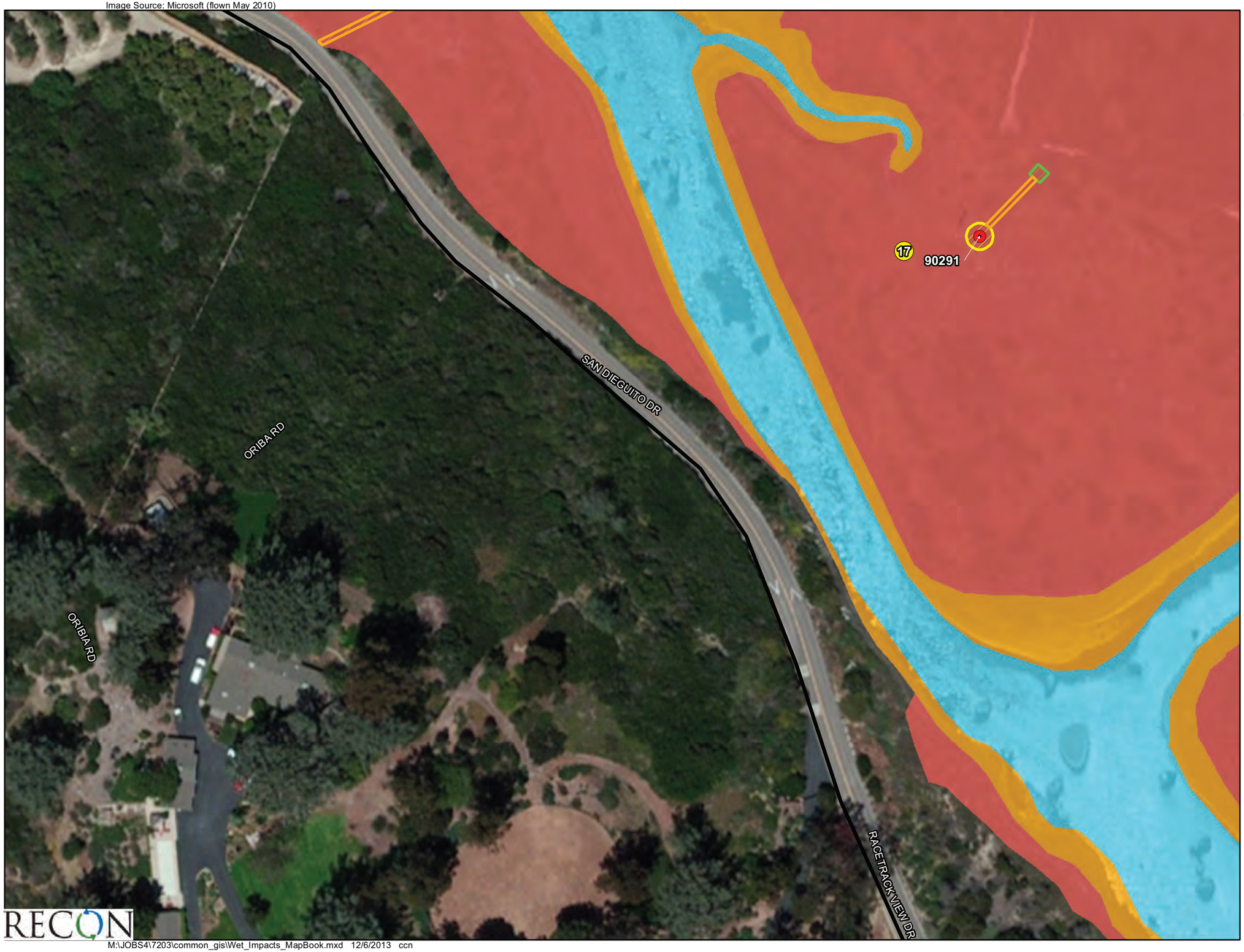
FIGURE 1-18

Jurisdictional Resources on TL666

RECON

M:\JOBS4\7203\common_gis\Wet_Impacts_MapBook.mxd 12/6/2013 ccn

Image Source: Microsoft (flown May 2010)



Survey Area

Transmission Pole

Hydrologic Feature Number

Impacts

Drop Zone

Plywood Path

Work Area

Jurisdictional Assessment [Vegetation Community]

ACOE Wetland Water of the U.S., CDFW Wetland, RWQCB Water of the State, CCC Wetland [Coastal Salt Marsh]

ACOE Special Aquatic Site, RWQCB Water of the State , CCC Wetland [Mudflat]

ACOE Non-wetland Water of the U.S., CDFW Streambed, RWQCB Water of the State, CCC Wetland [Open Water]

0 Feet 70

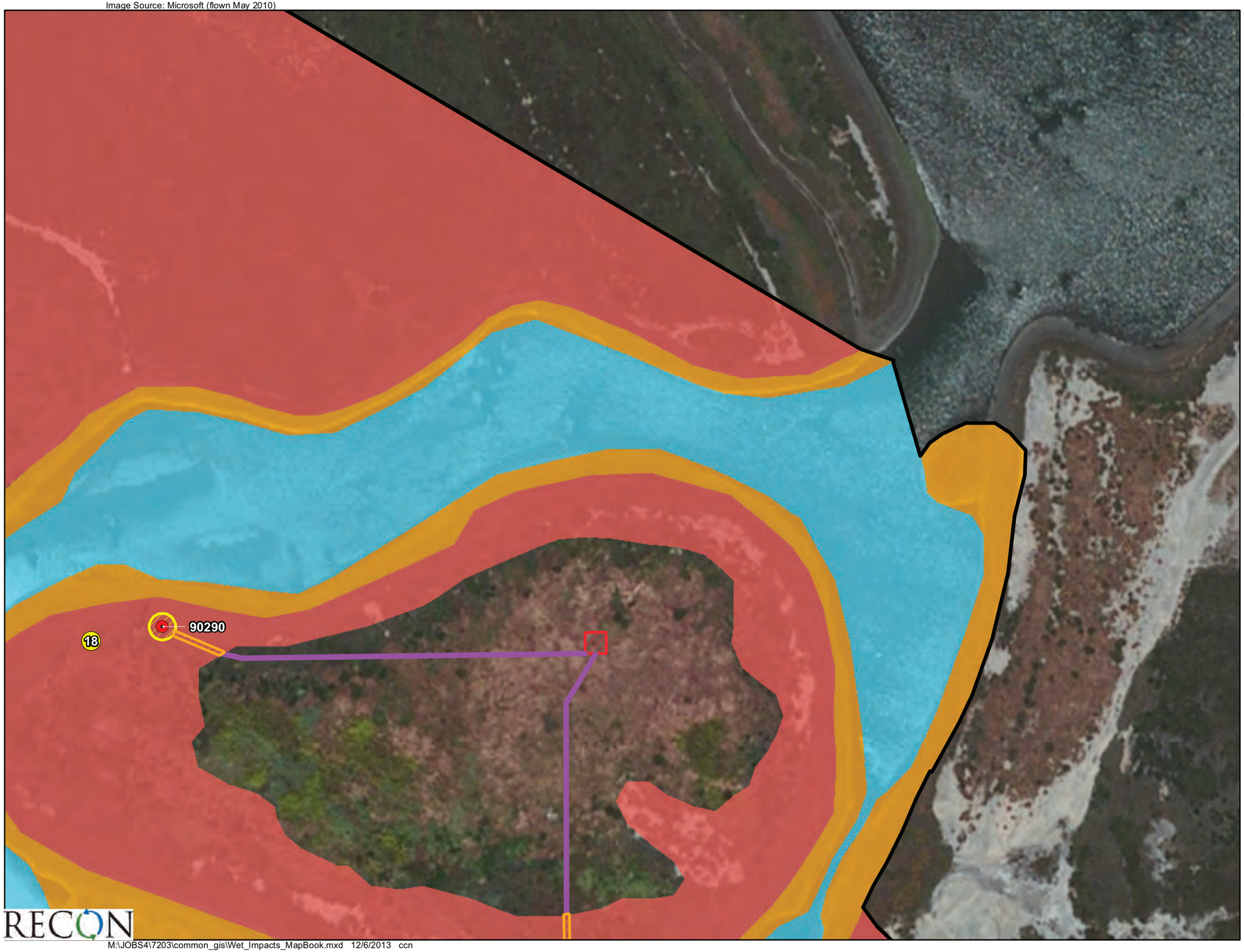
FIGURE 1-19

Jurisdictional Resources on TL666

RECON

M:\JOBS4\7203\common_gis\Wet_Impacts_MapBook.mxd 12/6/2013 ccn

Image Source: Microsoft (flown May 2010)



Survey Area

Transmission Pole

Hydrologic Feature Number

Impacts

Foot Path

Landing Zone

Plywood Path

Work Area

Jurisdictional Assessment [Vegetation Community]

ACOE Wetland Water of the U.S., CDFW Wetland, RWQCB Water of the State, CCC Wetland [Coastal Salt Marsh]

ACOE Special Aquatic Site, RWQCB Water of the State , CCC Wetland [Mudflat]

ACOE Non-wetland Water of the U.S., CDFW Streambed, RWQCB Water of the State, CCC Wetland [Open Water]

0 Feet 70

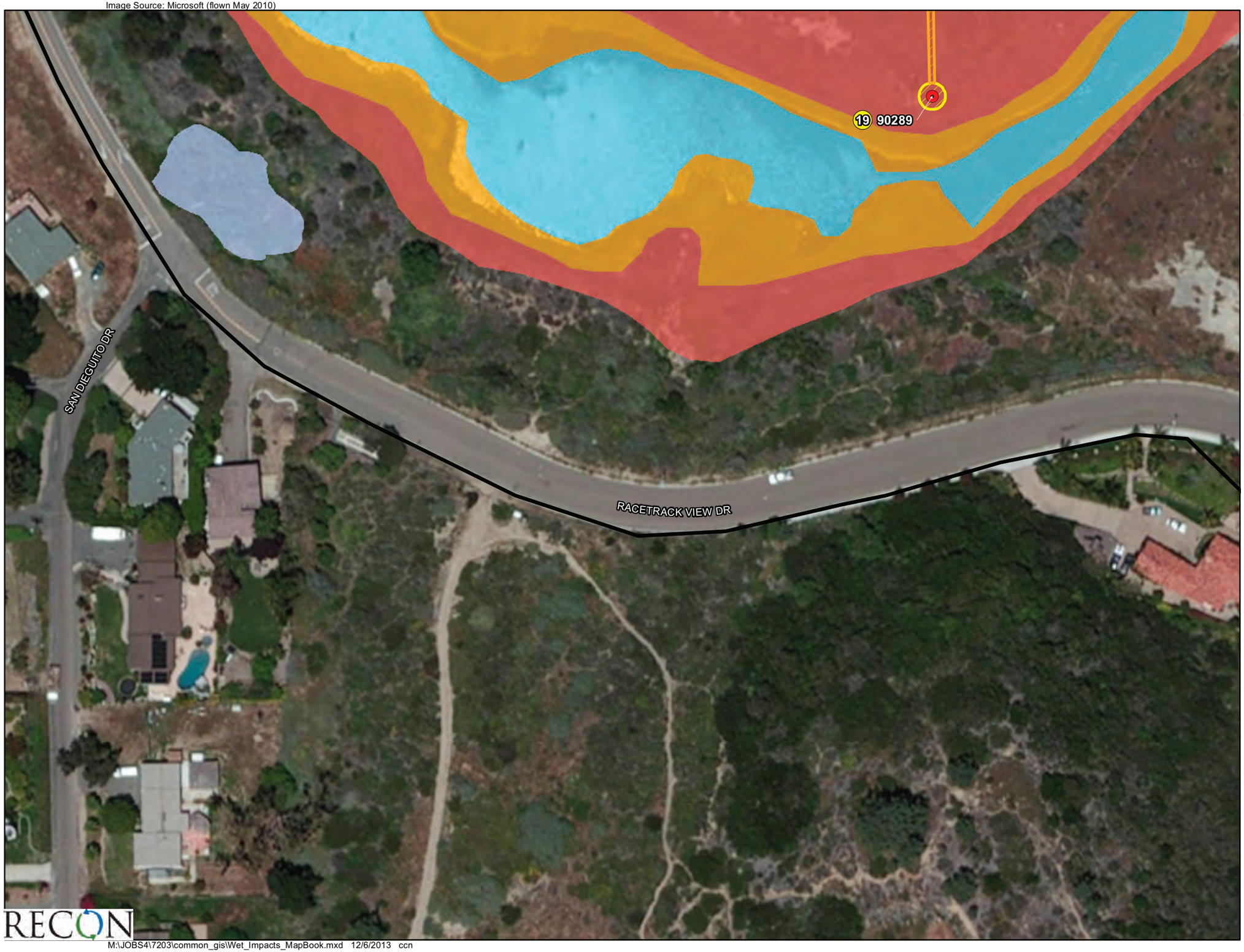
RECON

M:\JOBS4\7203\common_gis\Wet_Impacts_MapBook.mxd 12/6/2013 ccn

FIGURE 1-20

Jurisdictional Resources on TL666

Image Source: Microsoft (flown May 2010)



Survey Area

Transmission Pole

Hydrologic Feature Number

Impacts

Plywood Path

Work Area

Jurisdictional Assessment [Vegetation Community]

ACOE Wetland Water of the U.S., CDFW Wetland, RWQCB Water of the State, CCC Wetland [Coastal Salt Marsh]

ACOE Special Aquatic Site, RWQCB Water of the State , CCC Wetland [Mudflat]

ACOE Non-wetland Water of the U.S., CDFW Streambed, RWQCB Water of the State, CCC Wetland [Open Water]

ACOE Wetland Water of the U.S., CDFW Wetland, RWQCB Water of the State, CCC Wetland [Southern Willow Scrub]

0 Feet 70

RECON

M:\JOBS4\7203\common_gis\Wet_Impacts_MapBook.mxd 12/6/2013 ccn

FIGURE 1-21

Jurisdictional Resources on TL666

Image Source: Microsoft (flown May 2010)

Survey Area

Transmission Pole

Hydrologic Feature Number

Jurisdictional Assessment [Vegetation Community]

ACOE Wetland Water of the U.S., CDFW Wetland, RWQCB Water of the State, CCC Wetland [Coastal Salt Marsh]

0 Feet 70

FIGURE 1-22

Jurisdictional Resources on TL666

RECON

M:\JOBS4\7203\common_gis\Wet_Impacts_MapBook.mxd 12/6/2013 ccn

Image Source: Microsoft (flown May 2010)

Survey Area

Transmission Pole

Hydrologic Feature Number

0 Feet 70

FIGURE 1-23

Jurisdictional Resources on TL666

RECON

M:\JOBS4\7203\common_gis\Wet_Impacts_MapBook.mxd 12/6/2013 ccn

Image Source: Microsoft (flown May 2010)

Survey Area

Transmission Pole

Hydrologic Feature Number

0 Feet 70

FIGURE 1-24

Jurisdictional Resources on TL666

RECON

M:\JOBS4\7203\common_gis\Wet_Impacts_MapBook.mxd 12/6/2013 ccn

Image Source: Microsoft (flown May 2010)

Survey Area

Transmission Pole

Hydrologic Feature Number

0 Feet 70

FIGURE 1-25

Jurisdictional Resources on TL666

RECON

M:\JOBS4\7203\common_gis\Wet_Impacts_MapBook.mxd 12/6/2013 ccn

Image Source: Microsoft (flown May 2010)

Survey Area

Transmission Pole

Hydrologic Feature Number

0 Feet 70

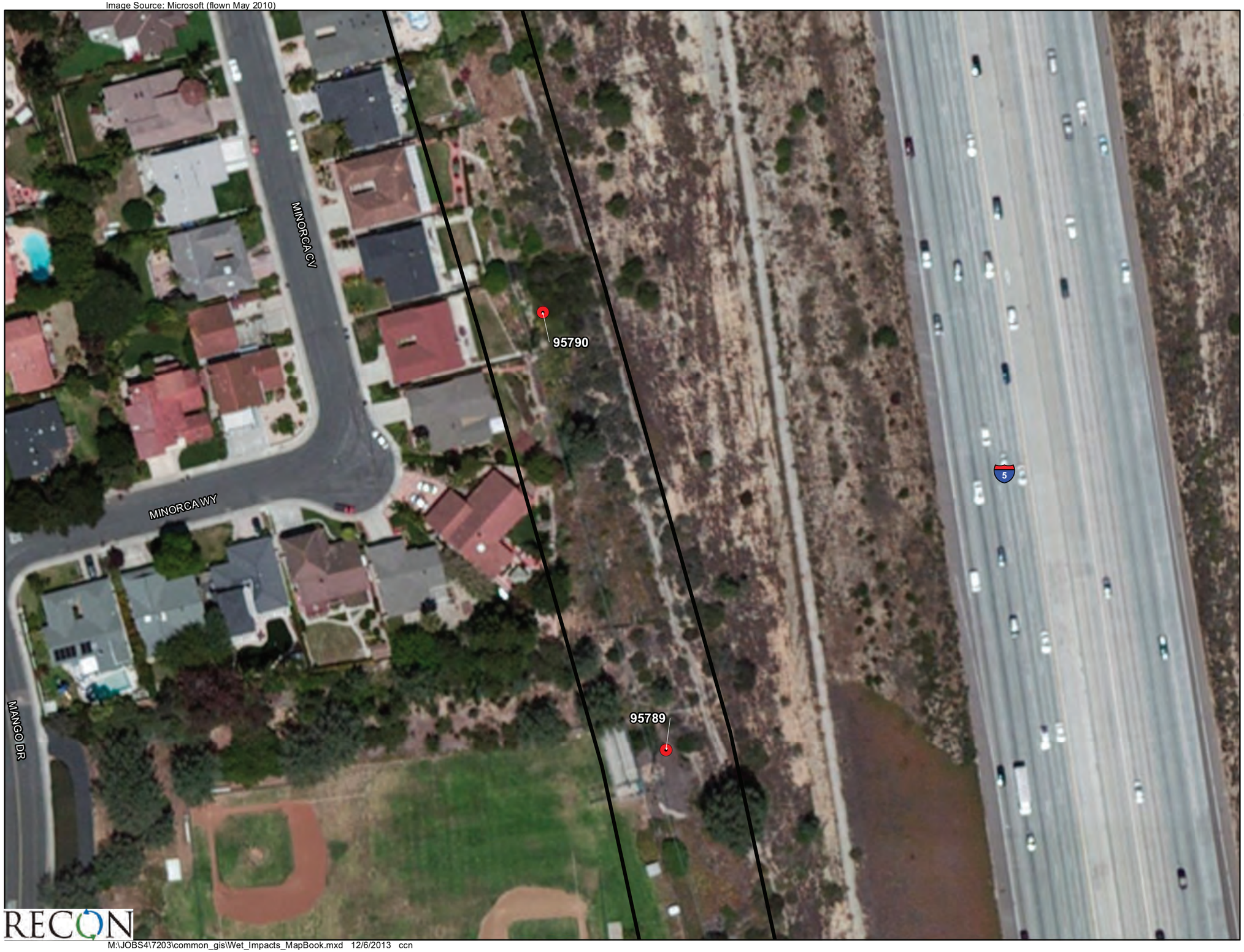
FIGURE 1-26

Jurisdictional Resources on TL666

RECON

M:\JOBS4\7203\common_gis\Wet_Impacts_MapBook.mxd 12/6/2013 ccn

Image Source: Microsoft (flown May 2010)



Survey Area

Transmission Pole

Hydrologic Feature Number

0 Feet 70

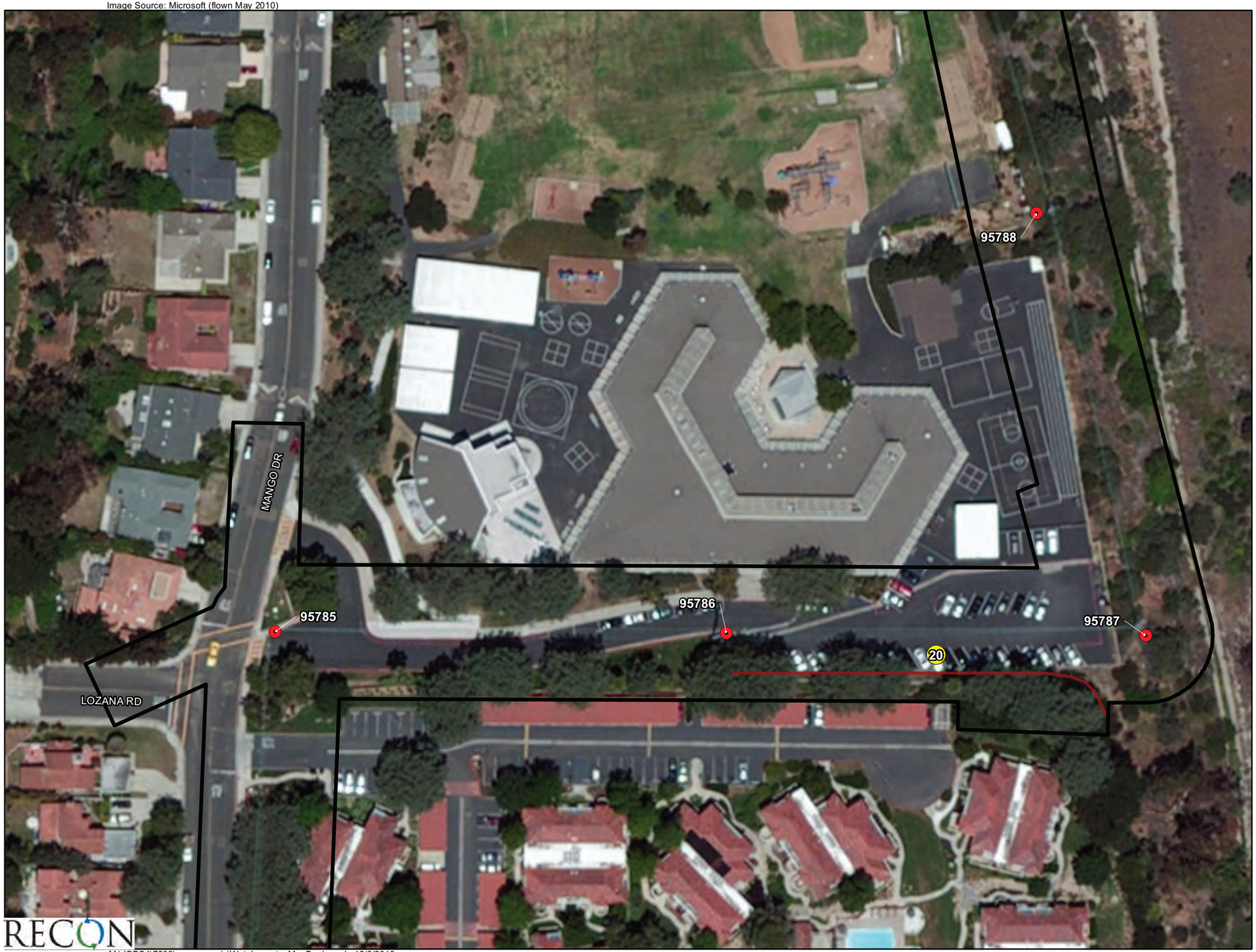
FIGURE 1-27

Jurisdictional Resources on TL666

RECON

M:\JOBS4\7203\common_gis\Wet_Impacts_MapBook.mxd 12/6/2013 ccn

Image Source: Microsoft (flown May 2010)



Survey Area

Transmission Pole

Hydrologic Feature Number

Jurisdictional Assessment [Vegetation Community]

Non-jurisdictional [Brow Ditch]

0 Feet 70

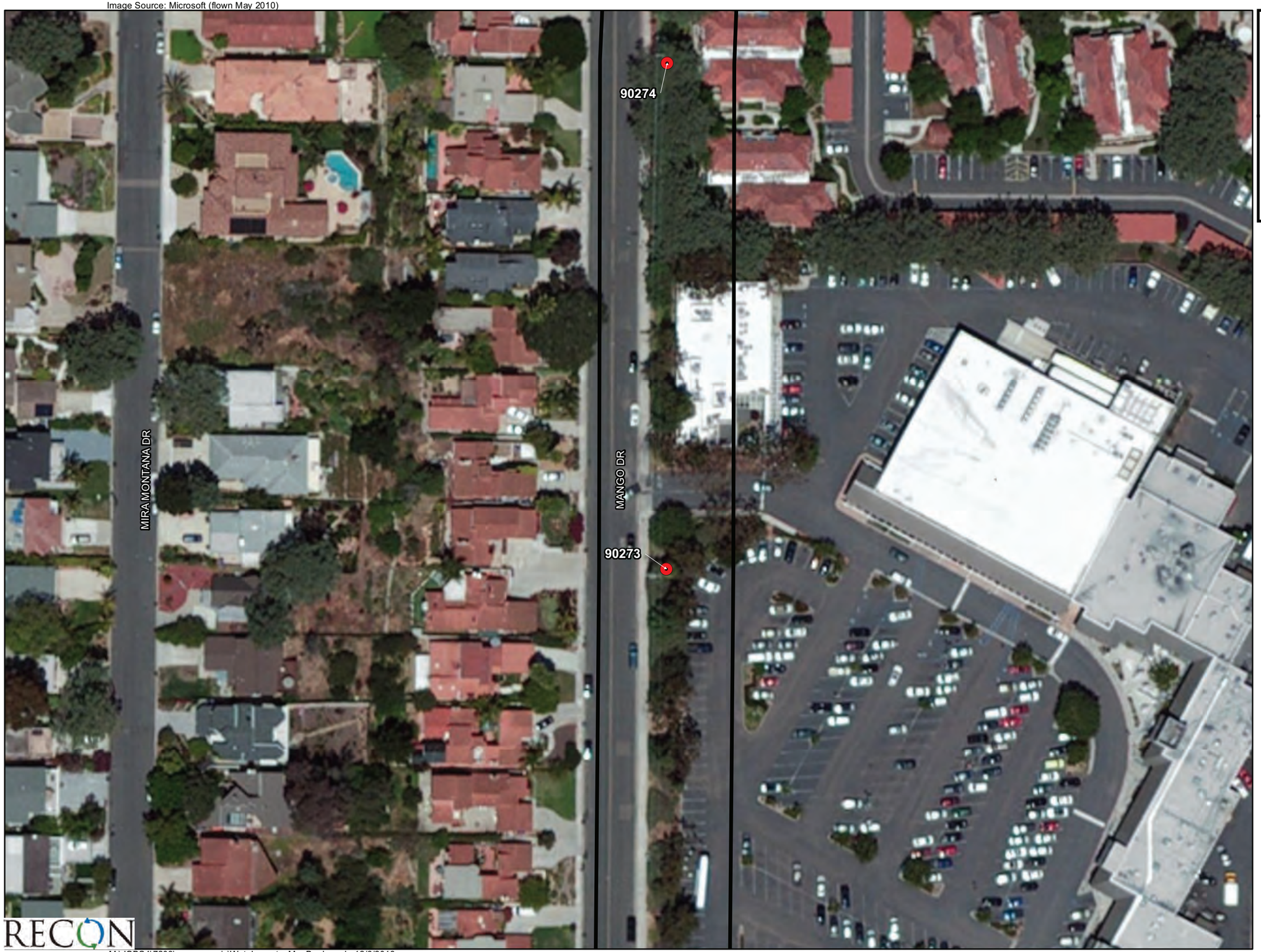
FIGURE 1-28

Jurisdictional Resources on TL666

RECON

M:\JOBS4\7203\common_gis\Wet_Impacts_MapBook.mxd 12/6/2013 ccn

Image Source: Microsoft (flown May 2010)



Survey Area
Transmission Pole
Hydrologic Feature Number

0 Feet 70

FIGURE 1-29

Jurisdictional Resources on TL666

RECON

M:\JOBS4\7203\common_gis\Wet_Impacts_MapBook.mxd 12/6/2013 ccn

Image Source: Microsoft (flown May 2010)

Survey Area

Transmission Pole

Hydrologic Feature Number

0 Feet 70

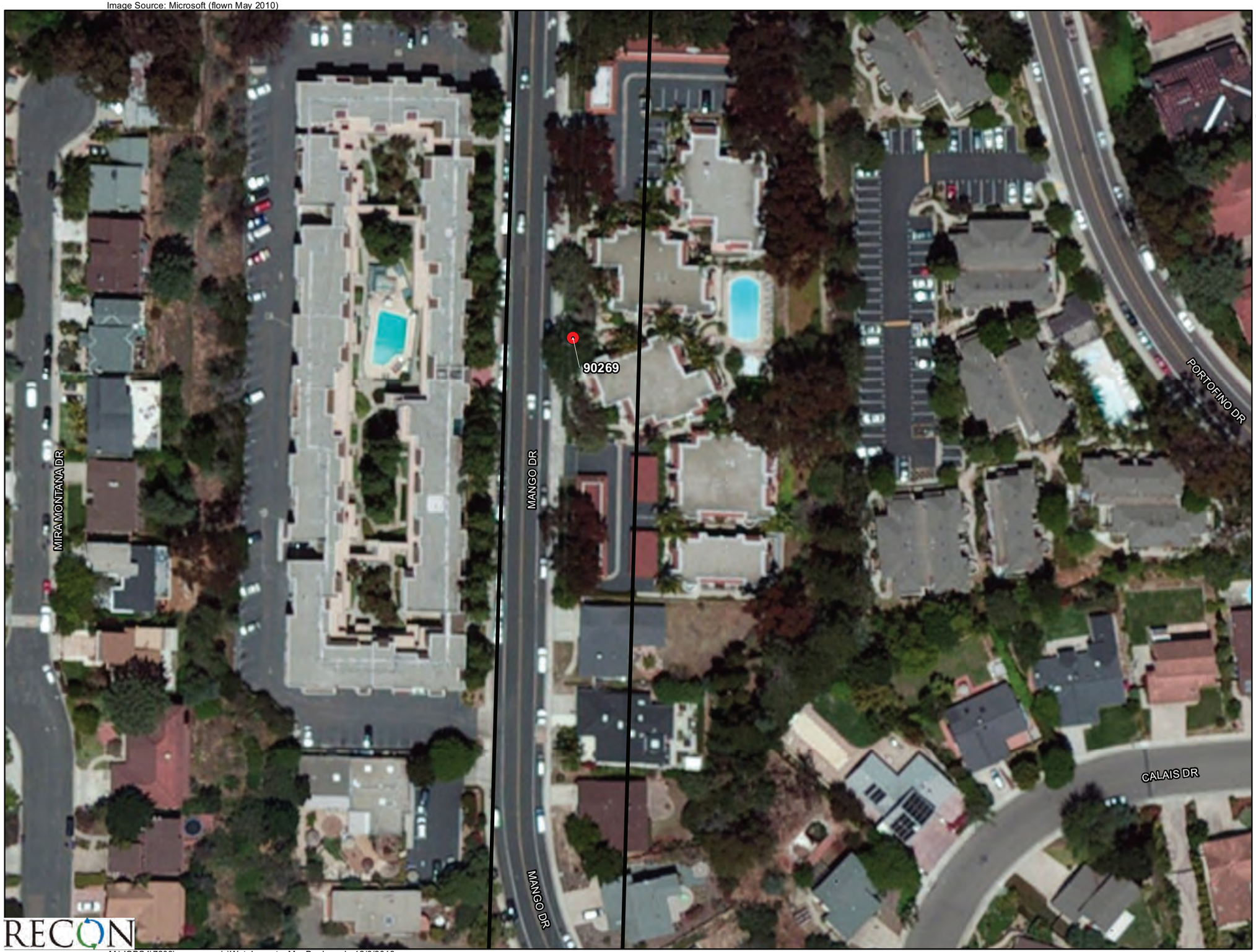
RECON

M:\JOBS4\7203\common_gis\Wet_Impacts_MapBook.mxd 12/6/2013 ccn

FIGURE 1-30

Jurisdictional Resources on TL666

Image Source: Microsoft (flown May 2010)



Survey Area

Transmission Pole

Hydrologic Feature Number

0 Feet 70

RECON

M:\JOBS4\7203\common_gis\Wet_Impacts_MapBook.mxd 12/6/2013 ccn

FIGURE 1-31

Jurisdictional Resources on TL666

Image Source: Microsoft (flown May 2010)

RECON

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Survey Area

Transmission Pole

Hydrologic Feature Number

0 Feet 70

FIGURE 1-32

Jurisdictional Resources on TL666

Image Source: Microsoft (flown May 2010)

Survey Area

Transmission Pole

Hydrologic Feature Number

0 Feet 70

RECON

M:\JOBS4\7203\common_gis\Wet_Impacts_MapBook.mxd 12/6/2013 ccn

FIGURE 1-33

Jurisdictional Resources on TL666

Image Source: Microsoft (flown May 2010)

Survey Area

Transmission Pole

Hydrologic Feature Number

0 Feet 70

FIGURE 1-34

Jurisdictional Resources on TL666

RECON

M:\JOBS4\7203\common_gis\Wet_Impacts_MapBook.mxd 12/6/2013 ccn

Image Source: Microsoft (flown May 2010)

Survey Area

Transmission Pole

Hydrologic Feature Number

0 Feet 70

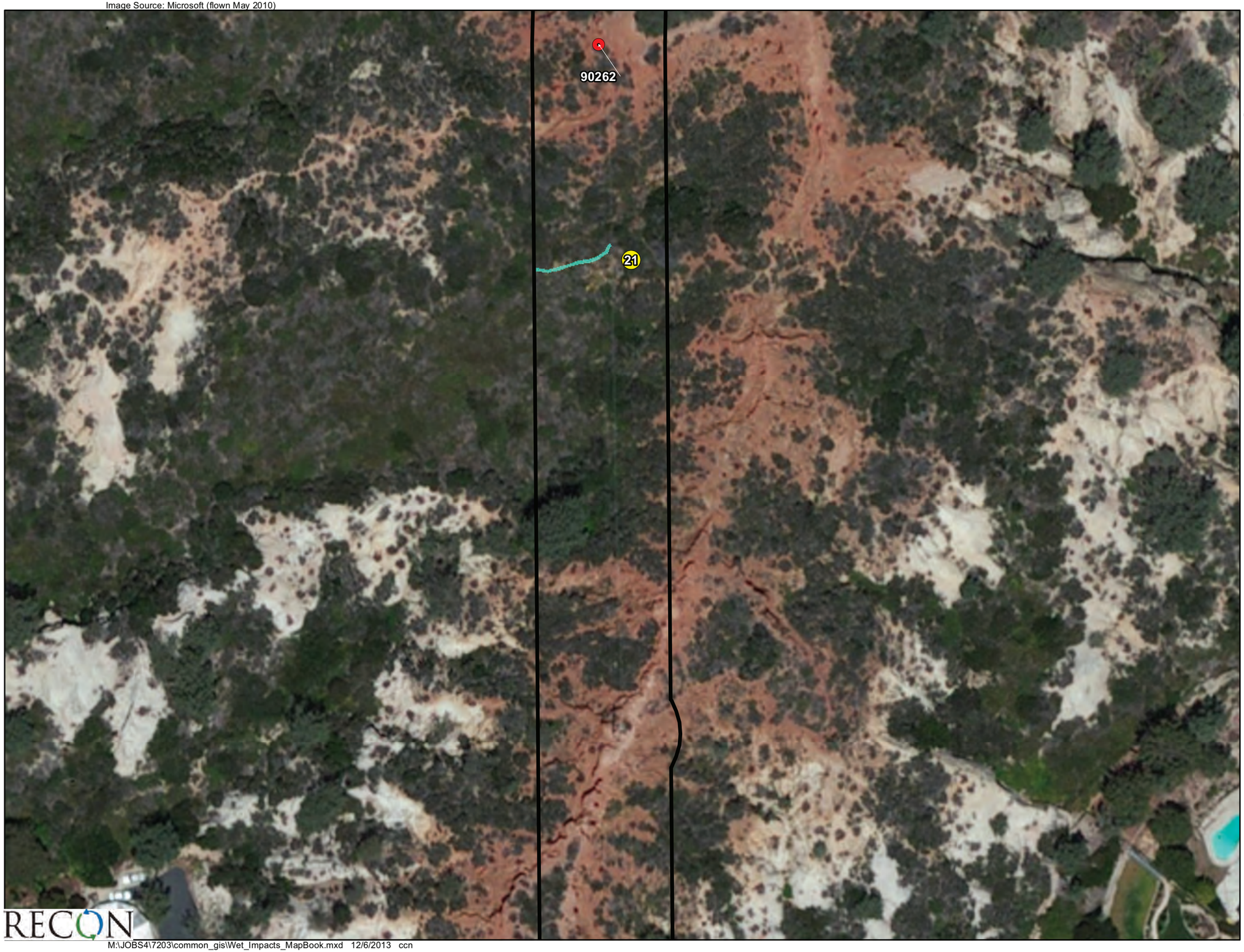
FIGURE 1-35

Jurisdictional Resources on TL666

RECON

M:\JOBS4\7203\common_gis\Wet_Impacts_MapBook.mxd 12/6/2013 ccn

Image Source: Microsoft (flown May 2010)



Survey Area

Transmission Pole

Hydrologic Feature Number

Jurisdictional Assessment [Vegetation Community]

ACOE Non-wetland Water of the U.S., CDFW Streambed, RWQCB Water of the State, CCC Wetland [Bare Ground]

0 Feet 70

FIGURE 1-36

Jurisdictional Resources on TL666

RECON

M:\JOBS4\7203\common_gis\Wet_Impacts_MapBook.mxd 12/6/2013 ccn

Image Source: Microsoft (flown May 2010)

Survey Area

Transmission Pole

Hydrologic Feature Number

0 Feet 70

FIGURE 1-37

Jurisdictional Resources on TL666

RECON

M:\JOBS4\7203\common_gis\Wet_Impacts_MapBook.mxd 12/6/2013 ccn

Image Source: Microsoft (flown May 2010)

Survey Area

Transmission Pole

Hydrologic Feature Number

0 Feet 70

FIGURE 1-38

Jurisdictional Resources on TL666

RECON

M:\JOBS4\7203\common_gis\Wet_Impacts_MapBook.mxd 12/6/2013 ccn

Image Source: Microsoft (flown May 2010)

Survey Area

Transmission Pole

Hydrologic Feature Number

Jurisdictional Assessment [Vegetation Community]

ACOE Wetland Water of the U.S., CDFW Wetland, RWQCB Water of the State, CCC Wetland [Coastal Salt Marsh]

0 Feet 70

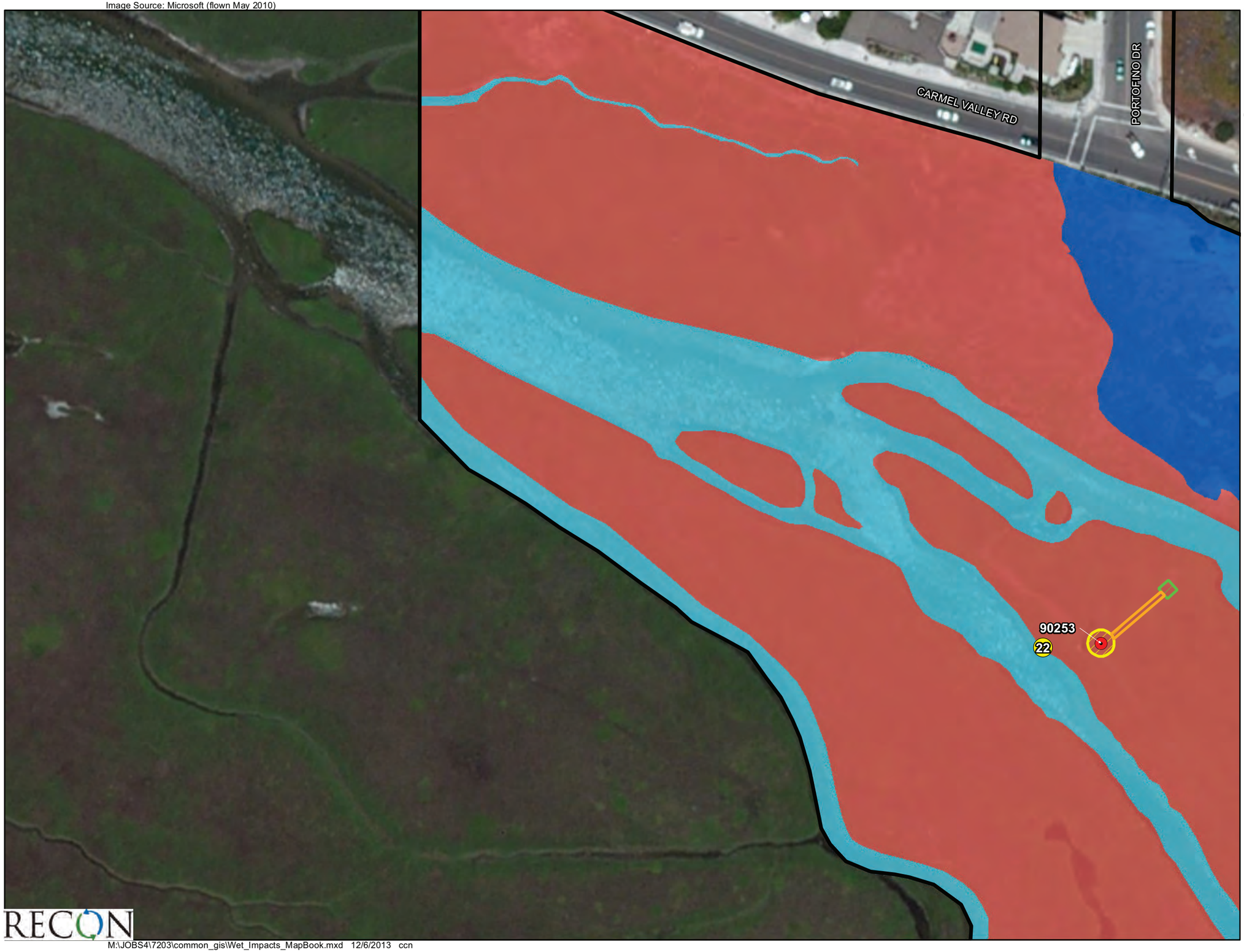
FIGURE 1-39

Jurisdictional Resources on TL666

RECON

M:\JOBS4\7203\common_gis\Wet_Impacts_MapBook.mxd 12/6/2013 ccn

Image Source: Microsoft (flown May 2010)



Survey Area

Transmission Pole

Hydrologic Feature Number

Impacts

Drop Zone

Plywood Path

Work Area

Jurisdictional Assessment [Vegetation Community]

ACOE Wetland Water of the U.S., CDFW Wetland, RWQCB Water of the State, CCC Wetland [Coastal Salt Marsh]

ACOE Wetland Water of the U.S., CDFW Wetland, RWQCB Water of the State, CCC Wetland [Emergent Freshwater Marsh]

ACOE Non-wetland Water of the U.S., CDFW Streambed, RWQCB Water of the State, CCC Wetland [Open Water]

0 Feet 70

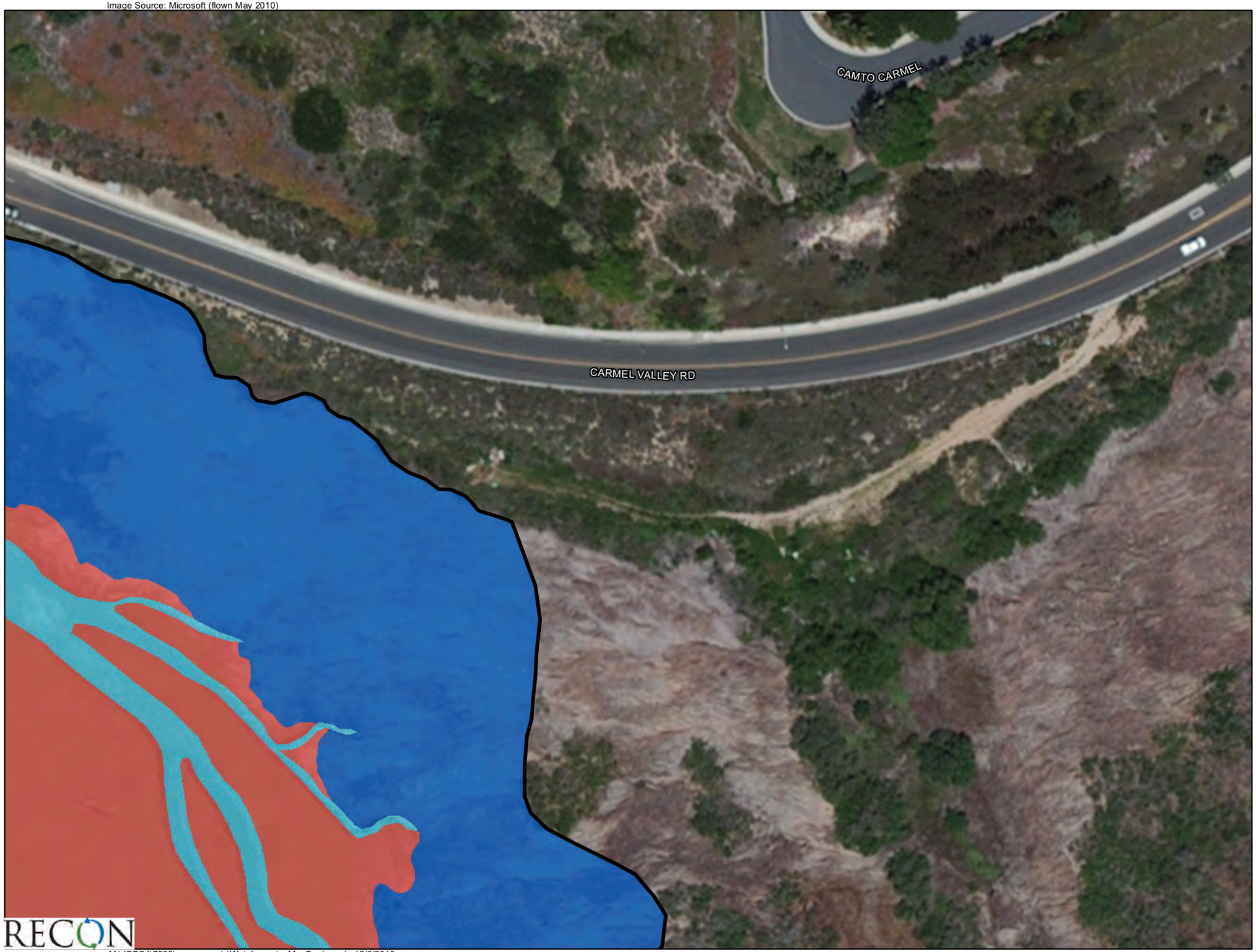
FIGURE 1-40

Jurisdictional Resources on TL666

RECON

M:\JOBS4\7203\common_gis\Wet_Impacts_MapBook.mxd 12/6/2013 ccn

Image Source: Microsoft (flown May 2010)



Survey Area

Hydrologic Feature Number

Jurisdictional Assessment [Vegetation Community]

ACOE Wetland Water of the U.S., CDFW Wetland, RWQCB Water of the State, CCC Wetland [Coastal Salt Marsh]

ACOE Wetland Water of the U.S., CDFW Wetland, RWQCB Water of the State, CCC Wetland [Emergent Freshwater Marsh]

ACOE Non-wetland Water of the U.S., CDFW Streambed, RWQCB Water of the State, CCC Wetland [Open Water]

0 Feet 70

FIGURE 1-41

Jurisdictional Resources on TL666

RECON

M:\JOBS4\7203\common_gis\Wet_Impacts_MapBook.mxd 12/6/2013 ccn

Image Source: Microsoft (flown May 2010)

Survey Area

Transmission Pole

Hydrologic Feature Number

Impacts

Drop Zone

Plywood Path

Work Area

Jurisdictional Assessment [Vegetation Community]

ACOE Wetland Water of the U.S., CDFW Wetland, RWQCB Water of the State, CCC Wetland [Coastal Salt Marsh]

ACOE Non-wetland Water of the U.S., CDFW Streambed, RWQCB Water of the State, CCC Wetland [Open Water]

ACOE Non-wetland Water of the U.S., RWQCB Water of the State, CCC Wetland [Salt Panne]

0 Feet 70

FIGURE 1-42

Jurisdictional Resources on TL666

RECON

M:\JOBS4\7203\common_gis\Wet_Impacts_MapBook.mxd 12/6/2013 ccn

Image Source: Microsoft (flown May 2010)

Survey Area

Transmission Pole

Hydrologic Feature Number

Impacts

Drop Zone

Plywood Path

Work Area

Jurisdictional Assessment [Vegetation Community]

ACOE Wetland Water of the U.S., CDFW Wetland, RWQCB Water of the State, CCC Wetland [Coastal Salt Marsh]

ACOE Wetland Water of the U.S., CDFW Wetland, RWQCB Water of the State, CCC Wetland [Emergent Freshwater Marsh]

ACOE Non-wetland Water of the U.S., CDFW Streambed, RWQCB Water of the State, CCC Wetland [Open Water]

0 Feet 70

FIGURE 1-43

Jurisdictional Resources on TL666

RECON

M:\JOBS4\7203\common_gis\Wet_Impacts_MapBook.mxd 12/6/2013 ccn

Image Source: Microsoft (flown May 2010)

Survey Area

Transmission Pole

Hydrologic Feature Number

Impacts

Drop Zone

Plywood Path

Work Area

Jurisdictional Assessment [Vegetation Community]

ACOE Wetland Water of the U.S., CDFW Wetland, RWQCB Water of the State, CCC Wetland [Coastal Salt Marsh]

ACOE Wetland Water of the U.S., CDFW Wetland, RWQCB Water of the State, CCC Wetland [Emergent Freshwater Marsh]

ACOE Non-wetland Water of the U.S., CDFW Streambed, RWQCB Water of the State, CCC Wetland [Open Water]

ACOE Non-wetland Water of the U.S., RWQCB Water of the State, CCC Wetland [Salt Panne]

0 Feet 70

FIGURE 1-44

Jurisdictional Resources on TL666

RECON

M:\JOBS4\7203\common_gis\Wet_Impacts_MapBook.mxd 12/6/2013 ccn

Image Source: Microsoft (flown May 2010)

Survey Area

Transmission Pole

Hydrologic Feature Number

Impacts

Drop Zone

Plywood Path

Work Area

Jurisdictional Assessment [Vegetation Community]

ACOE Wetland Water of the U.S., CDFW Wetland, RWQCB Water of the State, CCC Wetland [Coastal Salt Marsh]

ACOE Wetland Water of the U.S., CDFW Wetland, RWQCB Water of the State, CCC Wetland [Emergent Freshwater Marsh]

ACOE Non-wetland Water of the U.S., RWQCB Water of the State, CCC Wetland [Salt Panne]

0 Feet 70

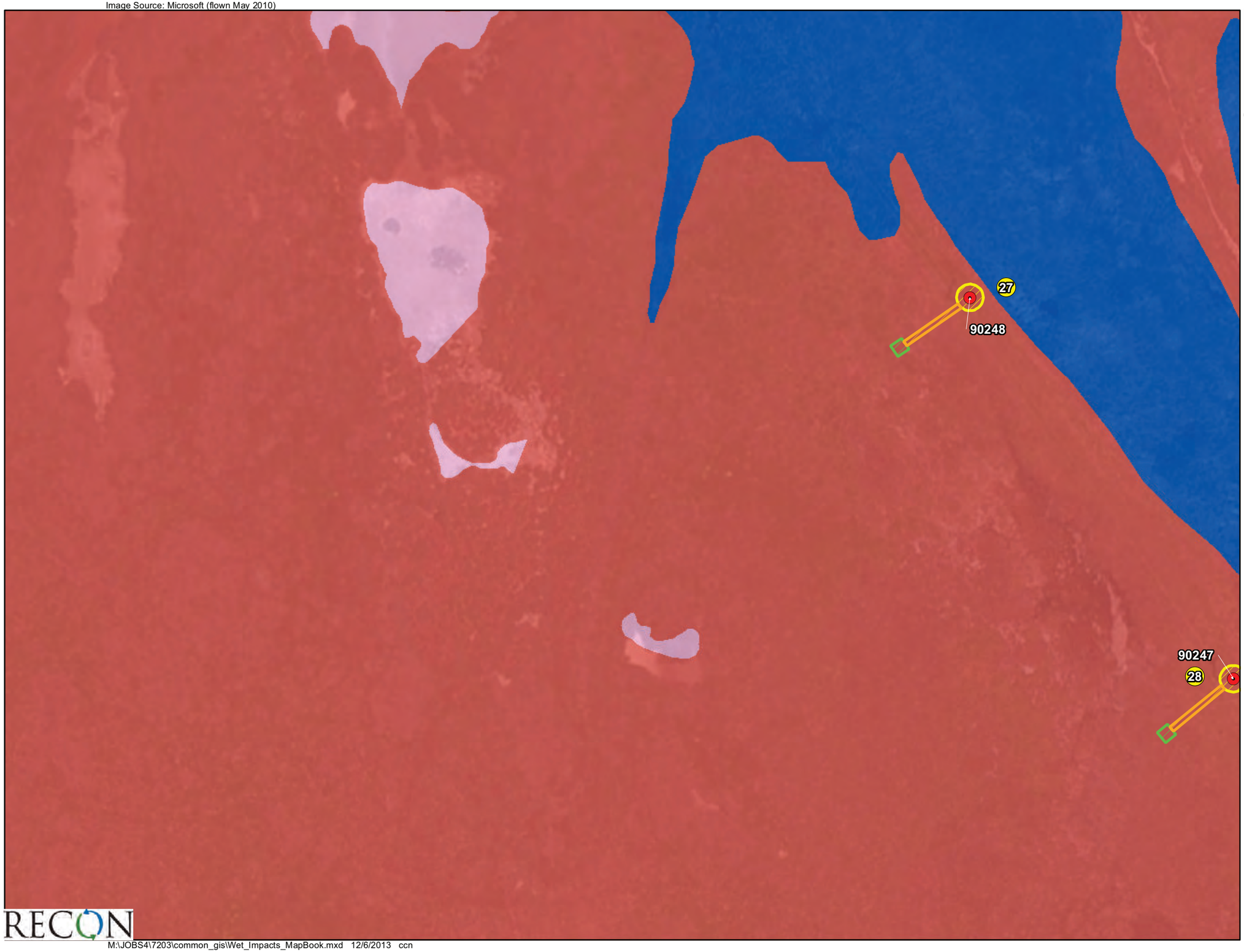
FIGURE 1-45

Jurisdictional Resources on TL666

RECON

M:\JOBS4\7203\common_gis\Wet_Impacts_MapBook.mxd 12/6/2013 ccn

Image Source: Microsoft (flown May 2010)



Survey Area

Transmission Pole

Hydrologic Feature Number

Impacts

Drop Zone

Plywood Path

Work Area

Jurisdictional Assessment [Vegetation Community]

ACOE Wetland Water of the U.S., CDFW Wetland, RWQCB Water of the State, CCC Wetland [Coastal Salt Marsh]

ACOE Wetland Water of the U.S., CDFW Wetland, RWQCB Water of the State, CCC Wetland [Emergent Freshwater Marsh]

ACOE Non-wetland Water of the U.S., RWQCB Water of the State, CCC Wetland [Salt Panne]

0 Feet 70

FIGURE 1-46

Jurisdictional Resources on TL666

RECON

M:\JOBS4\7203\common_gis\Wet_Impacts_MapBook.mxd 12/6/2013 ccn

Image Source: Microsoft (flown May 2010)

Survey Area

Hydrologic Feature Number

Impacts

Work Area

Jurisdictional Assessment [Vegetation Community]

ACOE Wetland Water of the U.S., CDFW Wetland, RWQCB Water of the State, CCC Wetland [Coastal Salt Marsh]

ACOE Wetland Water of the U.S., CDFW Wetland, RWQCB Water of the State, CCC Wetland [Emergent Freshwater Marsh]

ACOE Non-wetland Water of the U.S., RWQCB Water of the State, CCC Wetland [Salt Panne]

0 Feet 70

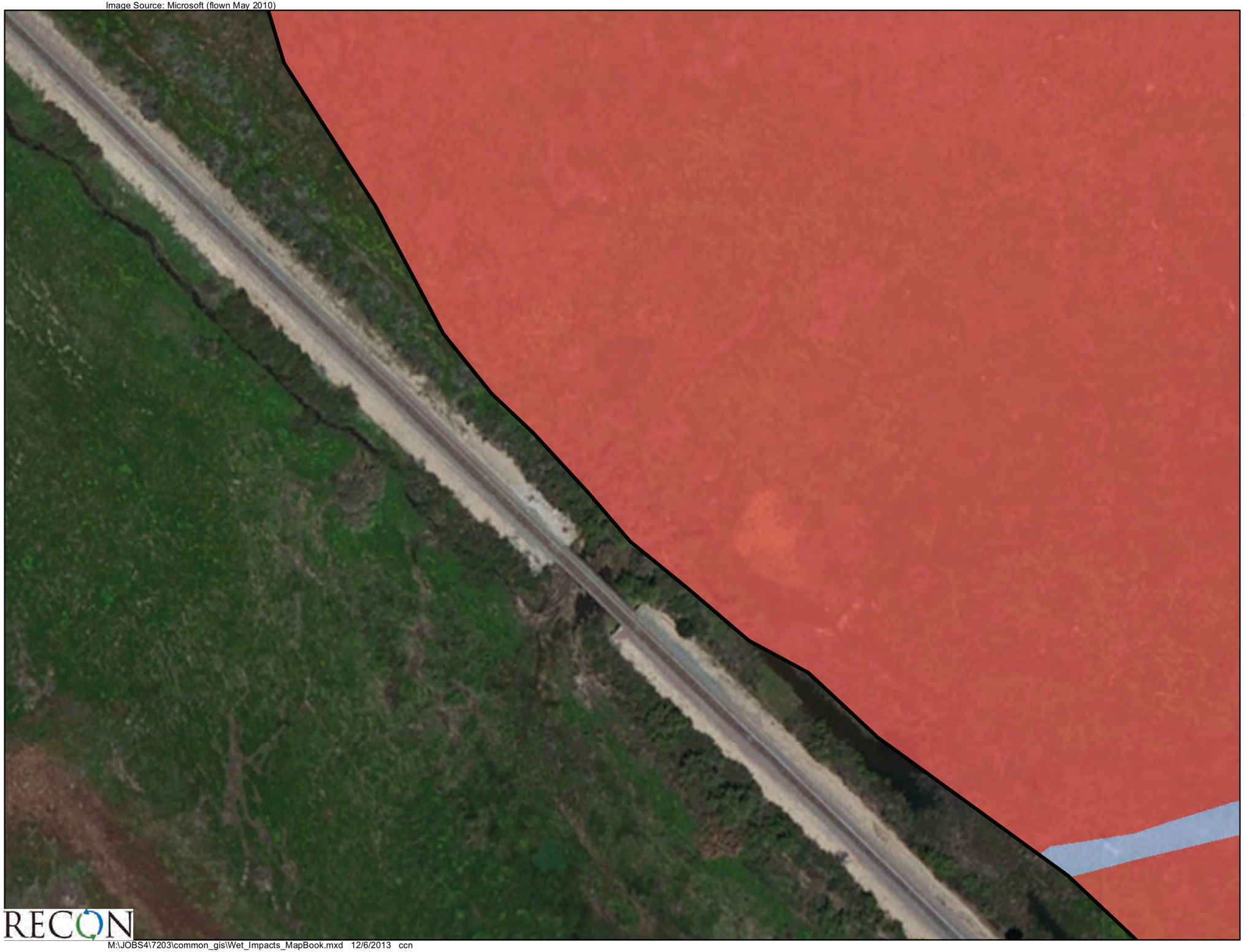
FIGURE 1-47

Jurisdictional Resources on TL666

RECON

M:\JOBS4\7203\common_gis\Wet_Impacts_MapBook.mxd 12/6/2013 ccn

Image Source: Microsoft (flown May 2010)



Survey Area

Hydrologic Feature Number

Jurisdictional Assessment [Vegetation Community]

ACOE Wetland Water of the U.S., CDFW Wetland, RWQCB Water of the State, CCC Wetland [Coastal Salt Marsh]

ACOE Wetland Water of the U.S., CDFW Wetland, RWQCB Water of the State, CCC Wetland [Southern Willow Scrub]

0 Feet 70

FIGURE 1-48

Jurisdictional Resources on TL666

RECON

M:\JOBS4\7203\common_gis\Wet_Impacts_MapBook.mxd 12/6/2013 ccn

Image Source: Microsoft (flown May 2010)

Survey Area

Transmission Pole

Hydrologic Feature Number

Impacts

Drop Zone

Plywood Path

Work Area

Jurisdictional Assessment [Vegetation Community]

ACOE Wetland Water of the U.S., CDFW Wetland, RWQCB Water of the State, CCC Wetland [Coastal Salt Marsh]

ACOE Wetland Water of the U.S., CDFW Wetland, RWQCB Water of the State, CCC Wetland [Emergent Freshwater Marsh]

ACOE Non-wetland Water of the U.S., RWQCB Water of the State, CCC Wetland [Salt Panne]

ACOE Wetland Water of the U.S., CDFW Wetland, RWQCB Water of the State, CCC Wetland [Southern Willow Scrub]

0 Feet 70

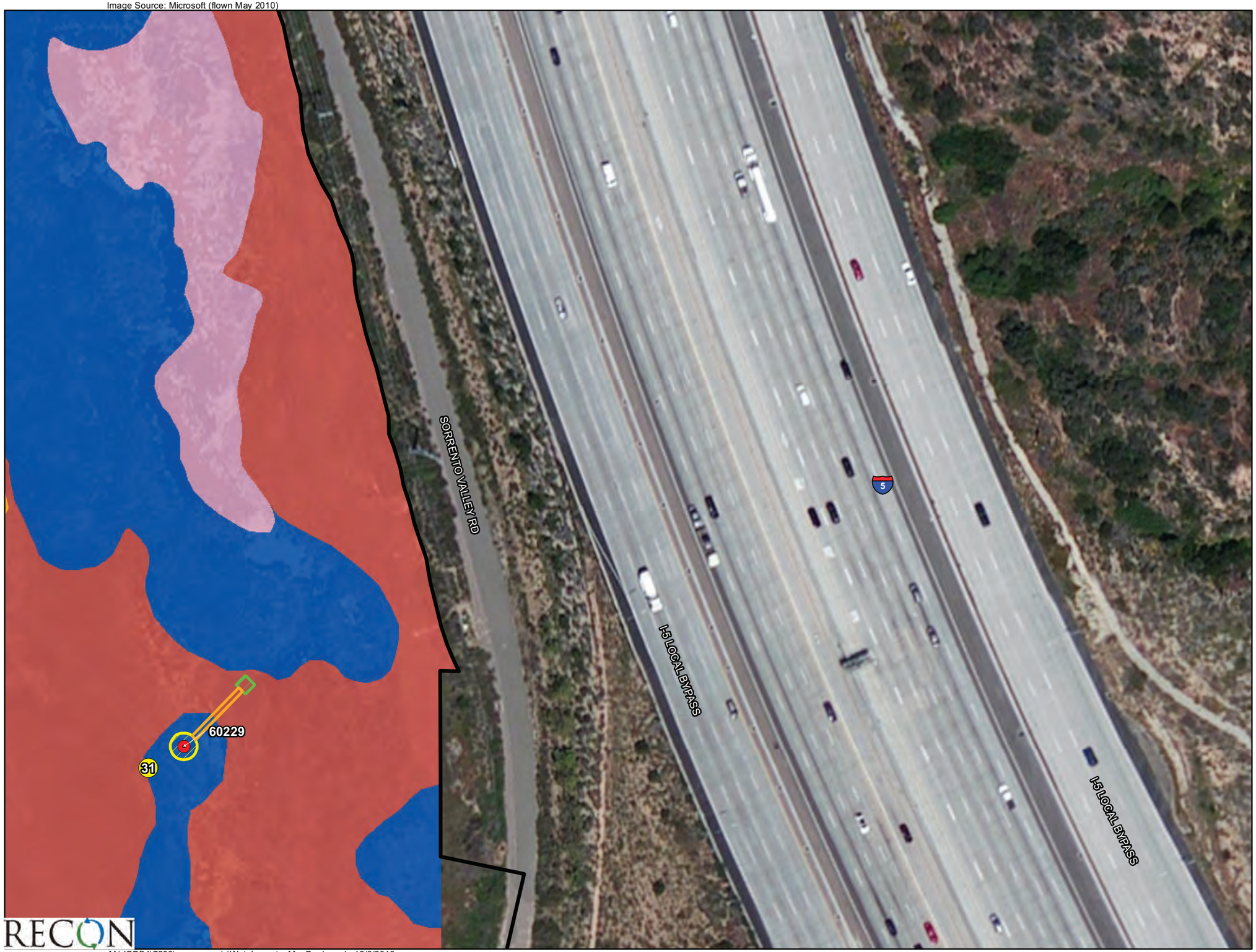
FIGURE 1-49

Jurisdictional Resources on TL666

RECON

M:\JOBS4\7203\common_gis\Wet_Impacts_MapBook.mxd 12/6/2013 ccn

Image Source: Microsoft (flown May 2010)



Survey Area

Transmission Pole

Hydrologic Feature Number

Impacts

Drop Zone

Plywood Path

Work Area

Jurisdictional Assessment [Vegetation Community]

ACOE Wetland Water of the U.S., CDFW Wetland, RWQCB Water of the State, CCC Wetland [Coastal Salt Marsh]

ACOE Wetland Water of the U.S., CDFW Wetland, RWQCB Water of the State, CCC Wetland [Emergent Freshwater Marsh]

ACOE Non-wetland Water of the U.S., RWQCB Water of the State, CCC Wetland [Salt Panne]

0 Feet 70

FIGURE 1-50

Jurisdictional Resources on TL666

RECON

M:\JOBS4\7203\common_gis\Wet_Impacts_MapBook.mxd 12/6/2013 ccn

Image Source: Microsoft (flown May 2010)

Survey Area

Hydrologic Feature Number

Jurisdictional Assessment [Vegetation Community]

ACOE Wetland Water of the U.S., CDFW Wetland, RWQCB Water of the State, CCC Wetland [Coastal Salt Marsh]

ACOE Wetland Water of the U.S., CDFW Wetland, RWQCB Water of the State, CCC Wetland [Emergent Freshwater Marsh]

0 Feet 70

FIGURE 1-51

Jurisdictional Resources on TL666

RECON

M:\JOBS4\7203\common_gis\Wet_Impacts_MapBook.mxd 12/6/2013 ccn

Image Source: Microsoft (flown May 2010)

Survey Area

Transmission Pole

Hydrologic Feature Number

Jurisdictional Assessment [Vegetation Community]

ACOE Wetland Water of the U.S., CDFW Wetland, RWQCB Water of the State, CCC Wetland [Coastal Salt Marsh]

ACOE Wetland Water of the U.S., CDFW Wetland, RWQCB Water of the State, CCC Wetland [Emergent Freshwater Marsh]

ACOE Non-wetland Water of the U.S., RWQCB Water of the State, CCC Wetland [Salt Panne]

0 Feet 70

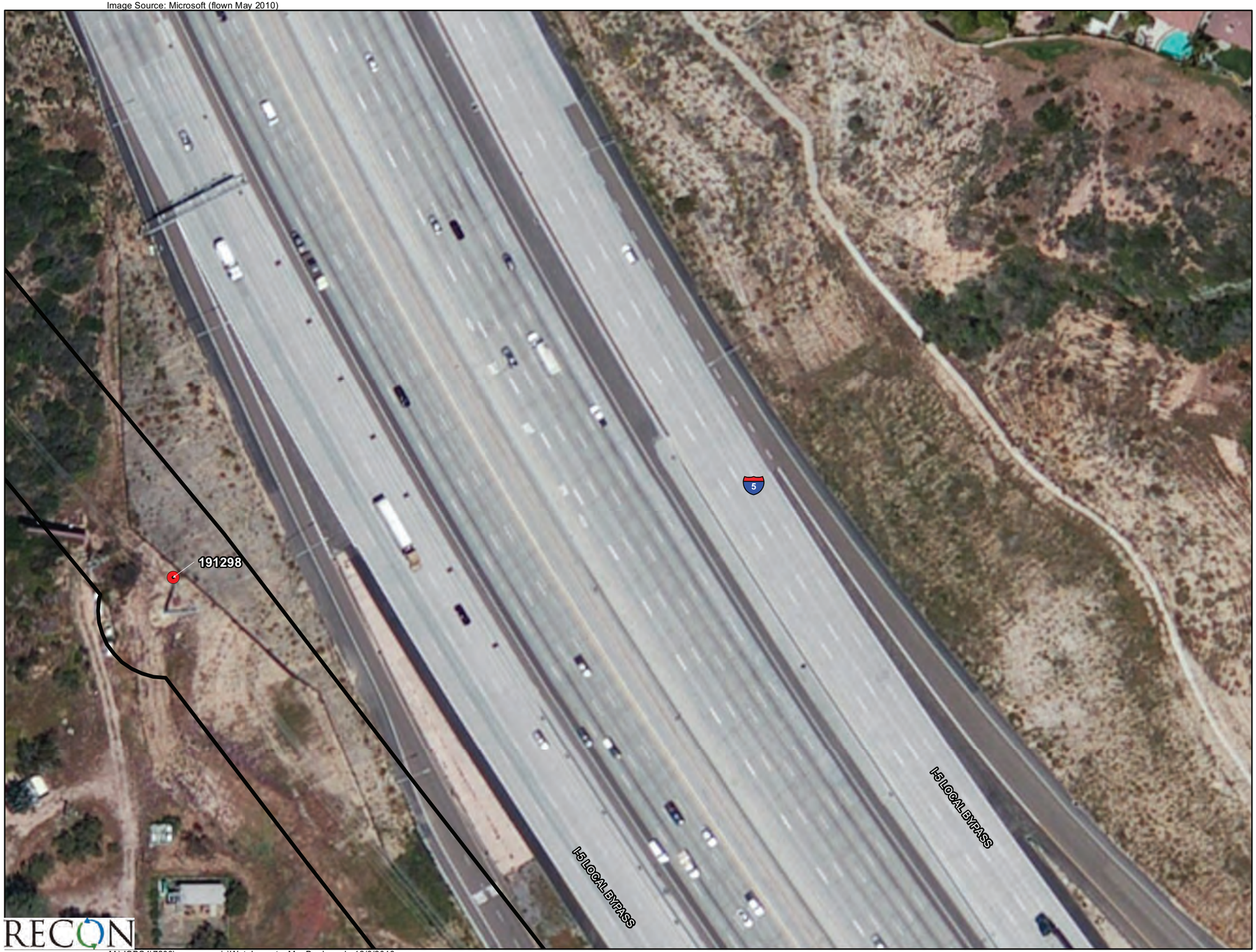
FIGURE 1-52

Jurisdictional Resources on TL666

RECON

M:\JOBS4\7203\common_gis\Wet_Impacts_MapBook.mxd 12/6/2013 ccn

Image Source: Microsoft (flown May 2010)



Survey Area

Transmission Pole

Hydrologic Feature Number

0 Feet 70

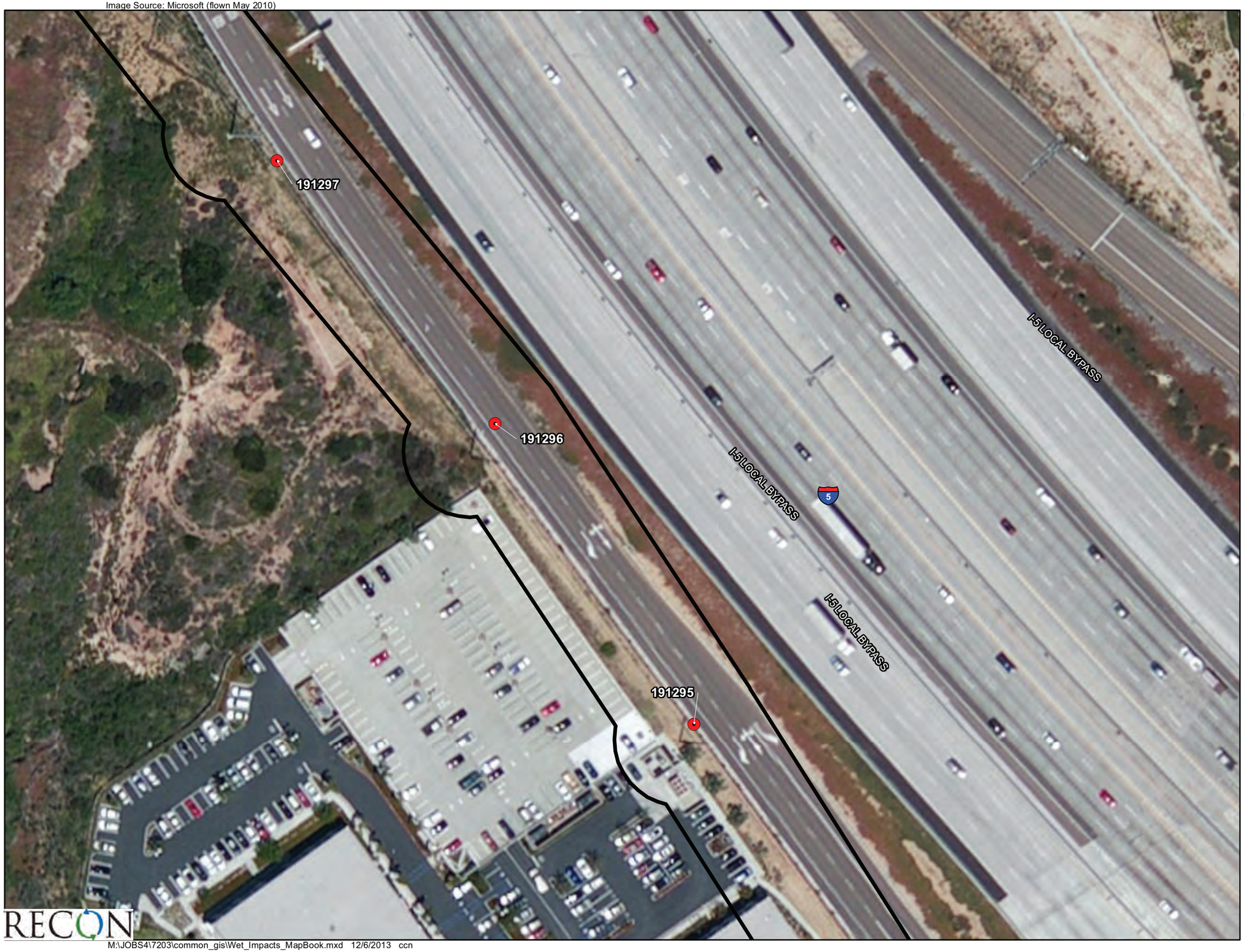
FIGURE 1-53

Jurisdictional Resources on TL666

RECON

M:\JOBS4\7203\common_gis\Wet_Impacts_MapBook.mxd 12/6/2013 ccn

Image Source: Microsoft (flown May 2010)



Survey Area

Transmission Pole

Hydrologic Feature Number

0 Feet 70

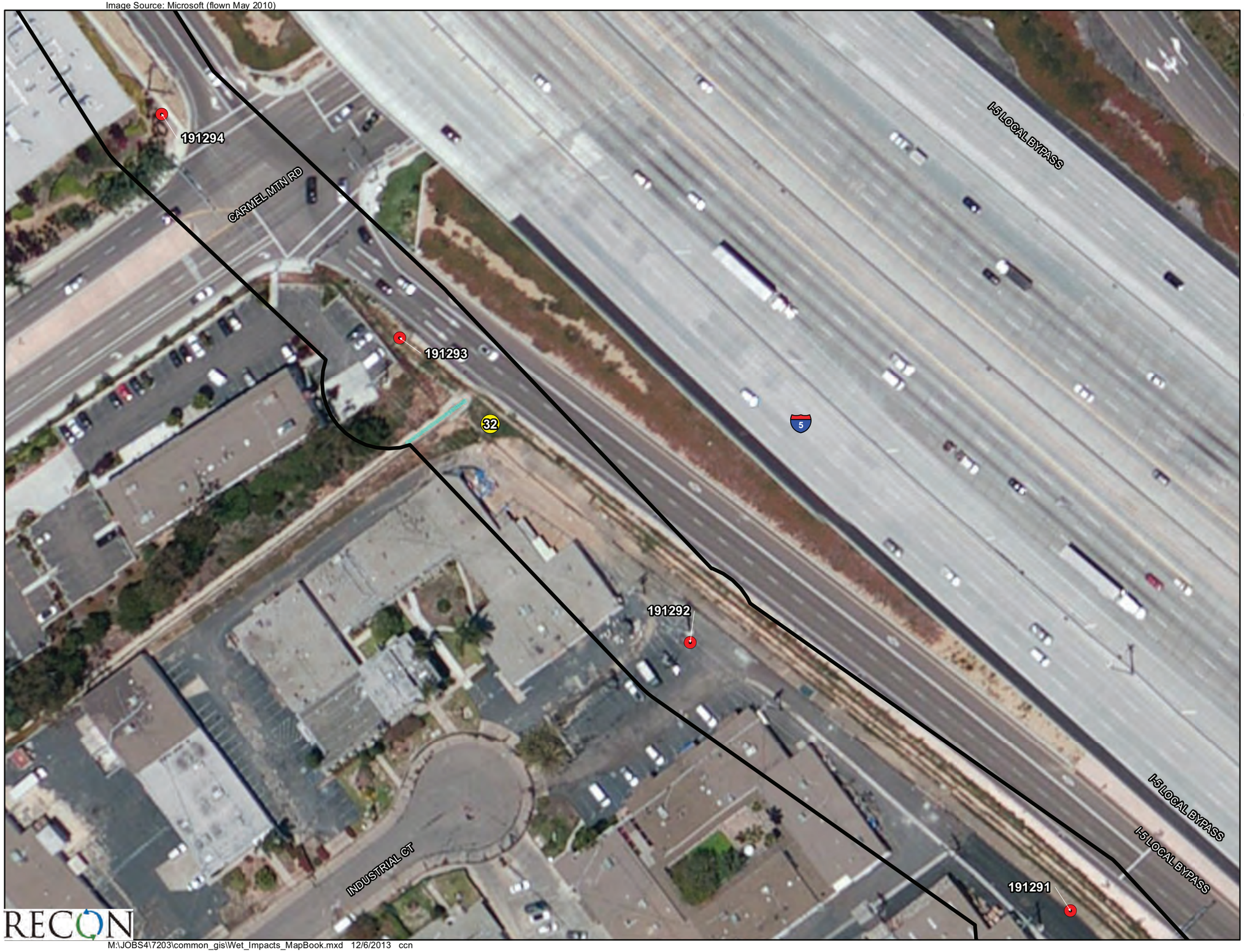
FIGURE 1-54

Jurisdictional Resources on TL666

RECON

M:\JOBS4\7203\common_gis\Wet_Impacts_MapBook.mxd 12/6/2013 ccn

Image Source: Microsoft (flown May 2010)



Survey Area

Transmission Pole

Hydrologic Feature Number

Jurisdictional Assessment [Vegetation Community]

ACOE Non-wetland Water of the U.S., CDFW Streambed, RWQCB Water of the State, CCC Wetland [Bare Ground]

0 Feet 70

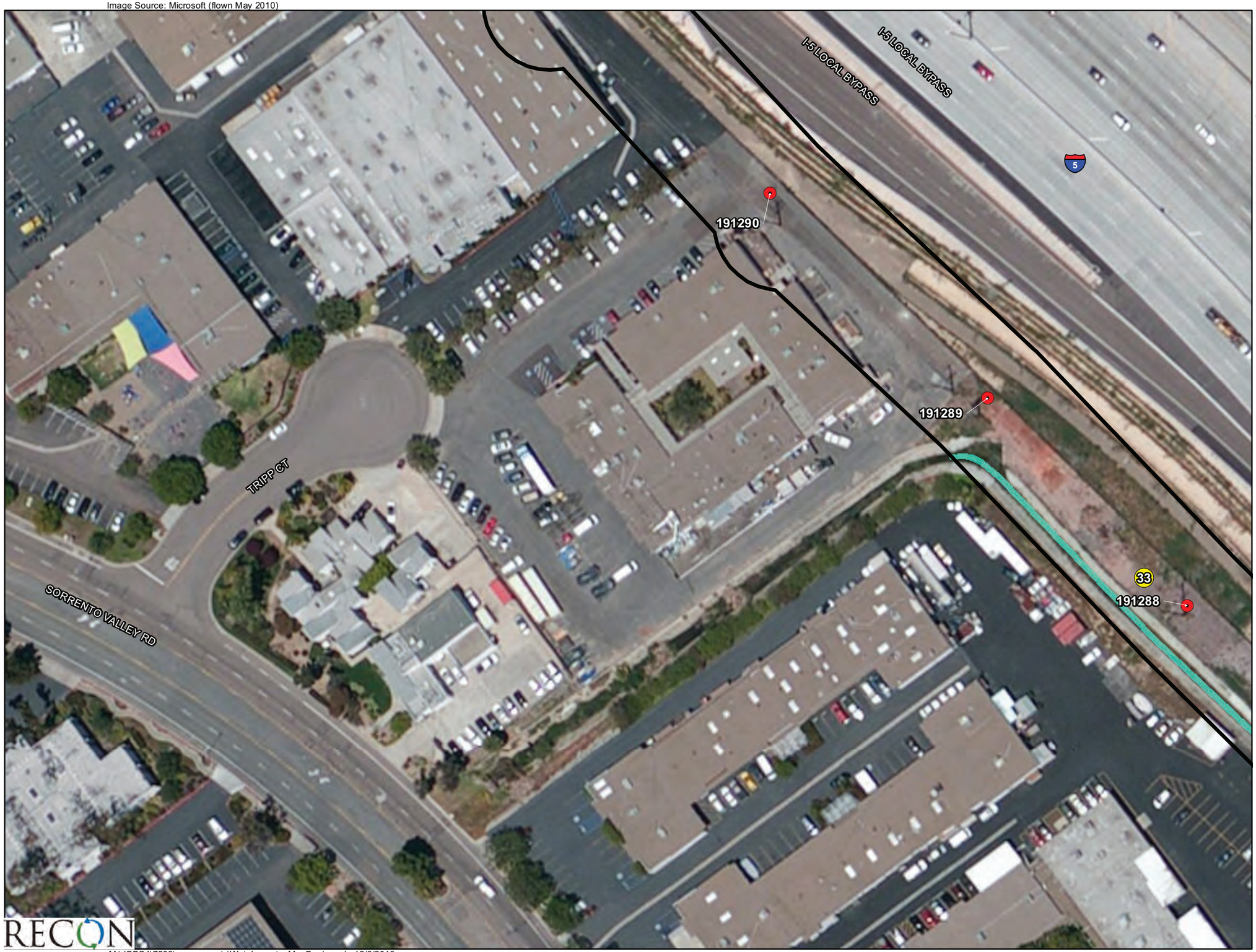
FIGURE 1-55

Jurisdictional Resources on TL666

RECON

M:\JOBS4\7203\common_gis\Wet_Impacts_MapBook.mxd 12/6/2013 ccn

Image Source: Microsoft (flown May 2010)



Survey Area

Transmission Pole

Hydrologic Feature Number

Jurisdictional Assessment [Vegetation Community]

ACOE Non-wetland Water of the U.S., CDFW Streambed, RWQCB Water of the State, CCC Wetland [Bare Ground]

0 Feet 70

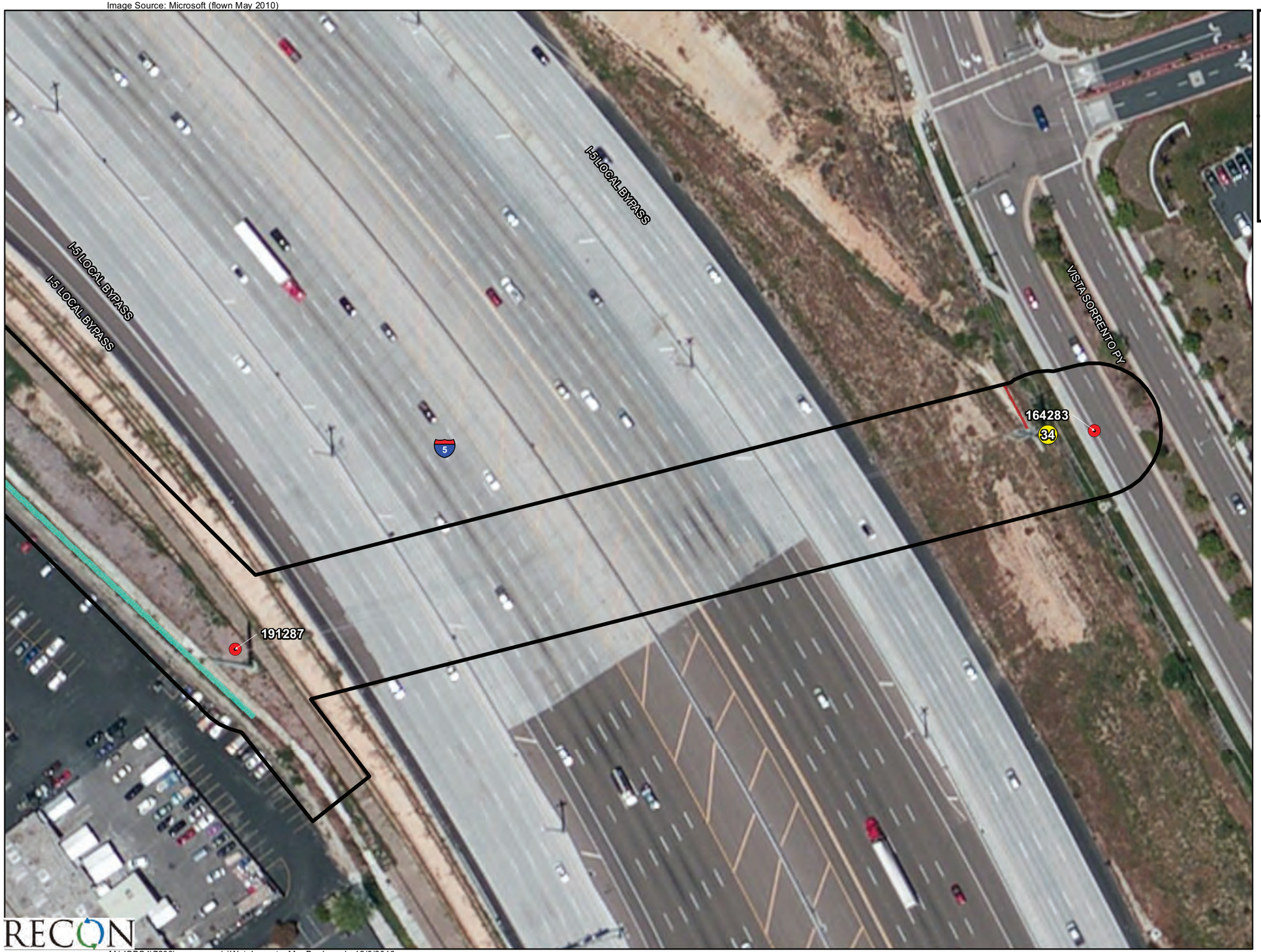
FIGURE 1-56

Jurisdictional Resources on TL666

RECON

M:\JOBS4\7203\common_gis\Wet_Impacts_MapBook.mxd 12/6/2013 ccn

Image Source: Microsoft (flown May 2010)



Survey Area

Transmission Pole

Hydrologic Feature Number

Jurisdictional Assessment [Vegetation Community]

ACOE Non-wetland Water of the U.S., CDFW Streambed, RWQCB Water of the State, CCC Wetland [Bare Ground]

Non-jurisdictional [Brow Ditch]

0 Feet 70

FIGURE 1-57

Jurisdictional Resources on TL666

RECON

M:\JOBS4\7203\common_gis\Wet_Impacts_MapBook.mxd 12/6/2013 ccn

Image source: Copyright 2010 Microsoft, All Rights Reserved (flown May 2010)

Survey Area

Distribution Pole

Jurisdictional Assessment [Vegetation Community]

ACOE Wetland Water of the U.S., CDFW Wetland, RWQCB Water of the State, CCC Wetland [Coastal Salt Marsh]

ACOE Special Aquatic Site, RWQCB Water of the State , CCC Wetland [Mudflat]

ACOE Non-wetland Water of the U.S., CDFW Streambed, RWQCB Water of the State, CCC Wetland [Open Water]

ACOE Non-wetland Water of the U.S., RWQCB Water of the State, CCC Wetland [Salt Panne]

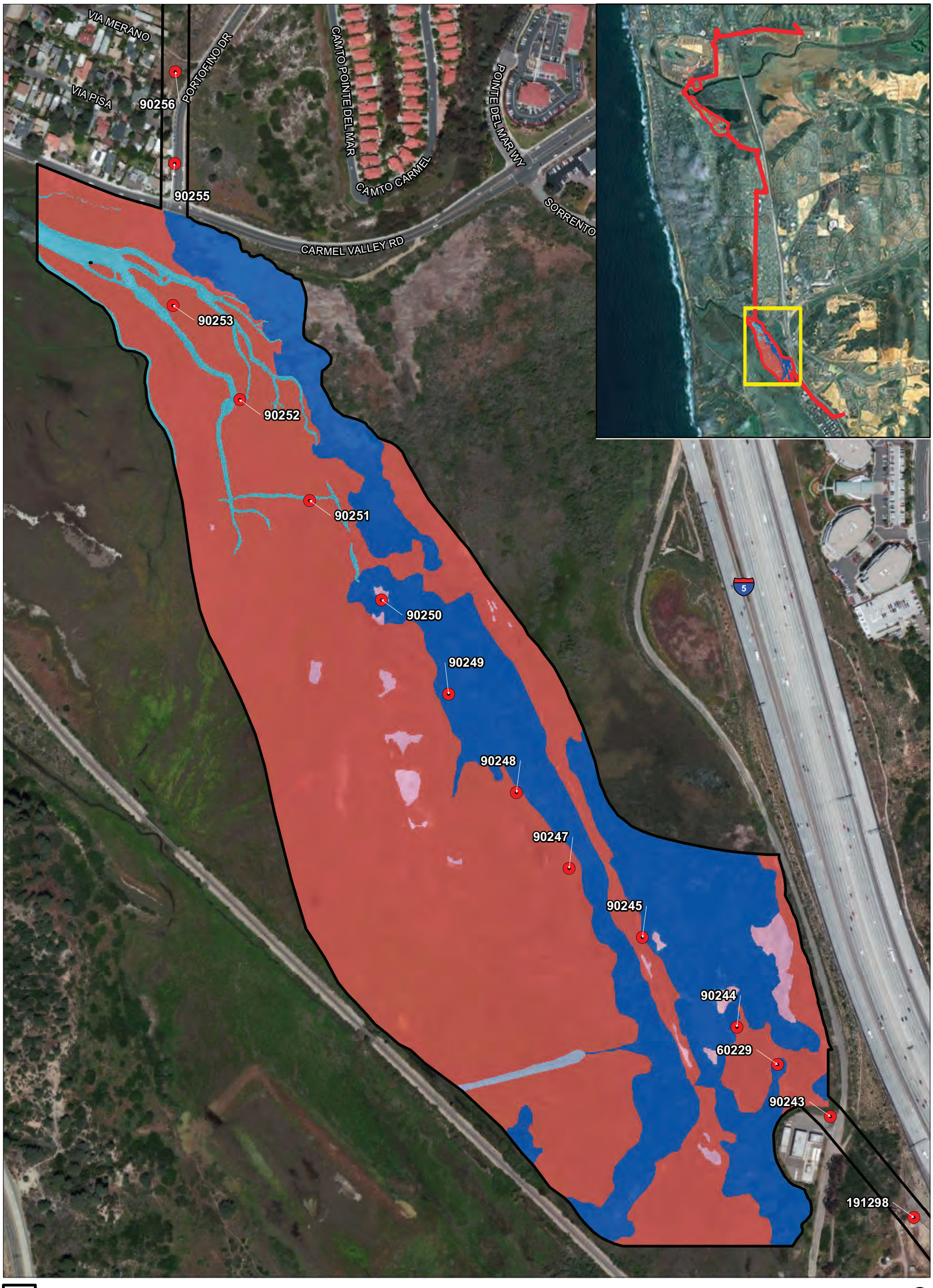
RECON

M:\JOBS4\7203\common_gis\fig2_wet.mxd 9/30/2013 ccn

FIGURE 2

Jurisdictional Resources on TL666: San Dieguito Estuary

Image source: Copyright 2010 Microsoft, All Rights Reserved (flown May 2010)



Survey Area

Distribution Pole

Jurisdictional Assessment [Vegetation Community]

ACOE Wetland Water of the U.S., CDFW Wetland, RWQCB Water of the State, CCC Wetland [Coastal Salt Marsh]

ACOE Wetland Water of the U.S., CDFW Wetland, RWQCB Water of the State, CCC Wetland [Emergent Freshwater Marsh]

ACOE Non-wetland Water of the U.S., CDFW Streambed, RWQCB Water of the State, CCC Wetland [Open Water]

ACOE Non-wetland Water of the U.S., RWQCB Water of the State, CCC Wetland [Salt Panne]

ACOE Wetland Water of the U.S., CDFW Wetland, RWQCB Water of the State, CCC Wetland [Southern Willow Scrub]

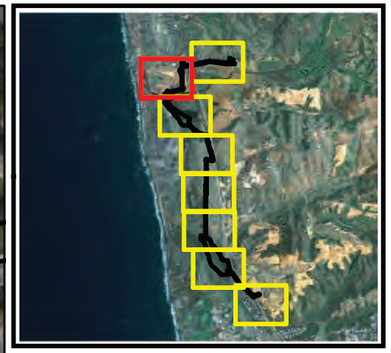
FIGURE 3

Jurisdictional Resources on TL666: Penasquitos Estuary

RECON

M:\JOBS4\7203\common_gis\fig3_wet.mxd 9/30/2013 ccn

Image Source: Microsoft (flown May 2010)



Survey Area
Transmission Pole
Culvert
CCC ESHA

0 Feet 400

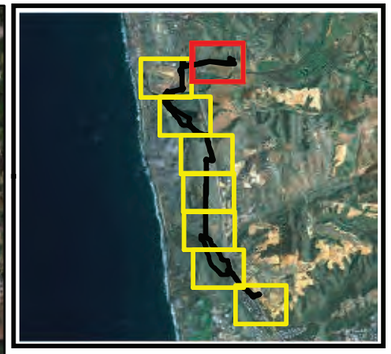
FIGURE 4-1

California Coastal Commission (CCC) Environmentally Sensitive Habitat Areas (ESHA) within TL666 Project Area

RECON

M:\JOBS4\7203\common_gis\CCC_MapBook.mxd 10/22/2013 ccn

Image Source: Microsoft (flown May 2010)



Survey Area
Transmission Pole
Culvert
CCC ESHA

0 Feet 400

RECON

M:\JOBS4\7203\common_gis\CCC_MapBook.mxd 10/22/2013 ccn

FIGURE 4-2

California Coastal Commission (CCC) Environmentally Sensitive Habitat Areas (ESHA) within TL666 Project Area

Image Source: Microsoft (flown May 2010)

Survey Area
Transmission Pole
Culvert
CCC ESHA

0 Feet 400

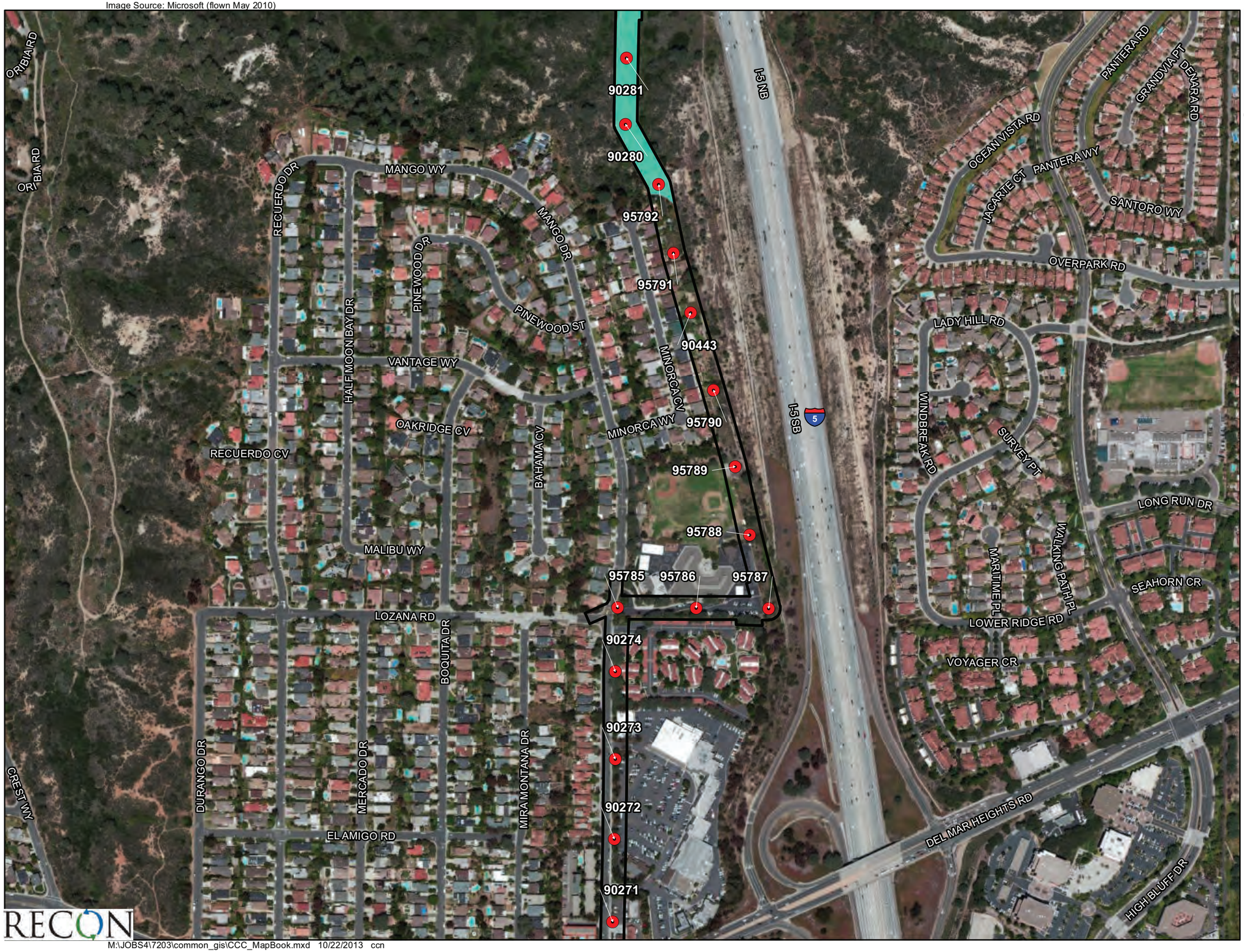
FIGURE 4-3

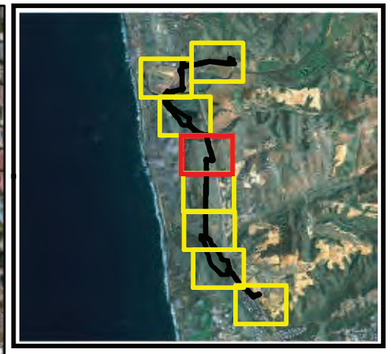
California Coastal Commission (CCC) Environmentally Sensitive Habitat Areas (ESHA) within TL666 Project Area

RECON

M:\JOBS4\7203\common_gis\CCC_MapBook.mxd 10/22/2013 ccn

Image Source: Microsoft (flown May 2010)





Survey Area

Transmission Pole

CCC ESHA

0 Feet 400

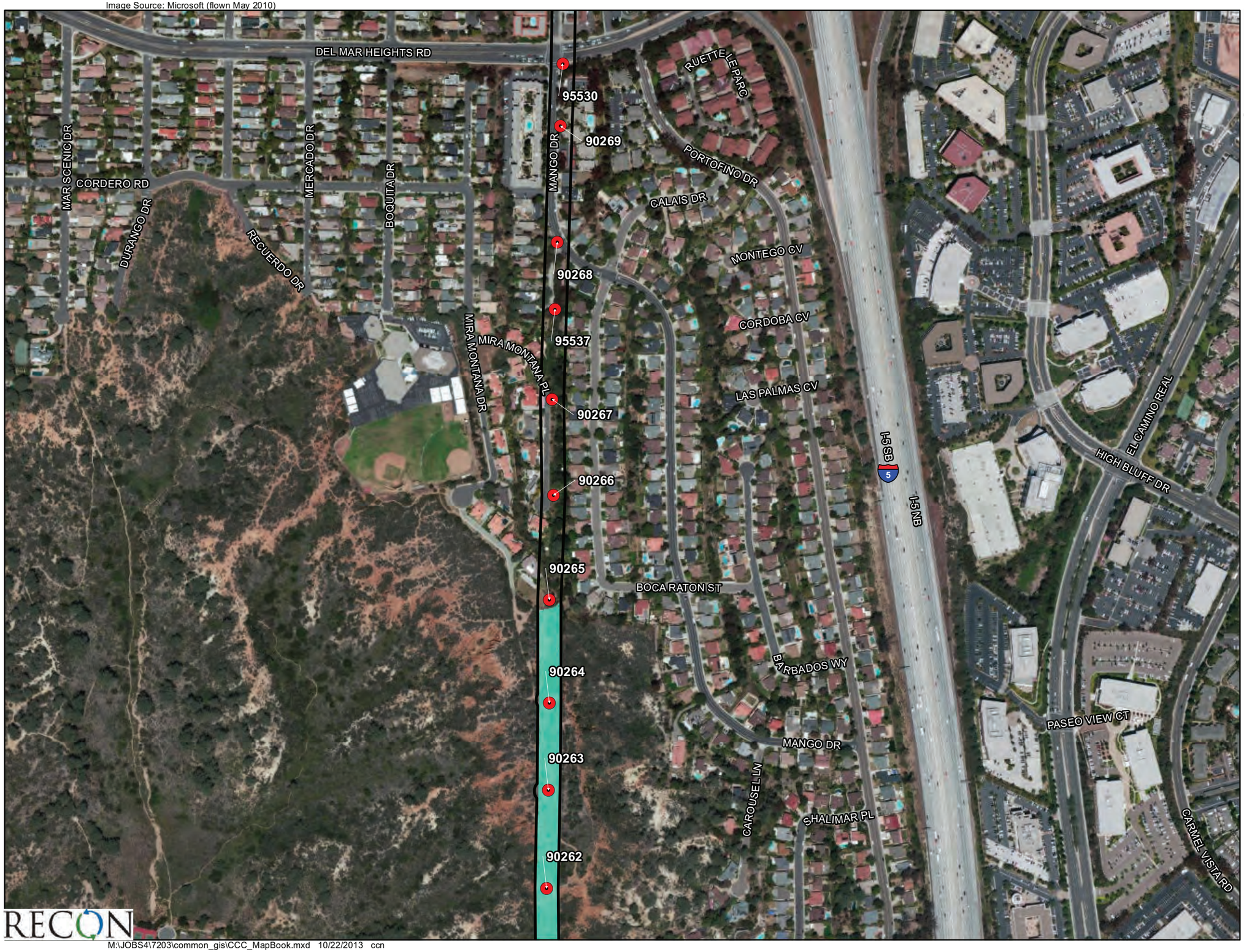
FIGURE 4-4

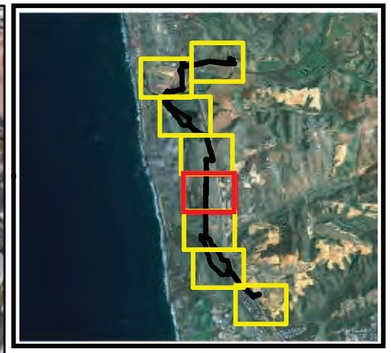
California Coastal Commission (CCC) Environmentally Sensitive Habitat Areas (ESHA) within TL666 Project Area

RECON

M:\JOBS4\7203\common_gis\CCC_MapBook.mxd 10/22/2013 ccn

Image Source: Microsoft (flown May 2010)





Survey Area
Transmission Pole
CCC ESHA

0 Feet 400

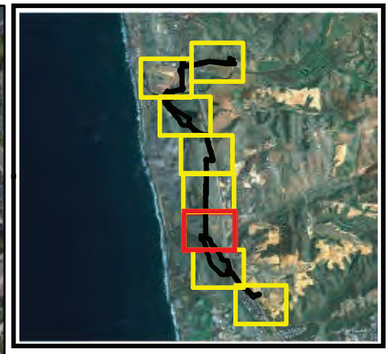
FIGURE 4-5

California Coastal Commission (CCC) Environmentally Sensitive Habitat Areas (ESHA) within TL666 Project Area

RECON

M:\JOBS4\7203\common_gis\CCC_MapBook.mxd 10/22/2013 ccn

Image Source: Microsoft (flown May 2010)



Survey Area

Transmission Pole

CCC ESHA

0 Feet 400

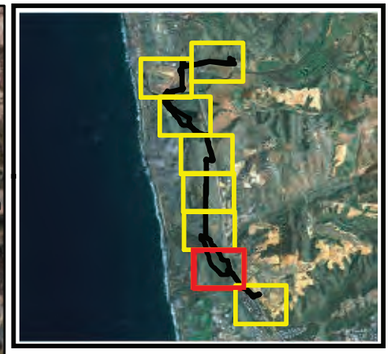
FIGURE 4-6

California Coastal Commission (CCC) Environmentally Sensitive Habitat Areas (ESHA) within TL666 Project Area

RECON

M:\JOBS4\7203\common_gis\CCC_MapBook.mxd 10/22/2013 ccn

Image Source: Microsoft (flown May 2010)



Survey Area

Transmission Pole

CCC ESHA

0 Feet 400

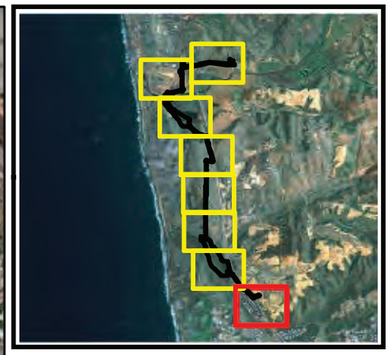
FIGURE 4-7

California Coastal Commission (CCC) Environmentally Sensitive Habitat Areas (ESHA) within TL666 Project Area

RECON

M:\JOBS4\7203\common_gis\CCC_MapBook.mxd 10/22/2013 ccn

Image Source: Microsoft (flown May 2010)



Survey Area

Transmission Pole

CCC ESHA

0 Feet 400

RECON

M:\JOBS4\7203\common_gis\CCC_MapBook.mxd 10/22/2013 ccn

FIGURE 4-8

California Coastal Commission (CCC) Environmentally Sensitive Habitat Areas (ESHA) within TL666 Project Area

Attachment III

Rare Plants Survey

Conducted 2014

1927 Fifth Avenue
San Diego, CA 92101
P 619.308.9333
F 619.308.9334

2033 East Grant Road
Tucson, AZ 85719
P 520.325.9977
F 520.293.3051

2027 Preisker Lane, Ste. G
Santa Maria, CA 93454
P 619.308.9333
F 619.308.9334

www.reconenvironmental.com

RECON

An Employee-Owned Company

August 18, 2014

Mr. Robert Fletcher
Environmental Specialist - Biologist
San Diego Gas & Electric
8315 Century Park Court
San Diego, CA 92123

Reference: Rare Plants Survey for the Reconfigure TL 674A at Del Mar and Remove from Service TL 666D Project (RECON Number 7203-1)

Dear Mr. Fletcher:

Per San Diego Gas & Electric's (SDG&E's) request, RECON Environmental, Inc. (RECON) biologists conducted focused surveys for rare plants within the Reconfigure Tie Line (TL) 674A at Del Mar and Remove from Service TL 666D Project (project) survey area. The project is located primarily in the communities of Torrey Pines, Del Mar Heights, and Via de la Valle in the City of San Diego and the City of Del Mar, within coastal San Diego County, California (Figures 1, 2, and 3). Small portions of the project area also extend into the City of Solana Beach and the community of Torrey Hills in the City of San Diego. The project survey area crosses several areas of intact open space with the potential for rare plant species including: San Dieguito Lagoon and Torrey Pines State Natural Reserve, including a portion of the Los Peñasquitos marsh.

The survey area is roughly defined as the 100-foot-wide transmission corridor centered on an approximately seven-mile stretch of TL 674A and TL 666D, with a minimum 50-foot buffer around each project site. Project sites include transmission poles, vaults, hand holes, guard structures, stringing sites, staging areas, and helicopter fly yards. Due to the increased potential for access challenges within the two estuaries (San Dieguito and Los Peñasquitos), the survey area in the estuaries was expanded to also include potential site access routes. The survey area is generally linear in shape, roughly paralleling an east–west portion of Via de la Valle and extending south and west along the eastern and southern sides of the Del Mar Fairgrounds, southeast through the San Dieguito Lagoon, south through the community of Del Mar Heights, southeast through the Los Peñasquitos marsh, and southeast along a portion of Interstate 5 (I-5; see Figure 2). The stringing sites are scattered along TL 674A and TL 666D throughout the project. Potential staging areas are located adjacent to TL 674A along Via del la Vialle, near Los Peñasquitos marsh adjacent to I-5, and near the intersection of San Dieguito Road and El Camino Real. Potential helicopter fly yards are located along Jimmy Durante Boulevard across from the entrance to the Del Mar Fairgrounds and within a parking lot near Torrey Pines State Beach on McGonigle Road.

FIGURE 1

Reconfigure TL 674A at Del Mar
and Remove from Service TL 666D
Project Regional Location

RECON

\\serverfs01\gis\JOBS4\7203\common_gis\fig1.mxd 8/4/2014 sab

Map Source: USGS 7.5 minute topographic map series, DEL MAR quadrangle, T14SR03W, T14SR04W & PUEBLO LANDS OF SAN DIEGO Landgrant

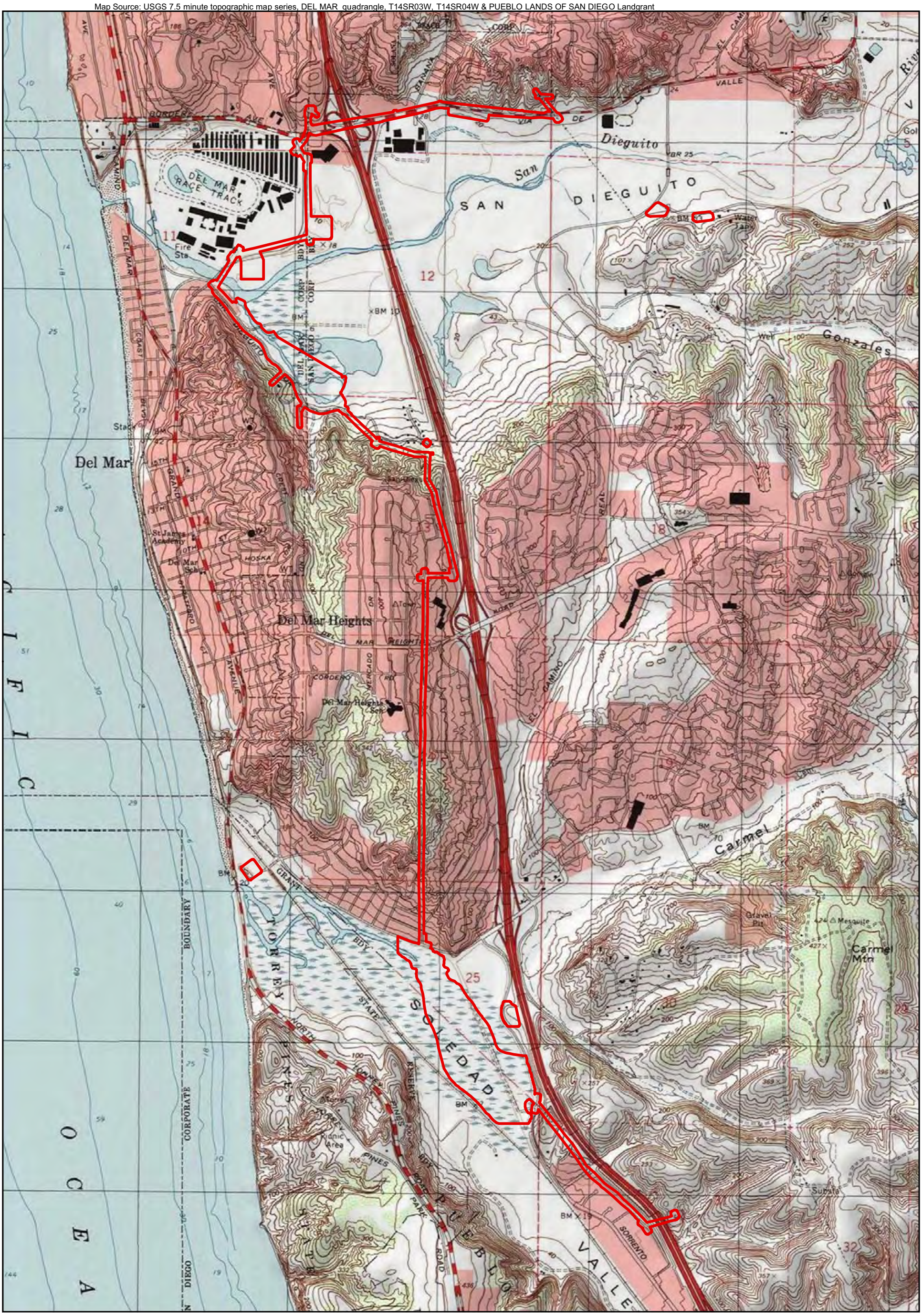


FIGURE 2

Reconfigure TL 674A at Del Mar
and Remove from Service TL 666D
Project Survey Area Location on USGS Map

RECON

M:\JOBS4\7203\common_gis\fig2.mxd 8/13/2014 sab

Image Source: SanGIS (flown May 2012)

0 Feet 2,000

Survey Area
Los Peñasquitos Lagoon
San Dieguito Lagoon
Los Peñasquitos Marsh Natural Preserve
Torrey Pines State Natural Reserve
Crest Canyon Open Space Park

FIGURE 3

Reconfigure TL 674A at Del Mar
and Remove from Service TL 666D
Project Survey Area Location on Aerial Photograph

RECON

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Concurrent with this rare plant survey, a jurisdictional determination and focused surveys for the following wildlife species have been or are being conducted by RECON:

- Pacific pocket mouse (*Perognathus longimembris pacificus*);
- coastal California gnatcatcher (*Polioptila californica californica*);
- least Bell's vireo (*Vireo bellii pusillus*);
- light-footed Ridgway's [clapper] rail (*Rallus longirostris levipes*), California black rail (*Laterallus jamaicensis coturniculus*), Belding's savannah sparrow (*Passerculus sandwichensis beldingi*), California least tern (*Sternula antillarum browni*), western snowy plover (*Charadrius alexandrinus nivosus*); and
- salt marsh (wandering) skipper (*Panoquina errans*).

Reports for the surveys listed above are in progress and will be submitted under a separate cover.

Methods

Prior to conducting the field survey, information on potentially occurring rare plant species, habitat preferences, soil types, vegetation maps, and known rare plant species' phenologies was compiled and used to plan survey efforts. In order to increase the detectability of rare plant species that are especially cryptic and/or have seasonally restricted blooming phenologies, known populations of aphanisma (*Aphanisma blitoides*), Encinitas baccharis (*Baccharis vanessae*), salt marsh bird's-beak (*Chloropyron maritimum*), Orcutt's spineflower (*Chorizanthe orcuttiana*), short-leaved dudleya (*Dudleya brevifolia*), and coast wallflower (*Erysimum ammophilum*) were selected as reference populations and checked periodically. The observed conditions of reference populations were factored into the planning of the focused plant surveys to ensure surveys were timed when species were most likely to be observed.

For purposes of this survey, plant species are considered rare if they are federally or state listed as endangered or threatened; are covered species under SDG&E's Natural Community Conservation Plan (NCCP); or, using the California Native Plant Society's (CNPS) California Rare Plant Ranking (CRPR) System, are ranked as 1B (considered rare, threatened, or endangered throughout their range), 2B (considered rare, threatened, or endangered in California, but more common elsewhere), or 4 (plants of limited distribution; CNPS 2014). CNPS also includes a Threat Rank, which is represented as an extension to the California Rare Plant Rank and designates the levels of threat by a 1 to 3 ranking, as follows: 0.1 — seriously threatened in California, 0.2 — moderately threatened in California, and 0.3 — not very threatened in California (CNPS 2014).

RECON botanists Michael Nieto and Andrew Smisek, and Michelle Balk of Balk Biological, conducted two rare plant surveys in spring 2014. Additionally, Mr. Smisek conducted one rare plant survey in summer 2014 (Table 1). During the course of the surveys, the proposed project design was revised multiple times, resulting in expansion of the overall survey area. As a result, San Dieguito Lagoon and Los Peñasquitos marsh were surveyed three times, and all areas were surveyed at least twice. Within all areas, surveys were timed so that any potentially occurring rare plant species would be in a sufficiently conspicuous life-stage to be observed, if present. All portions of the survey area were traversed on foot via meandering paths to map rare plant species. Surveyors recorded the location of all rare plant species when encountered using a sub-meter accuracy handheld Trimble® GeoXH. In addition, a species list of all plants observed was compiled during the course of the survey.

TABLE 1
SURVEY INFORMATION FOR THE RECONFIGURE TL 674A AT DEL MAR AND REMOVE FROM SERVICE TL 666D PROJECT

Survey	Biologists	Date	Time
1	Michael Nieto, Andrew Smisek, and Michelle Balk	3/26/2014	07:00–17:00
2	Michael Nieto, Andrew Smisek, and Michelle Balk	5/1/2014, 5/12/2014	07:00–17:00
3	Andrew Smisek	7/10/2014	07:00–16:00

Although the surveys were conducted during optimal periods for detection of the rare plant species, it should be noted that the San Diego region is experiencing extended drought conditions (NDMC-UNL 2014), possibly resulting in decreased expression of potentially present annual rare plant species including: aphanisma, Orcutt's pincushion (*Chaenactis glabriuscula* var. *orcuttiana*), Orcutt's spineflower, long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*), short-leaved dudleya, sea dahlia (*Leptosyne maritima*), and coast wallflower.

Existing Conditions

Vegetation Communities and Land Cover Types

Vegetation communities and land cover types within the survey area include Diegan coastal sage scrub, maritime succulent scrub, Torrey pine forest, southern maritime chaparral, saltpan, non-native grassland, southern coastal salt marsh, southern willow scrub, disturbed habitat, urban/developed, and urban/developed (landscaped; Oberbauer et al. 2008). The San Dieguito Lagoon and Los Peñasquitos marsh portions of the survey area are primarily dominated by southern coastal salt marsh habitat with sparse unvegetated saltpan patches occuring throughout. Disturbed habitat and non-native grassland occur in a portion of the San Dieguito Lagoon as well as in upland areas throughout the survey area, especially in locations adjacent to development. Large areas of Diegan coastal sage scrub occur along Via de la Valle, on the periphery of the San Dieguito Lagoon and Los Peñasquitos marsh, and upland areas in Crest Canyon Park and near Carmel Valley Road within the survey area. Southern willow scrub occurs on a slope adjacent to San Dieguito Lagoon and northwest of the potential staging area near Los Peñasquitos marsh. Torrey pine forest occurs adjacent to residential development along Via Latina and as a large area in the northern portion of the Torrey Pines State Natural Reserve. Southern maritime chaparral also occurs in the Torrey Pines State Natural Reserve and in Crest Canyon Park as large patches. Large portions of the survey area extend through urban/developed areas such as along Jimmy Durante Boulevard, Mango Drive, and I-5.

Soils

The following nine soil series are mapped in the survey area (USDA 1973):

- Carlsbad gravelly loamy sand 5 to 9 percent slopes (CbC);
- Chino silt loam saline 0 to 2 percent slopes (CkA);
- Corralitos loamy sand 0 to 5 percent slopes (CsB), Corralitos loamy sand 5 to 9 percent slopes (CsC), and Corralitos loamy sand 9 to 15 percent slopes (CsD);
- Gaviota fine sandy loam 30 to 50 percent slopes (GaF);
- Huerhuero–Urban land complex 2 to 9 percent slopes (HuE), Huerhuero loam 15 to 30 percent slopes eroded (HrE2), Huerhuero loam 2 to 9 percent slopes (HrC), Huerhuero loam 5 to 9 percent slopes eroded (HrC2), and Huerhuero loam 9 to 15 percent slopes eroded (HrD2);
- Loamy alluvial land–Huerhuero complex 9 to 50 percent slopes severely eroded (LvF3);

- Terrace escarpments (TeF);
- Tidal flats (Tf); and
- Tujunga sand 0 to 5 percent slopes (TuB).

The survey area also contains areas mapped as Made Land, which consists of level areas that have been filled with excavated and transported material, and areas mapped as Lagoons of San Diego, which include open water within the San Dieguito Lagoon and Los Peñasquitos marsh.

Terrace escarpments occur at northeastern end of the survey area, in uplands around San Dieguito Lagoon, through most of Crest Canyon Park and Torrey Pines State Natural Reserve. Corralitos loamy sand also occurs in uplands near the San Dieguito Lagoon and Los Peñasquitos marsh and Crest Canyon Park as well as along Via de la Valle and as patches along I-5 and Mango Drive. Huerhuero loam occurs along Jimmy Durante Boulevard and as patches along I-5 where it underlies developed land. Tujunga sand and tidal flats occur adjacent to the San Dieguito Lagoon with tidal flats occurring as a large area within Los Peñasquitos marsh. Chino silt loam occurs as small area on east side of San Dieguito Lagoon and as a large area in Los Peñasquitos marsh. Carlsbad gravelly loam sand occurs as patch in Torrey Pines State Natural Reserve and underlying developed and disturbed habitat near I-5. Loamy alluvial land–Huerhuero complex also underlies developed and disturbed habitat near I-5 and along Mango Drive. Gaviota fine sandy loam occurs at the southeastern end of the survey area underlying developed land.

Due to having a slope of nine percent or less and having a subsurface layer with permeability of 0.06 inches/hour or less, two soil types have potential to support vernal pools and vernal pool-associated rare plant species: Carlsbad gravelly loamy sand 5 to 9 percent slopes (CbC) and Huerhuero loam 2 to 9 percent slopes (HrC). However, these soil types mostly underlie disturbed habitat and developed land, and no signs of vernal pools or vernal pool-associated plant species were observed within the survey area.

Rare Plant Survey Results

A total of seventeen rare plant species was observed during the survey: Shaw's agave (*Agave shawii* var. *shawii*), Del Mar manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*), Palmer sagewort (*Artemisia palmeri*), San Diego County viguiera (*Bahiopsis laciniata*), wart-stemmed ceanothus (*Ceanothus verrucosus*), Orcutt's pincushion, summer holly (*Comarostaphylis diversifolia* ssp. *diversifolia*), Del Mar mesa sand aster (*Corethrogyne filaginifolia* var. *linifolia*), coast wallflower, San Diego barrel cactus (*Ferocactus viridescens*), beach goldenaster (*Heterotheca sessiliflora* ssp. *sessiliflora*), San Diego marsh-elder (*Iva hayesiana*), southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*), sea-dahlia, Torrey pine (*Pinus torreyana* ssp. *torreyana*), Nuttall's scrub oak (*Quercus dumosa*), and woolly seablite (*Suaeda taxifolia*); (Table 2 and Attachment 1: Figures 4-1 through 4-17). Six of these species are covered by SDG&E's NCCP, under which two are listed as Narrow Endemic species and four are considered Regionally Sensitive Species (see Table 2). In addition, one species, Del Mar manzanita, is federally listed as endangered. Descriptions of the rare plant species observed on-site are presented below. Each point in Figure 4 represents one individual unless otherwise noted. A complete list of all plant species observed within the survey area is provided as Attachment 2.

TABLE 2
RARE PLANTS OBSERVED WITHIN THE RECONFIGURE TL 674A AT DEL MAR AND REMOVE FROM SERVICE TL 666D PROJECT

Scientific Name	Common Name	Federal/ State Listing	CRPR Rank	SDG&E NCCP	Number of Individuals Observed
Agave shawii var. *shawii*	Shaw's agave	–/–	2B.1	NE, RSS, NCCP	4†
Arctostaphylos glandulosa ssp. crassifolia	Del Mar manzanita	FE/–	1B.1	NCCP	60*
Artemisia palmeri	Palmer sagewort	–/–	4.2	–	35*
Bahiopsis laciniata	San Diego County viguiera	–/–	4.2	–	180*
Ceanothus verrucosus	wart-stemmed ceanothus	–/–	2B.2	RSS, NCCP	110*
Chaenactis glabriuscula var. *orcuttiana*	Orcutt's pincushion	–/–	1B.1	–	100*
Comarostaphylis diversifolia ssp. *diversifolia*	summer holly	–/–	1B.2	–	9
Corethrogyne filaginifolia var. *linifolia*	Del Mar mesa sand aster	–/–	1B.1	NCCP	800*
Erysimum ammophilum	coast wallflower	–/–	1B.2	NE, RSS, NCCP	175*
Ferocactus viridescens	San Diego barrel cactus	–/–	2B.1	RSS, NCCP	18
Heterotheca sessiliflora ssp. *sessiliflora*	beach goldenaster	–/–	1B.1	–	12
Iva hayesiana	San Diego marsh-elder	–/–	2B.2	–	50*
Juncus acutus ssp. *leopoldii*	southwestern spiny rush	–/–	4.2	–	270*
Leptosyne maritima	sea-dahlia	–/–	2B.2	–	140*
Pinus torreyana ssp. *torreyana*	Torrey pine	–/–	1B.2	NCCP	116*†
Quercus dumosa	Nuttal's scrub oak	–/–	1B.1	–	50*
Suaeda taxifolia	woolly seablite	–/–	4.2	–	5

See notes on next page.

† Some or all individuals may have been planted and are not naturally occurring.
* Numbers are approximate.

FEDERAL CANDIDATES AND LISTED PLANTS
FE = Federally listed endangered

SAN DIEGO GAS & ELECTRIC (SDG&E) NATURAL COMMUNITY CONSERVATION PLAN (NCCP)
NE = Narrow endemic
RSS = Regionally Sensitive Species

CALIFORNIA RARE PLANT RANKS
1B = Species rare, threatened, or endangered in California and elsewhere. These species are eligible for state listing.
2B = Species rare, threatened, or endangered in California but more common elsewhere. These species are eligible for state listing.
4 = A watch list of species of limited distribution. These species need to be monitored for changes in the status of their populations.

CALIFORNIA NATIVE PLANT SOCIETY THREAT RANKS
0.1 = Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
0.2 = Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)

Shaw's agave (*Agave shawii* var. *shawii*). Shaw's agave is a CRPR 2B.1 species (CNPS 2014) and is a covered species, Narrow Endemic, and Regionally Sensitive Species under SDG&E's NCCP. This short-stemmed succulent perennial in the century plant family (Agavaceae) has a basal rosette of dark green oval-shaped leaves. It flowers once in its life, between September and May. Shaw's agave grows in coastal sage scrub and maritime succulent scrub on dry coastal bluffs. It is found naturally only in southern San Diego County and northern Baja California. While abundant along the coast of northern Baja California, in San Diego County it is known from less than five native occurrences, including Border Fields State Park and Point Loma (Reiser 2001).

Four individuals of Shaw's agave were observed within the survey area in Diegan coastal sage scrub on a hillside southeast of Los Peñasquitos marsh (see Figure 4-14). These individuals may have been planted for a restoration purpose and are considered not naturally occurring. This species is not known to naturally occur near the project and is more common in southern San Deigo County along the coast.

Del Mar manzanita (*Arctostaphylos glandulosa ssp. crassifolia*). Del Mar manzanita is listed as endangered by the U.S. Fish and Widlife Service (USFWS; 1996), is a CRPR 1B.1 species (CNPS 2014), and is a covered species under SDG&E's NCCP. This evergreen shrub in the heath family (Ericaceae) blooms from December through April. It can be distinguished from the common Eastwood manzanita (*A. glandulosa* ssp. *glandulosa*) by its shorter stature (to four feet) and by leaf and bract characteristics. Its range is limited to San Diego County and northern Baja California. In San Diego County it is found coastally in Carlsbad and Torrey Pines State Natural Reserve, and inland to Rancho Santa Fe, Del Mar Mesa, and near Lake Hodges (USFWS 1996). Along the coast it occurs in open, low-growing southern maritime chaparral vegetation; farther inland it grows in denser mixed chaparral. It appears to be restricted to exposed sandstone soils, including terrace escarpments and loamy alluvial land soil types (Reiser 2001).

Approximately 60 individuals of Del Mar manzanita were observed within the survey area in southern maritime chaparral in Crest Canyon Park (see Figures 4-8) and the Torrey Pines State Natural Reserve (see Figures 4-10 and 4-11).

Palmer sagewort (*Artemisia palmeri*). Palmer sagewort is a CRPR 4.2 species (CNPS 2014). This perennial in the sunflower family (Asteraceae) grows as a series of long wandlike stems from the base and blooms from July to September (Munz 1974). It is found in San Diego County and northern Baja California, Mexico (CNPS 2014). In San Diego County, its distribution ranges from La Jolla south to Otay and east to Alpine (Beauchamp 1986). In coastal areas it occurs mostly near creeks and drainages; where it can occur in low numbers in dense riparian vegetation and may be difficult to detect. Farther inland it may occur in mesic chaparral vegetation, such as that found on the north-facing slopes (Reiser 2001).

Approximately 35 individuals of Palmer sagewort were observed within the survey area in southern willow scrub along Sorrento Valley Road near Los Peñasquitos marsh (see Figure 4-13).

San Diego County viguiera (*Bahiopsis laciniata*). San Diego County viguiera is a CRPR 4.2 species (CNPS 2014). This shrub in the sunflower family (Asteracae) has shiny, resinous leaves and showy yellow flowers that bloom from February to August (Baldwin et al. 2012; Munz 1974). Its range extends from Sonora and Baja California, Mexico northward into San Diego and Orange County (CNPS 2014), although the population in Orange County may not be native (Reiser 2001). In San Diego County it is rare north of Highway 78, becoming increasingly common to the south, until it is the dominant species in coastal sage shrub in non-coastal southern San Diego County (Reiser 2001). San Diego County viguiera occurs on dry, shrubby slopes in Diegan coastal sage scrub and chaparral habitats between 200 and 2,500 feet in elevation.

Approximately 180 individuals of San Diego County viguiera were observed within survey area in Diegan coastal sage scrub, maritime succulent scrub, and disturbed habitat along Via de la Valle (see Figures 4-1 and 4-2), San Dieguito Drive (see Figure 4-6), I-5 (see Figure 4-13), and El Camino Real (see Figure 4-16).

Wart-stemmed ceanothus (*Ceanothus verrucosus*). Wart-stemmed ceanothus is a CRPR 2B.2 species (CNPS 2014) and is a covered species and Regionally Sensitive Species under SDG&E's NCCP. This rounded evergreen shrub in the buckthorn family (Rhamnaceae) grows up to 10 feet tall and flowers from January to April (Munz 1974). This species occurs in coastal San Diego County and northern Baja California, Mexico with sizeable populations on Point Loma, at Torrey Pines State Natural Reserve, in San Clemente Canyon, and above Escondido Creek (Reiser 2001). Wart-stemmed ceanothus is typically found on north-facing slopes as a component of southern mixed chaparral or southern maritime chaparral plant communities (Oberbauer et al. 2008), but can occur in drier areas. The preferred habitat is intermixed with chamise (*Adenostoma fasciculatum*) and mission manzanita (*Xylococcus bicolor*; Reiser 2001). It has been noted growing on Exchequer rocky silt loam, San Miguel–Exchequer rocky silt loam, terrace escarpments, and Gaviota fine sandy loam soils (Reiser 2001).

Approximately 110 individuals of wart-stemmed ceanothus were observed within the survey area in southern maritime chaparral in the Torrey Pines State Natural Reserve (see Figures 4-10 and 4-11), on a hillside southeast of Los Peñasquitos marsh (see Figure 4-14), and in Crest Canyon Park as well as in disturbed habitat adjacent to I-5 (see Figure 4-8).

Orcutt's pincushion (*Chaenactis glabriuscula var. orcuttiana*). Orcutt's pincushion is a CRPR 1B.1 species (CNPS 2014). It is a small annual herb in the sunflower family (Asteraceae) that grows from 4 to 12 inches tall and has yellow flowers from April through July. It can be distinguished from other *C. glabriuscula* varieties by its leaves, which are basal and generally 2-pinnately lobed, fleshy, withering into summer, and often covered with cobwebby hairs (Baldwin et al. 2012). This variety ranges from Los Angeles County south to San Diego County and into Baja California below 330 feet in elevation (CNPS 2014). The habitat of Orcutt's pincushion is Diegan coastal sage scrub; typically in proximity to moist ocean breezes (Reiser 2001). At Torrey Pines State Natural Reserve, it occurs in sage scrub openings, particularly on the lower slopes around Los Peñasquitos marsh.

Approximately 100 individuals of Orcutt's pincushion were observed within the survey area in Diegan coastal sage scrub, maritime succulent scrub, and disturbed habitat along Via de la Valle (see Figures 4-1 and 4-2) and on a hillside southeast of Los Peñasquitos marsh (see Figure 4-14).

Summer holly (*Comarostaphylis diversifolia* ssp. *diversifolia*). Summer holly is a CRPR 1B.2 species (CNPS 2014). This evergreen shrub in the heath family (Ericaceae) reaches heights of 15 feet and produces small white flowers from April to June (Munz 1974). Summer holly is found in chaparral in Orange, Riverside, and San Diego Counties, as well as Baja California, Mexico. In San Diego County it occurs at low elevations near the coast, generally in relatively moist areas such as north-facing slopes and steep drainages (Reiser 2001). Although this large, showy plant has leaves and habit similar to the more common Mission manzanita (*Xylococcus bicolor*), mature individuals can be distinguished by their grey bark rather than the red bark of Mission manzanita, which is typical among manzanitas. Also, summer holly produces fruit with a granular or warty surface in the late spring or early summer, unlike the smooth fruit of Mission manzanita, produced in early spring.

A total of 9 individuals of summer holly were observed within the survey area in southern maritime chaparral in Crest Canyon Park (see Figures 4-7 and 4-8).

Del Mar mesa sand aster (*Corethrogyne filaginifolia* var. *linifolia*). Del Mar mesa sand aster is a CRPR 1B.1 species (CNPS 2014) and is a covered species under SDG&E's NCCP. This perennial herbaceous subshrub in the sunflower family (Asteraceae) grows from 8 to 16 inches tall and flowers from July to September (Munz 1974). Del Mar mesa sand aster is endemic to San Diego County, being found only from Del Mar to Encinitas (Reiser 2001). This variety is commonly found on bluffs and brushy slopes near the sea (Munz 1974) but may occur in openings in maritime chaparral and coastal scrub on sandy soils between 50 feet and 500 feet in elevation (CNPS 2014). Terrace escarpments soils are mapped for many sites where Del Mar mesa sand aster is found (Reiser 2001).

Del Mar mesa sand aster has been taxonomically included within California aster (*Lessingia filiginifolia* var. *filaginifolia*) along with what used to be considered separate varieties in the genus *Corethrogyne* (Hickman 1993). The ranges of two of these varieties, San Diego sand aster (*C. f.* var. *incana*) and virgate cudweed-aster (*C. f.* var. *virgata*), overlap the southern extent of Del Mar mesa sand aster (Beauchamp 1986). Del mar mesa sand aster can be distinguished from these varieties by height (less than 16 inches versus 20 to 32 inches for San Diego San aster and 16 inches to four feet for virgate cudweed-aster) and hairiness (Del Mar mesa sand aster is hairy throughout, but the hairs on the upper stems are deciduous on San Diego sand aster and are green on cudweed-aster). Floral characters are more definitive in distinguishing these varieties: Del Mar mesa sand aster has hairy bracts when flowering, versus glandular bracts in the other varieties (Munz 1974).

Approximately 800 individuals of Del Mar mesa sand aster were observed within the survey area in southern maritime chaparral and Diegan coastal sage scrub in Crest Canyon Park (see Figures 4-7 and 4-8), the Torrey Pines State Natural Reserve (see Figure 4-10), and on a hillside southeast of Los Peñasquitos marsh (see Figure 4-14).

Coast wallflower (*Erysimum ammophilum*). Coast wallflower is a CRPR 1B.2 species (CNPS 2014) and is a covered species, Narrow Endemic, and Regionally Sensitive Species under SDG&E's NCCP. This perennial herb in the mustard family (Brassicaceae) flowers from February to June. Its range extends from San Mateo County to Monterey County. It also occurs on Santa Rosa Island and in San Diego County, where it occurs in coastal dunes and sandstone in coastal chaparral. In San Diego County, populations have been recently recorded in Crest Canyon Park and east Del Mar as well as in Camp Pendleton (Consortium of California Herbaria 2014).

Approximately 175 individuals of coast wallflower were observed in Diegan coastal sage scrub and Torrey pine forest within the survey area where it spans Via Latina (see Figure 4-11) and in Crest Canyon Park (see Figures 4-7 and 4-8).

San Diego barrel cactus (*Ferocactus viridescens*). San Diego barrel cactus is a CRPR 2B.1 species (CNPS 2014) and is a covered species and Regionally Sensitive Species under SDG&E's NCCP. This globular succulent in the cactus family (Cactaceae) grows up to eight inches tall and flowers in May and June (Baldwin et al. 2012). It is found only in coastal San Diego County and Baja California, Mexico. Although found coastally as far north as Oceanside and inland as far east as Poway, the largest populations of San Diego barrel cactus occur in Otay Mesa and Otay Valley, Point Loma, and MCAS Miramar (Reiser 2001). This species generally occurs in sandy, rocky, or dry hills of coastal sage scrub, grassland, chaparral, and vernal pool habitats below 500 feet in elevation (Baldwin et al. 2012; Munz 1974). It is typically found in soil types such as San Miguel–Exchequer rocky silt loams and Redding gravelly loams, and is associated with species such as variegated dudleya (*Dudleya variegata*), foothill needlegrass (*Stipa lepida*), and California sagebrush (*Artemisia californica*) (Reiser 2001). It is the only barrel cactus found in coastal areas.

A total of 17 individuals of San Diego barrel cactus were observed within the survey area as it spans Via Latina and extends north into the Torrey Pines State Natural Reserve (see Figure 4-11). One additional individual was observed within the survey area on a hillside southeast of Los Peñasquitos marsh (see Figure 4-14), for a total of 18 individuals.

Beach goldenaster (*Heterotheca sessiliflora* ssp. *sessiliflora*). Beach goldenaster is a CRPR 1B.1 species (CNPS 2014). This herbaceous perennial in the sunflower family (Asteraceae) grows from 7 to 50 inches in height and ranges from decumbent to erect in habit (Baldwin et al. 2012). It is found along the coast mostly in San Diego County and Baja California below 200 feet in elevation with a presumed extant population also occuring in Los Angeles County (CNPS 2014). This species is found on coastal dunes and in sandy locales of coastal sage scrub, and in Del Mar occurs on soils mapped as terrace escarpments (Reiser 2001).

A total of 12 individuals of beach goldenaster were observed within the survey area in Diegan coastal sage scrub in Crest Canyon Park (see Figures 4-7 and 4-8).

San Diego marsh-elder (*Iva hayesiana*). San Diego marsh-elder is a CRPR 2B.2 species (CNPS 2014). This plant is a subshrub with multiple stems and relatively fleshy leaves that grows to three feet tall and produces nodding clusters of inconspicuous flowers between April and September (Munz 1974). This species is distributed in San Diego County and northern Baja California below 1,700 feet in elevation. Its habitat is identified as marshes, swamps, and playas (CNPS 2014); alkaline sinks and flats (Munz 1974; Baldwin et al. 2012); and creeks of intermittent streambeds (Reiser 2001). In San Diego County, it has been reported from the Tijuana Estuary to near Lake Hodges, with populations becoming smaller and more localized in the northern part of its range. San Diego marsh-elder is found on sandy alluvial embankments with cobbles on Riverwash, San Miguel–Exchequer, or Huerhuero loam soils (Reiser 2001).

Approximately 50 individuals of San Diego marsh-elder were observed within the survey area in southern coastal salt marsh in Los Peñasquitos marsh (see Figures 4-13 and 4-14).

Southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*). Southwestern spiny rush is a CRPR 4.2 species (CNPS 2014). This perennial herb in the rush family (Juncaceae) has basal leaves and stout stems that form large tufts up to five feet tall, blooming in May and June (Munz 1974). Southwestern spiny rush grows in coastal salt marshes and dunes from San Luis Obispo County south to Baja California, Mexico, and in meadows and alkaline seeps in Imperial County and Arizona (CNPS 2014). It may also grow along riparian drainages, in palm oases, or "[w]herever water can pond along substantial seasonal drainages" (Reiser 2001).

Approximately 270 individuals of southwestern spiny rush were observed within the survey area in southern coastal salt marsh in San Dieguito Lagoon (see Figures 4-5, 4-6, and 4-7) and Los Peñasquitos marsh (see Figures 4-12, 4-13, and 4-14).

Sea-dahlia (*Leptosyne maritima*). Sea-dahlia is a CRPR 2B.2 species (CNPS 2014). This robust perennial herb in the sunflower family (Asteraceae) grows one or two feet tall and produces yellow flower heads (infloresences) about three inches wide from March to June (Munz 1974). Sea-dahlia occurs only in coastal San Diego County and Baja California, Mexico. It grows in coastal bluffs, dunes, coastal strand vegetation, and coastal sage scrub below 200 feet in elevation. In San Diego it occurs mainly on eroding sandstone cliffs near the ocean. When not in flower, sea-dahlia can be readily recognized by its hollow stems and succulent leaves (Reiser 2001).

Approximately 140 individuals of sea-dahlia were observed in Torrey pine forest within the survey area as it spans Via Latina and extends north into the Torrey Pines State Natural Reserve (see Figure 4-11).

Torrey pine (*Pinus torreyana* ssp. *torreyana*). Torrey pine is a CRPR 1B.2 species (CNPS 2014) and a covered species under SDG&E's NCCP. This tree in the pine family (Pinaceae) may reach 75 feet in height and has an open, round crown and bark with red-brown plates and irregular furrows (Baldwin et al. 2012). Torrey pine is endemic to coastal San Diego County near Del Mar. This pine is widely planted in the region as an ornamental. Planted stands will occasionally generate seedlings such as on the northwestern slope of Carmel Mountain and near Oak Crest Park in Encinitas (Reiser 2001). Its native habitat is at elevations between 250 and 500 feet, on sandstone substrates in chaparral and closed-cone coniferous forest communities.

A total of approximately 116 individuals of Torrey pine were observed within the survey area throughout the project. Approximately 90 individuals were observed in southern maritime chaparral and Torrey pine forest in the Torrey Pines State Natural Reserve (see Figures 4-10 and 4-11) and in upland areas within San Dieguito Lagoon and Crest Canyon Park (see Figure 4-7 and 4-8). These individuals are within the natural range and habitat preferences of this species and are considered naturally occurring.

Four individuals of Torrey Pine were observed within the survey area in southern maritime chaparral on a hillside southeast of Los Peñasquitos marsh and were likely planted for a restoration purpose (see Figure 4-14). A total of 22 individuals of Torrey Pine were observed within the survey area in landscaped areas near Via de la Valle, Jimmy Durante Boulevard, Racetrack View Drive, and I-5 and were likely planted for an ornamental purpose (see Figures 4-1, 4-3, 4-5, 4-7, 4-8, and 4-14). Individuals planted for a restoration or ornamental purposes are considered not naturally occurring.

Nuttall's scrub oak (*Quercus dumosa*). Nuttall's scrub oak is a CRPR 1B.1 species (CNPS 2014). This evergreen shrub in the oak family (Fagaceae) grows less than 10 feet tall and blooms from February to April. This species is found near the coast in Santa Barbara, Orange, and San Diego counties and in Baja California, Mexico, at elevations below 1,300 feet. It grows in chaparral, coastal sage scrub, and closed-cone coniferous forest habitats (CNPS 2014), preferring coastal chaparral with a relatively open canopy in flat areas, but is also found growing in dense stands on north-facing slopes (Reiser 2001). In San Diego County it is known to grow as far inland as Camp Elliott and Otay Mesa (Reiser 2001), being replaced by the similar scrub oak (*Q. berberidifolia*) in higher, drier locations (Baldwin et al. 2012). Nuttall's scrub oak can be distinguished from the scrub oak, with which it may hybridize, by its acorn, which is less than 0.4 inch wide, moderately tuberculed, and has a thin cup (Baldwin et al. 2012), and by its leaves, which tend to be smaller, spinier, more undulated (Reiser 2001), and have densely matted gray hairs (Roberts 1995).

Approximately 50 individuals of Nuttall's scrub oak were observed in southern maritime chaparral within the survey area in the Torrey Pines State Natural Reserve (see Figures 4-10 and 4-11) and on a hillside southeast of Los Peñasquitos marsh (see Figure 4-14).

Woolly sea-blite (*Suaeda taxifolia*). Woolly sea-blite is a CRPR 4.2 species (CNPS 2014). This hairy evergreen shrub in the goosefoot family (Chenopodiaceae) has gray–brown stems that grow up to six feet tall and can flower at any time of the year (Baldwin et al. 2012; CNPS 2014). Woolly sea-blite is found along the coast from San Luis Obispo County south to Baja California, Mexico, and on the Channel Islands (CNPS 2014). It usually occurs along the margins of salt marshes but may also occasionally be found in coastal bluffs below 50 feet in elevation (Baldwin et al. 2012; Reiser 2001). Woolly sea-blite has been reported in salt marshes along the coast and in lagoons through the length of San Diego County (Reiser 2001).

Five individuals of woolly seablite were observed within the survey area in southern coastal salt marsh habitat in San Dieguito Lagoon (see Figures 4-5 and 4-6).

Discussion

The San Diego region is experiencing extended drought conditions, which may decrease the expression of annual plant species. Although the expression and/or extent of each population of observed annual rare plant species including coast wallflower, Orcutt's pincushion, and sea-dahlia may have been reduced due to drought conditions, these weather-influenced variations are likely minimal. Due to the planned timing of the surveys in accordance with peak expression of each rare plant species, the observations are likely to provide an accurate representation of the overall distribution of these species within the survey area. For these and most other annual rare plant species, population size may be reduced, but it is unlikely that entire populations within the survey area went undetected.

However, detection of two rare plant species may have been affected more than that of the other species with potential to occur. Drought conditions may substantially reduce the growing season, as well as flowering period, for tiny annuals or corm-sprouting species such as Orcutt's spineflower and short-leaved dudleya. The effect of the current drought was observed in the reference populations of these species, where only a small proportion of the known population of Orcutt's spineflower individuals were present, and only a small percentage of short-leaved dudleya individuals produced flower stalks. With a shortened growing season and reduced number of flowering individuals, these species may have been especially difficult to observe. As a result, despite the botanists' thorough search of suitable habitat (southern maritime chaparral and Torrey pine forest with sandy substrates for Orcutt's spineflower and iron concretions preferred by short-leaved dudleya), small populations, if present, may have gone undetected.

If you have any questions concerning the contents of this letter, please contact me via telephone at (619) 308-9333, ext. 158, or e-mail asmisek@reconenvironmental.com.

Sincerely,

Andrew Smisek
Biologist

AKS:sjg/eab

Attachments

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ATTACHMENTS

ATTACHMENT 1

Figures 4.1–4.17

Image source: SanGIS (flown May 2012)

Survey Area

Rare Plant Observations*

- Orcutt's Pincushion
- San Diego County Viguiera
- Torrey Pine (not naturally occurring)

* Plant observations indicate a single individual unless otherwise noted.

0 Feet 200

FIGURE 4-1

Rare Plant Species Observed within the
Reconfigure TL 674A at Del Mar and
Remove from Service TL 666D Project Survey Area

RECON

M:\JOBS4\7203\common_gis\fig4_1.mxd 8/15/2014 sab

Image source: SanGIS (flown May 2012)

Survey Area

Rare Plant Observations*

- Orcutt's Pincushion
- San Diego County Viguiera

* Plant observations indicate a single individual unless otherwise noted.

0 Feet 200

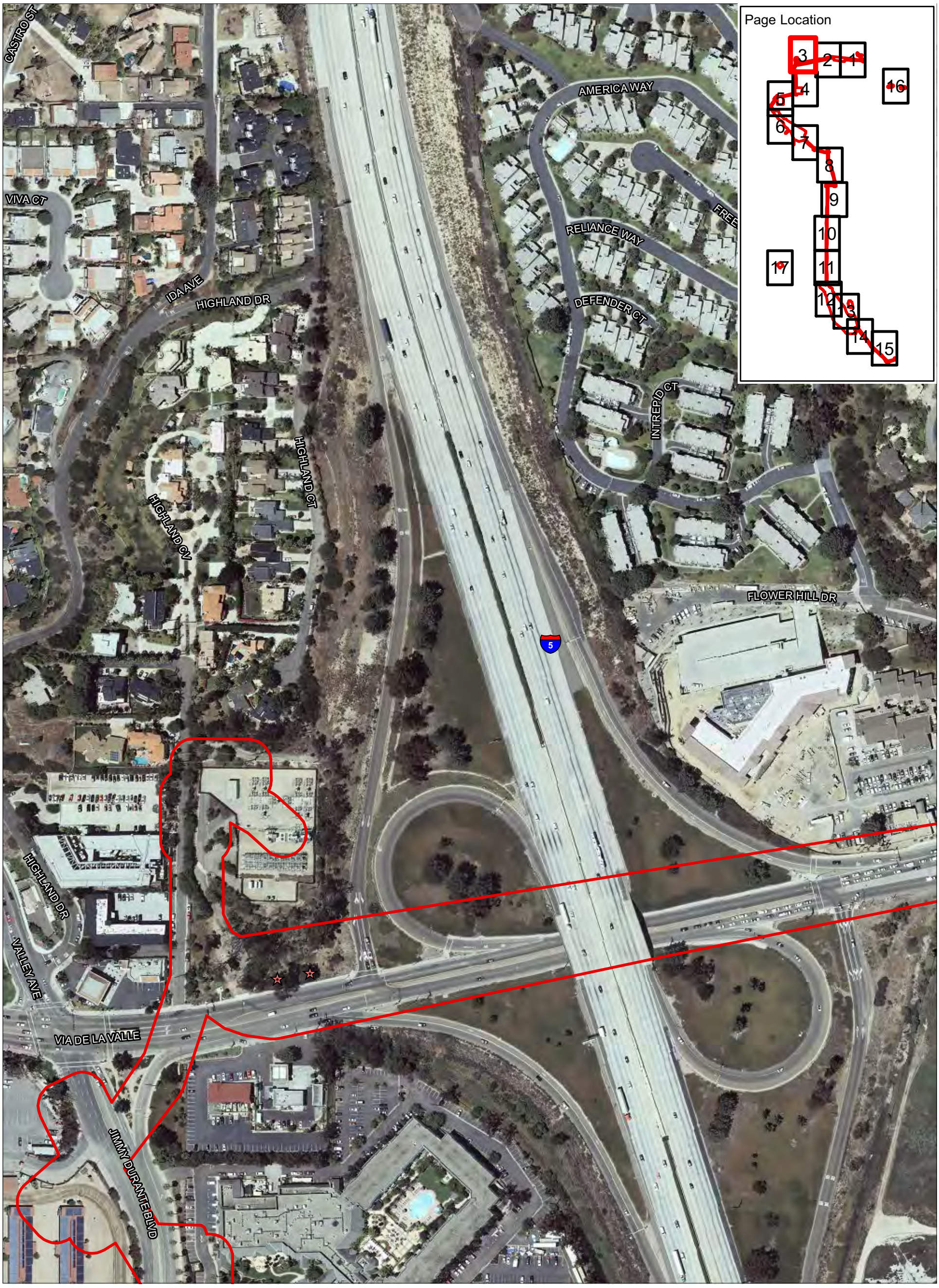
FIGURE 4-2

Rare Plant Species Observed within the
Reconfigure TL 674A at Del Mar and
Remove from Service TL 666D Project Survey Area

RECON

M:\JOBS4\7203\common_gis\fig4_2.mxd 8/15/2014 sab

Image source: SanGIS (flown May 2012)



Survey Area

Rare Plant Observations*

☆ Torrey Pine (not naturally occurring)

* Plant observations indicate a single individual unless otherwise noted.

0 Feet 200

FIGURE 4-3

Rare Plant Species Observed within the
Reconfigure TL 674A at Del Mar and
Remove from Service TL 666D Project Survey Area

RECON

M:\JOBS4\7203\common_gis\fig4_3.mxd 8/15/2014 sab

Image source: SanGIS (flown May 2012)

Survey Area

0 Feet 200

No rare plant species observed within extent of figure.

FIGURE 4-4

Rare Plant Species Observed within the
Reconfigure TL 674A at Del Mar and
Remove from Service TL 666D Project Survey Area

RECON

M:\JOBS4\7203\common_gis\fig4_4.mxd 8/15/2014 sab

Image source: SanGIS (flown May 2012)

Survey Area

Rare Plant Observations*

- Southwestern Spiny Rush
- Torrey Pine (not naturally occurring)
- Woolly Seablite

* Plant observations indicate a single individual unless otherwise noted.

0 Feet 200

FIGURE 4-5

Rare Plant Species Observed within the
Reconfigure TL 674A at Del Mar and
Remove from Service TL 666D Project Survey Area

RECON

M:\JOBS4\7203\common_gis\fig4_5.mxd 8/15/2014 sab

Image source: SanGIS (flown May 2012)

Survey Area

Rare Plant Observations*

- San Diego County Viguiera
- Southwestern Spiny Rush
- Woolly Seablite

* Plant observations indicate a single individual unless otherwise noted.

0 Feet 200

FIGURE 4-6

Rare Plant Species Observed within the
Reconfigure TL 674A at Del Mar and
Remove from Service TL 666D Project Survey Area

RECON

M:\JOBS4\7203\common_gis\fig4_6.mxd 8/15/2014 sab

Image source: SanGIS (flown May 2012)

Survey Area

Rare Plant Observations*

- Del Mar Mesa Sand Aster
- Southwestern Spiny Rush
- Summer Holly
- Torrey Pine
- Torrey Pine (not naturally occurring)

* Plant observations indicate a single individual unless otherwise noted.

0 Feet 200

FIGURE 4-7

Rare Plant Species Observed within the Reconfigure TL 674A at Del Mar and Remove from Service TL 666D Project Survey Area

RECON

M:\JOBS4\7203\common_gis\fig4_7.mxd 8/15/2014 sab

Image source: SanGIS (flown May 2012)

Survey Area

Rare Plant Observations*

- Beach Goldenaster
- Coast Wallflower
- Del Mar Manzanita
- Del Mar Mesa Sand Aster
- Summer Holly
- Torrey Pine
- Torrey Pine (not naturally occurring)
- Wart-stemmed Ceanothus

* Plant observations indicate a single individual unless otherwise noted.

0 Feet 200

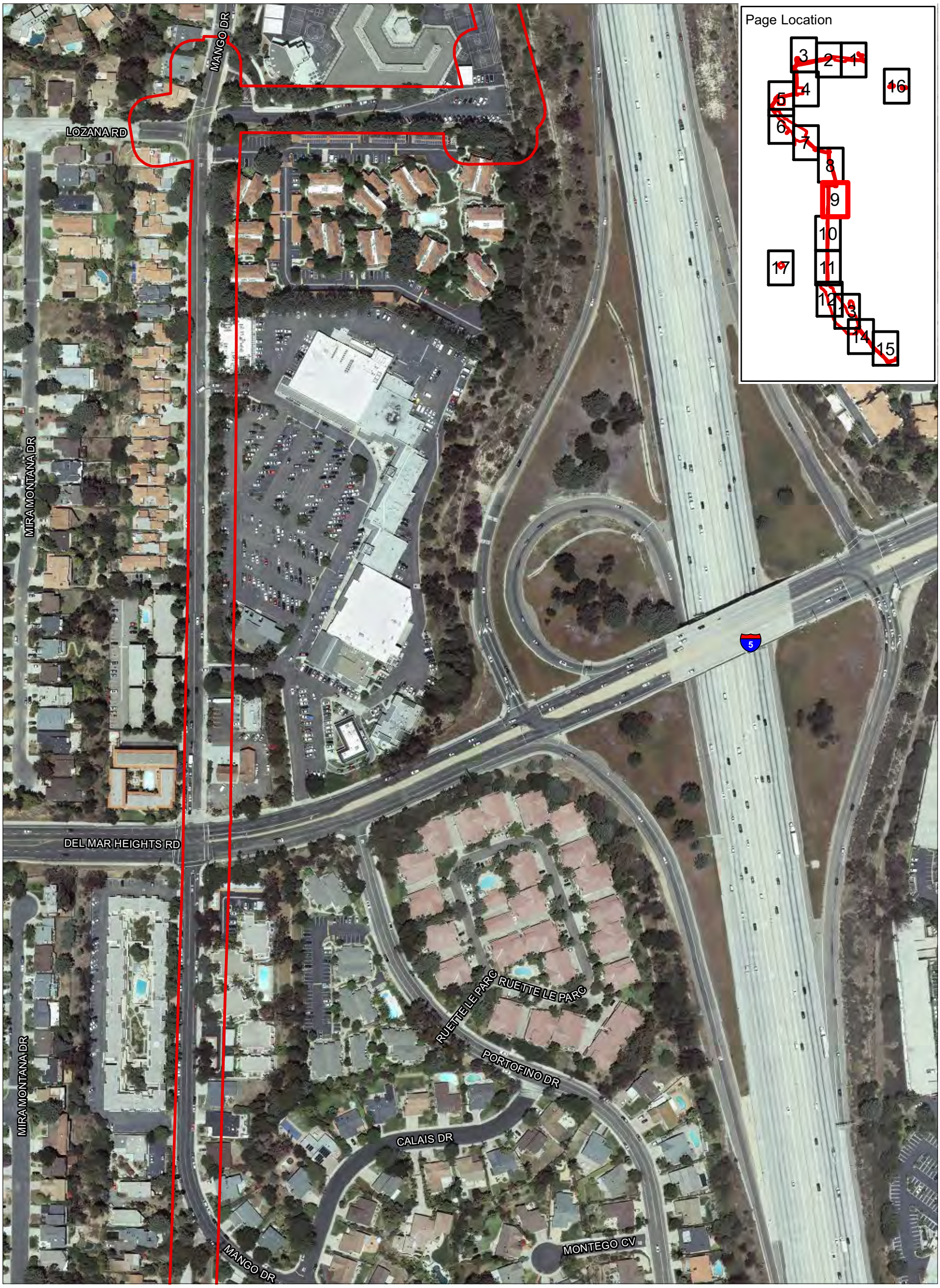
FIGURE 4-8

Rare Plant Species Observed within the
Reconfigure TL 674A at Del Mar and
Remove from Service TL 666D Project Survey Area

RECON

M:\JOBS4\7203\common_gis\fig4_8.mxd 8/15/2014 sab

Image source: SanGIS (flown May 2012)



Survey Area

0 Feet 200

No rare plant species observed within extent of figure.

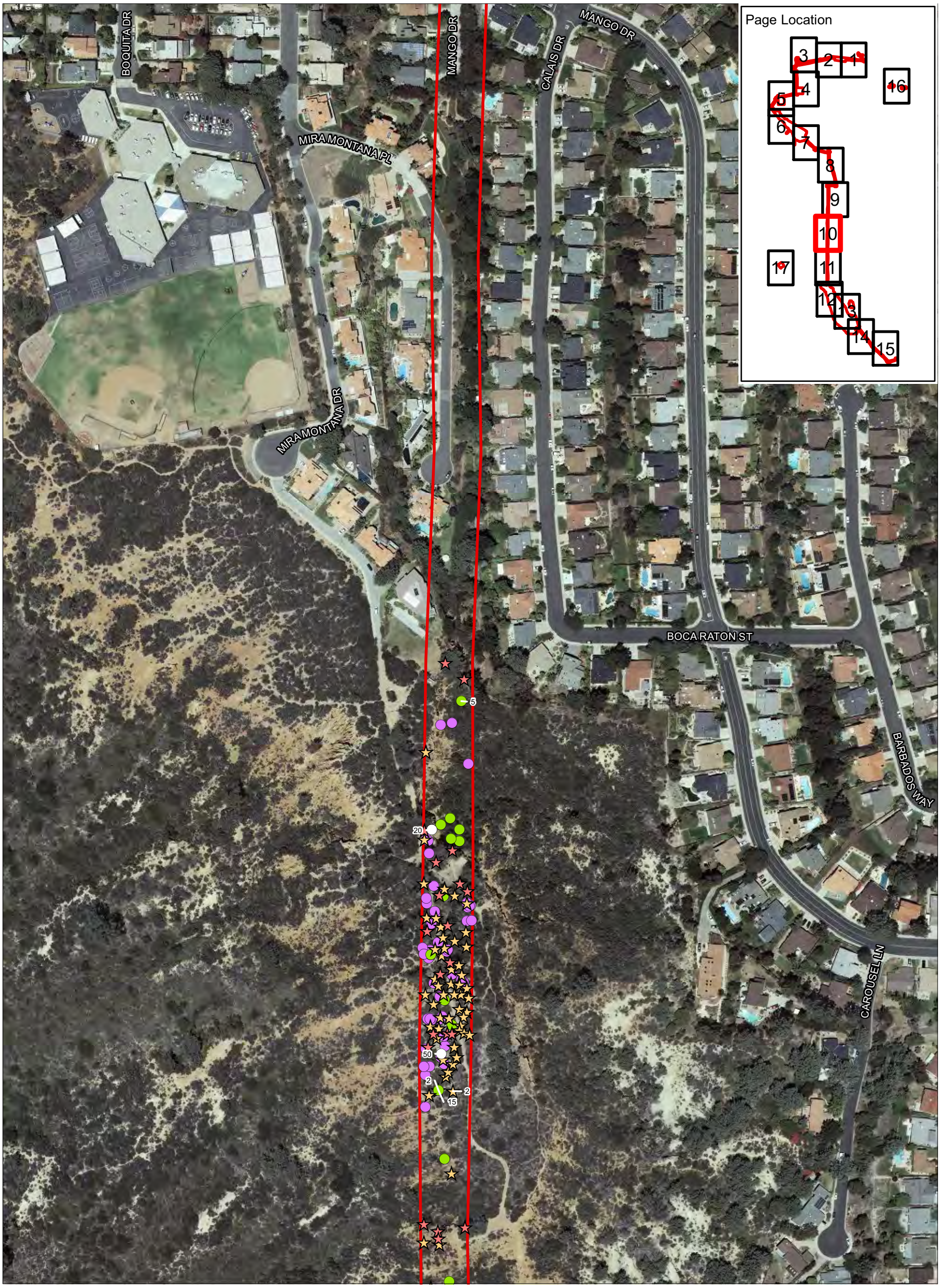
FIGURE 4-9

Rare Plant Species Observed within the
Reconfigure TL 674A at Del Mar and
Remove from Service TL 666D Project Survey Area

RECON

M:\JOBS4\7203\common_gis\fig4_9.mxd 8/15/2014 sab

Image source: SanGIS (flown May 2012)



Survey Area

Rare Plant Observations*

- Del Mar Manzanita
- Del Mar Mesa Sand Aster
- Nuttall's Scrub Oak
- Torrey Pine
- Wart-stemmed Ceanothus

* Plant observations indicate a single individual unless otherwise noted.

0 Feet 200

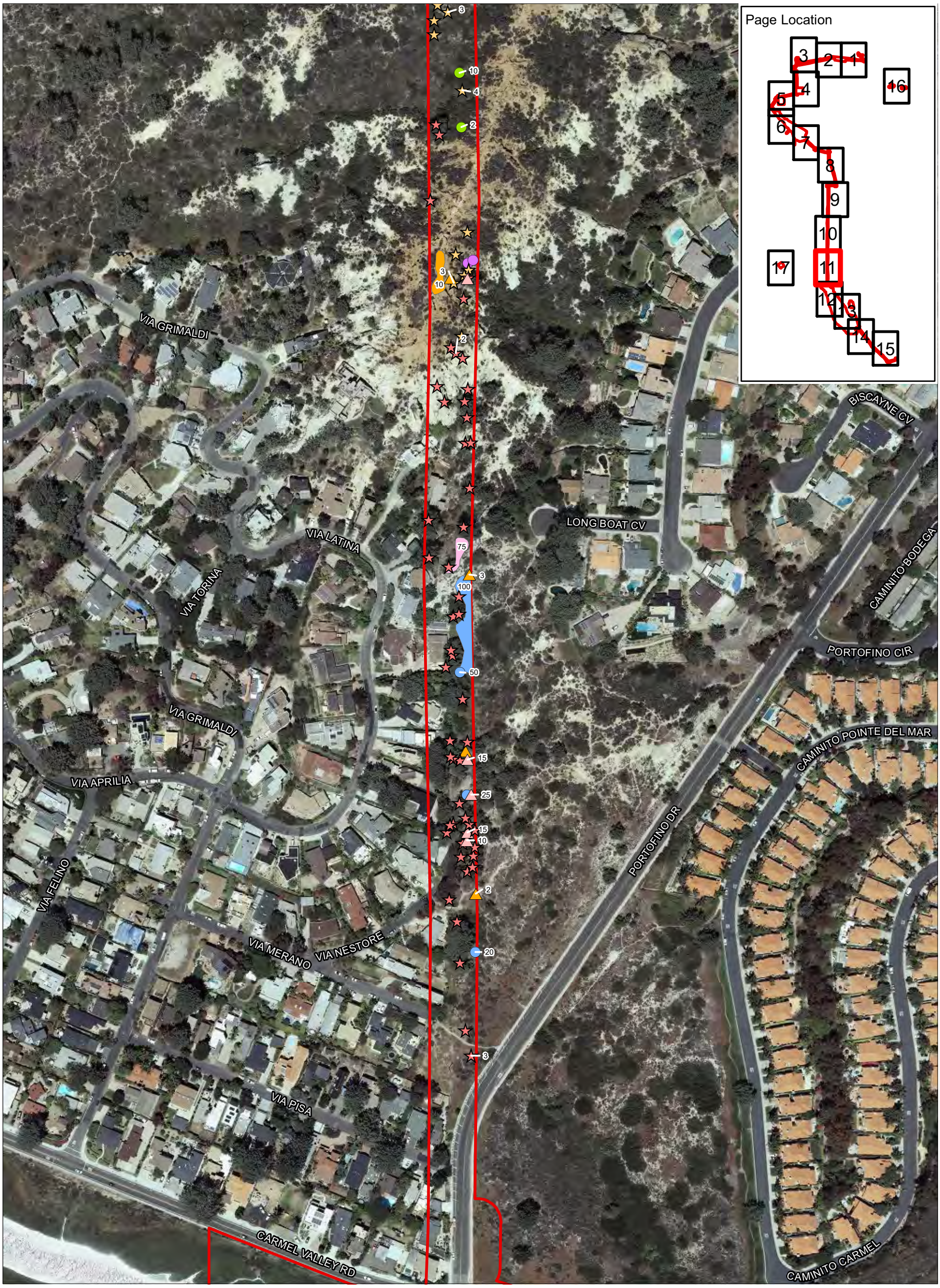
FIGURE 4-10

Rare Plant Species Observed within the
Reconfigure TL 674A at Del Mar and
Remove from Service TL 666D Project Survey Area

RECON

M:\JOBS4\7203\common_gis\fig4_10.mxd 8/15/2014 sab

Image source: SanGIS (flown May 2012)



Survey Area

Rare Plant Observations*

- Coast Wallflower
- Del Mar Manzanita
- Nuttall's Scrub Oak
- San Diego Barrel Cactus
- Sea-dahlia
- Torrey Pine
- Wart-stemmed Ceanothus

* Plant observations indicate a single individual unless otherwise noted.

0 Feet 200

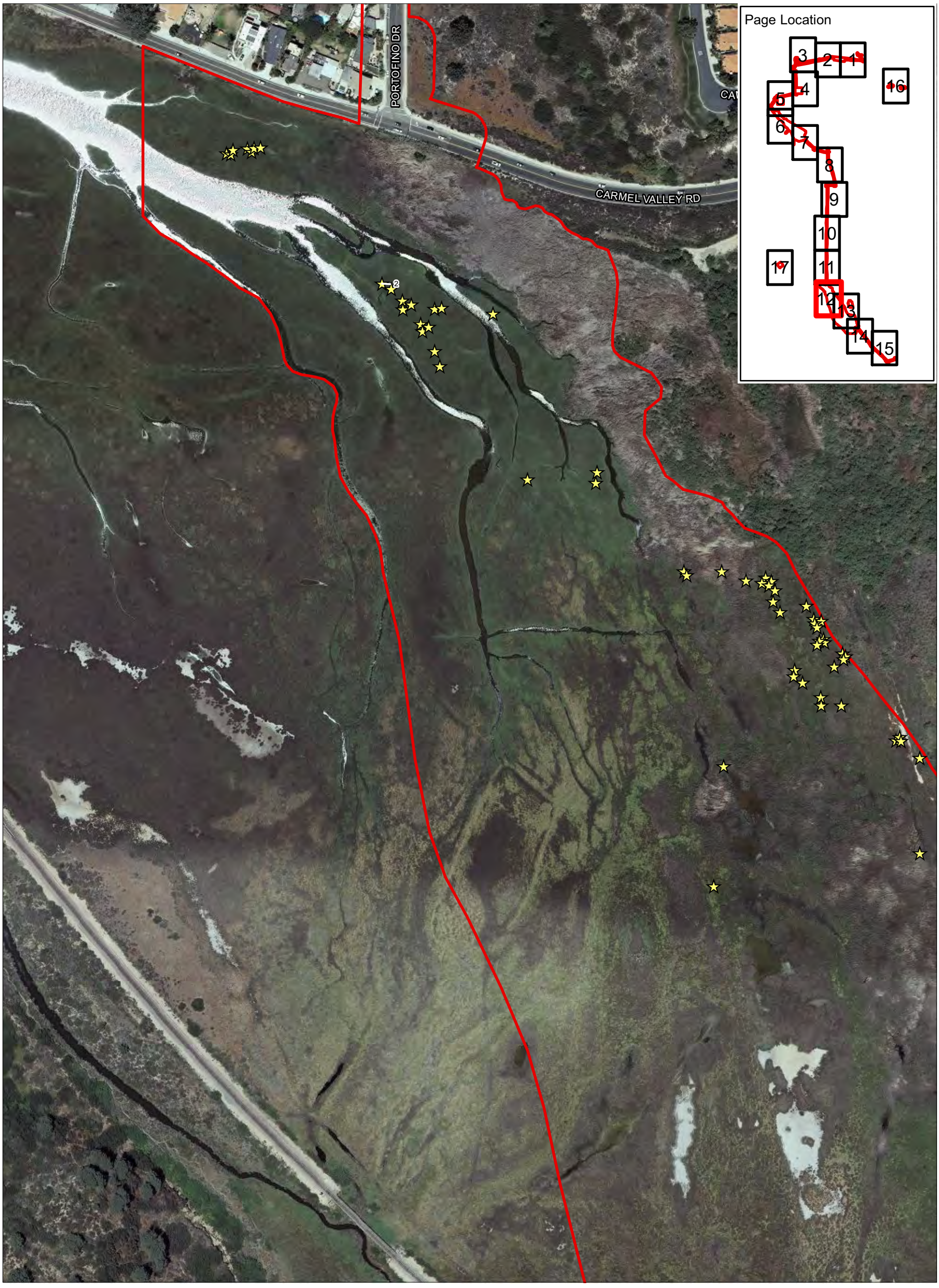
FIGURE 4-11

Rare Plant Species Observed within the
Reconfigure TL 674A at Del Mar and
Remove from Service TL 666D Project Survey Area

RECON

M:\JOBS4\7203\common_gis\fig4_11.mxd 8/15/2014 sab

Image source: SanGIS (flown May 2012)



Survey Area

Rare Plant Observations*

Southwestern Spiny Rush

* Plant observations indicate a single individual unless otherwise noted.

0 Feet 200

FIGURE 4-12

Rare Plant Species Observed within the
Reconfigure TL 674A at Del Mar and
Remove from Service TL 666D Project Survey Area

RECON

M:\JOBS4\7203\common_gis\fig4_12.mxd 8/15/2014 sab

Image source: SanGIS (flown May 2012)

Survey Area

Rare Plant Observations*

- Palmer Sagewort
- San Diego County Viguiera
- San Diego Marsh-elder
- Southwestern Spiny Rush

* Plant observations indicate a single individual unless otherwise noted.

0 Feet 200

FIGURE 4-13

Rare Plant Species Observed within the Reconfigure TL 674A at Del Mar and Remove from Service TL 666D Project Survey Area

RECON

M:\JOBS4\7203\common_gis\fig4_13.mxd 8/15/2014 sab

Image source: SanGIS (flown May 2012)

Survey Area

Rare Plant Observations*

- Orcutt's Pincushion
- San Diego Barrel Cactus
- San Diego Marsh-elder
- Shaw's Agave
- Southwestern Spiny Rush
- Torrey Pine
- Torrey Pine (not naturally occurring)
- Wart-stemmed Ceanothus
- Nuttall's Scrub Oak

0 Feet 200

* Plant observations indicate a single indiviual unless otherwise noted.

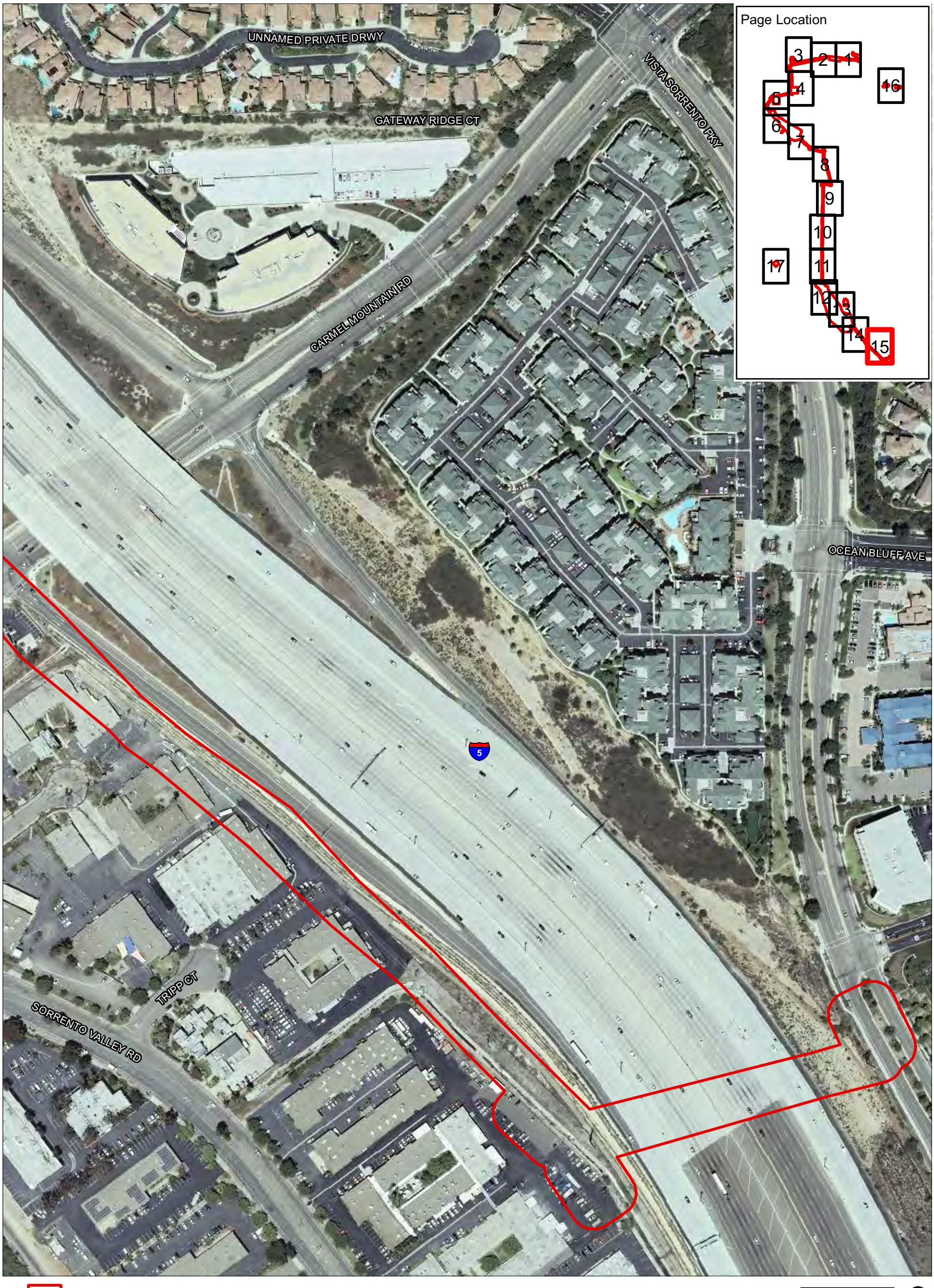
FIGURE 4-14

Rare Plant Species Observed within the Reconfigure TL 674A at Del Mar and Remove from Service TL 666D Project Survey Area

RECON

M:\JOBS4\7203\common_gis\fig4_14.mxd 8/15/2014 sab

Image source: SanGIS (flown May 2012)



Survey Area

No rare plant species observed within extent of figure.

0 Feet 200

FIGURE 4-15

Rare Plant Species Observed within the
Reconfigure TL 674A at Del Mar and
Remove from Service TL 666D Project Survey Area

RECON

M:\JOBS4\7203\common_gis\fig4_15.mxd 8/15/2014 sab

Image source: SanGIS (flown May 2012)

Survey Area

Rare Plant Observations*

San Diego County Viguiera

* Plant observations indicate a single indiviual unless otherwise noted.

0 Feet 200

FIGURE 4-16

Rare Plant Species Observed within the
Reconfigure TL 674A at Del Mar and
Remove from Service TL 666D Project Survey Area

RECON

M:\JOBS4\7203\common_gis\fig4_16.mxd 8/15/2014 sab

Image source: SanGIS (flown May 2012)

Survey Area

No rare plant species observed within extent of figure.

0 Feet 200

FIGURE 4-17

Rare Plant Species Observed within the
Reconfigure TL 674A at Del Mar and
Remove from Service TL 666D Project Survey Area

RECON

M:\JOBS4\7203\common_gis\fig4_17.mxd 8/15/2014 sab

Attachment 2

Plant Species Observed in the Reconfigure TL 674A at Del Mar and Remove from Service TL 666D Project Survey Area

ATTACHMENT 2
PLANT SPECIES OBSERVED IN THE
RECONFIGURE TL 674A AT DEL MAR AND REMOVE FROM SERVICE TL 666D PROJECT SURVEY AREA

Scientific Name	Common Name	Habitat	Origin
	LYCOPODS		
SELAGINELLACEAE	**SPIKE-MOSS FAMILY**		
Selaginella sp.	spike-moss	SMC	N
Selaginella bigelovii Underw.	Bigelow's spike-moss	CSS	N
	FERNS		
POLYPODIACEAE	**POLYPODY FAMILY**		
Polypodium californicum Kaulf.	California polypody	TPF	N
PTERIDACEAE	**BRAKE FAMILY**		
Pentagramma triangularis (Kaulf.) Yatsk. Windham & E. Wollenw.	goldback fern	SMC	N
	GYMNOSPERMS		
PINACEAE	**PINE FAMILY**		
Pinus torreyana Parry ex Carrière ssp. *torreyana*	Torrey pine	UDL,SMC,TPF	N
	ANGIOSPERMS: MONOCOTS		
AGAVACEAE	**AGAVE FAMILY**		
Agave shawii Engelm. var. *shawii*	Shaw's agave	CSS	N
Yucca schidigera Ortgies	Mojave yucca	TPF, SMC, MSS	N
ARECACEAE	**PALM FAMILY**		
Washingtonia robusta H. Wendl.	Mexican fan palm	CSS	I
ASPARAGACEAE	**ASPARAGUS FAMILY**		
Asparagus asparagoides (L.) Druce	florist's-smilax	UDL	I
CYPERACEAE	**SEDGE FAMILY**		
Carex praegacilis	clustered field sedge	EM	N
Cyperus eragrostis Lam.	tall flatsedge	EM	N
Schoenoplectus [=*Scirpus*] *acutus* (Muhl. ex Bigelow) Á. Löve & D. Löve var. *occidentalis* (S. Watson) S.G. Sm.	common tule	EM	N
IRIDACEAE	**IRIS FAMILY**		
Iris sp.	iris	CSS	I
Sisyrinchium bellum S. Watson	western blue-eyed-grass	CSS	N

ATTACHMENT 2
PLANT SPECIES OBSERVED IN THE
RECONFIGURE TL 674A AT DEL MAR AND REMOVE FROM SERVICE TL 666D PROJECT SURVEY AREA
(continued)

Scientific Name	Common Name	Habitat	Origin
JUNCACEAE	**RUSH FAMILY**		
Juncus acutus L. ssp. *leopoldii* (Parl.) Snogerup	southwestern spiny rush	SSM	N
POACEAE (GRAMINEAE)	**GRASS FAMILY**		
Aristida purpurea Nutt	three-awn	CSS	N
Avena sp.	wild oats	UDL	I
Avena barbata Pott ex Link	slender wild oat	DH	I
Avena fatua L.	wild oat	DH	I
Brachypodium distachyon (L.) P. Beauv.	purple falsebrome	CSS, DH	I
Bromus diandrus Roth	ripgut grass	CSS, UDL, DH	I
Bromus hordeaceus L.	soft chess	NNG, CSS, DH	I
Bromus madritensis L. ssp. *rubens* (L.) Husn.	red brome	CSS, DH	I
Cortaderia selloana (Schult. & Schult. f.) Asch. & Graebn.	pampas grass	DH	I
Cynodon dactylon (L.) Pers.	Bermuda grass	DH	I
Distichlis [=*Monanthochloe*] *littoralis* (Engelm.) H.L. Bell & Columbus	shore grass	SSM	N
Distichlis spicata (L.) Greene	salt grass	CSS, SSM	N
Ehrharta erecta Lam.	panic veldt grass	CSS, DH	I
Eragrostis sp.	lovegrass		
Festuca [=*Vulpia*] *myuros* L.	rattail sixweeks grass	CSS, DH	I
Festuca perennis (L.) Columbus & J.P. Sm. [=*Lolium multiflorum* and *Lolium perenne*]	rye grass	DH, EM	I
Hordeum murinum L. ssp. *leporinum* (Link) Arcang.	hare barley	DH	I
Lamarckia aurea (L.) Moench	golden-top	DH	I
Melica imperfecta Trin.	little California melica	DH	N
Muhlenbergia microsperma (DC.) Kunth	littleseed muhly	CSS	N
Parapholis incurva	sickle grass	DH	I
Pennisetum sp.		SMC	I
Pennisetum setaceum (Forssk.) Chiov.	crimson fountain grass	CSS, DH	I
Polypogon monspeliensis (L.) Desf.	annual beard grass, rabbitfoot grass	CSS, DH, EM	I
Schismus barbatus (L.) Thell.	Mediterranean schismus	SMC, CSS, DH	I
Stipa [=*Achnatherum*] *coronata* Thurb.	crested needle grass	CSS	N
Stipa [=*Nassella*] *lepida* Hitchc.	foothill needle grass	CSS	N
Stipa miliacea (L.) Hoover var. *miliaceae* [=*Piptatherum miliaceum* ssp. *miliaceum* and *Oryzopsis miliacea*]	smilo grass	DH	I

ATTACHMENT 2
PLANT SPECIES OBSERVED IN THE
RECONFIGURE TL 674A AT DEL MAR AND REMOVE FROM SERVICE TL 666D PROJECT SURVEY AREA
(continued)

Scientific Name	Common Name	Habitat	Origin
Stipa [=*Nassella*] *pulchra* Hitchc.	purple needle grass	CSS	N
THEMIDACEAE	**BRODIAEA FAMILY**		
Dichelostemma capitatum (Benth.) Alph. Wood	blue dicks	CSS	N
TYPHACEAE	**CATTAIL FAMILY**		
Typha sp.	cattail	SSM	N
Typha domingensis Pers.	southern cattail	EM	N
	ANGIOSPERMS: DICOTS		
ADOXACEAE	**ADOXA FAMILY**		
Sambucus nigra L. ssp. *caerulea* (Raf.) Bolli [=*Sambucus mexicana*]	blue elderberry	SMC, CSS	N
AIZOACEAE	**FIG-MARIGOLD FAMILY**		
Carpobrotus edulis (L.) N.E. Br.	freeway iceplant	CSS, DH	I
Malephora crocea (Jacq.) Schwantes	crocea iceplant	NNG	I
Mesembryanthemum crystallinum L.	crystalline iceplant	NNG, CSS, DH	I
Mesembryanthemum nodiflorum L.	slender-leaved iceplant	DH	I
Tetragonia tetragonioides (Pall.) Kuntze	New Zealand spinach	UDL	I
ANACARDIACEAE	**SUMAC OR CASHEW FAMILY**		
Malosma laurina Nutt. ex Abrams	laurel sumac	CSS	N
Rhus aromatica [=*Rhus trilobata*] Aiton	skunk bush		N
Rhus integrifolia (Nutt.) Benth. & Hook. f. ex Rothr.	lemonade berry	CSS	N
Schinus terebinthifolius Raddi	Brazilian pepper tree	UDL	I
APIACEAE (UMBELLIFERAE)	**CARROT FAMILY**		
Apium graveolens L.	celery	SSM	I
Bowlesia incana Ruiz & Pav.	American bowlesia	CSS	N
Conium maculatum L.	common poison hemlock	SWS	I
Foeniculum vulgare Mill.	fennel	CSS, DH	I
Lomatium lucidum (Torr. & A. Gray) Jeps.	shiny Lomatium	SMC	N
APOCYNACEAE	**DOGBANE FAMILY**		
Funastrum [=*Sarcostemma*] *cynanchoides* (Decne.) Schltr. var. *hartwegii* (Vail) Krings	climbing milkweed	CSS	N
ASTERACEAE	**SUNFLOWER FAMILY**		
Ambrosia acanthicarpa Hook.	annual bur-sage	DH	N

ATTACHMENT 2
PLANT SPECIES OBSERVED IN THE
RECONFIGURE TL 674A AT DEL MAR AND REMOVE FROM SERVICE TL 666D PROJECT SURVEY AREA
(continued)

Scientific Name	Common Name	Habitat	Origin
Ambrosia psilostachya DC.	western ragweed	DH	N
Artemisia californica Less.	California sagebrush	CSS, MSS	N
Artemisia dracunculus L.	tarragon	DH	N
Artemisia palmeri A. Gray	San Diego sagewort, Palmer sagewort	SWS	N
Baccharis pilularis DC.	chaparral broom, coyote brush	CSS	N
Baccharis salicifolia (Ruiz & Pav.) Pers. ssp. *salicifolia*	mule fat, seep-willow	CSS	N
Baccharis sarothroides A. Gray	broom baccharis	DH	N
Bahiopsis [=*Viguiera*] *laciniata* (A. Gray) E.E. Schilling & Panero	San Diego viguiera	CSS, DH, MSS	N
Carduus pycnocephalus L.	Italian thistle	SSM, CSS	I
Centaurea melitensis L.	tocalote, Maltese star-thistle	CSS, DH	I
Chaenactis glabriuscula DC. var. *orcuttiana* (Greene) H.M. Hall	Orcutt's pincushion	CSS, DH, MSS	N
Cirsium occidentale (Nutt.) Jeps. var. *californicum* (A. Gray) D.J. Keil & C.E. Turner	California thistle	CSS	N
Corethrogyne filaginifolia [= all previously known *Lessingia filaginifolia* varieties in California] (Hook. & Arn.) Nutt.	California-aster	SMC, CSS	N
Cotula australis (Sieber ex Spreng.) Hook. f.	Australian cotula	DH	I
Encelia californica Nutt.	California encelia	CSS	N
Encelia farinosa A. Gray ex Torr.	brittlebush, incienso	CSS	N/I
Erigeron [=*Conyza*] *bonariensis* L.	flax-leaved horseweed	DH	ID
Erigeron [=*Conyza*] *canadensis* L.	horseweed	CSS, DH	N
Eriophyllum confertiflorum (DC.) A. Gray var. *confertiflorum*	long-stem golden-yarrow	CSS	N
Gazania linearis (Thunb.) Druce	treasure flower	DH	I
Glebionis coronaria (L.) Spach [=*Chrysanthemum coronarium*]	garland, crown daisy	CSS, DH	I
Hedypnois cretica (L.) Dum. Cours.	crete weed	DH	I
Helianthus annuus L.	western sunflower	DH	N
Heterotheca grandiflora Nutt.	telegraph weed	CSS, DH	N
Heterotheca [=*Chrysopsis*] *sessiliflora* (Nutt.) Shinners ssp. *sessiliflora*	beach, false goldenaster	CSS	N
Hypochaeris glabra L.	smooth cat's-ear	CSS, DH	I
Isocoma menziesii (Hook. & Arn.) G.L. Nesom	coastal goldenbush	SSM, CSS, DH	N
Iva hayesiana A. Gray	San Diego marsh-elder	SSM	N
Jaumea carnosa (Less.) A. Gray	fleshy Jaumea, salty susan	SSM	N
Lactuca serriola L.	prickly lettuce	DH	I
Leptosyne [=*Coreopsis*] *maritima* (Nutt.) A. Gray	sea-dahlia	TPF	N
Logfia [=*Filago*] sp.	herba impia		N/I

ATTACHMENT 2
PLANT SPECIES OBSERVED IN THE
RECONFIGURE TL 674A AT DEL MAR AND REMOVE FROM SERVICE TL 666D PROJECT SURVEY AREA
(continued)

Scientific Name	Common Name	Habitat	Origin
Logfia [=*Filago*] *gallica* (L.) Coss. & Germ.	daggerleaf cottonrose, narrow-leaf herba impia	CSS	I
Matricaria discoidea [=*Chamomilla suaveolens*] DC.	pineapple weed, rayless chamomile	DH	I
Osmadenia tenella Nutt.	osmadenia	CSS	N
Pluchea sericea (Nutt.) Coville	arrow-weed	SSM	N
Porophyllum gracile Benth.	odora, slender poreleaf	CSS	N
Pseudognaphalium biolettii Anderb. [=*Gnaphalium bicolor*]	bicolor cudweed	CSS	N
Pseudognaphalium [=*Gnaphalium*] *californicum* (DC.) Anderb.	California everlasting, green everlasting	TPF, CSS	N
Pseudognaphalium [=*Gnaphalium*] *luteoalbum* (L.) Hilliard & B. L. Burtt	everlasting cudweed	CSS, DH	I
Silybum marianum (L.) Gaertn.	milk thistle	DH	I
Sonchus sp.		CSS	I
Sonchus asper (L.) Hill ssp. *asper*	prickly sow thistle	CSS, DH	I
Sonchus oleraceus L.	common sow thistle	CSS, DH	I
Stephanomeria sp.		SMC	N
Stephanomeria virgata Benth.	slender stephanomeria	DH	N
Taraxacum officinale F.H. Wigg.	common dandelion	DH, UDL	I
Xanthium strumarium L.	cocklebur	EM	N
BIGNONIACEAE	**BIGNONIA FAMILY**		
Tecoma capensis (Thunb.) Lindl.	cape honeysuckle	UDL	I
BORAGINACEAE	**BORAGE FAMILY**		
Amsinckia intermedia Fisch. & C. A. Mey.	common fiddleneck	UDL	N
Amsinckia menziesii (Lehm.) A. Nelson & J.F. Macbr.	common fiddleneck, small-flowered fiddleneck, rancher's fireweed	CSS, DH	N
Cryptantha sp.	cryptantha	TPF	N
Echium candicans L. f.	pride of Madeira	UDL	I
Eriodictyon crassifolium Benth.	felt-leaf yerba santa	SMC	N
Eucrypta chrysanthemifolia (Benth.) Greene	eucrypta	CSS, DH	N
Heliotropium curassavicum L. var. *oculatum* (A. Heller) I. M. Johnst. ex Tidestr.	seaside heliotrope, alkali heliotrope	SSM	N
Pectocarya penicillata (Hook. & Arn.) A. DC.	northern pectocarya, hairy-leaved comb-bur	CSS, DH	N
Phacelia distans Benth.	wild-heliotrope	CSS	N
Phacelia ramosissima Douglas ex Lehm.	shrubby phacelia	CSS	N

ATTACHMENT 2
PLANT SPECIES OBSERVED IN THE
RECONFIGURE TL 674A AT DEL MAR AND REMOVE FROM SERVICE TL 666D PROJECT SURVEY AREA
(continued)

Scientific Name	Common Name	Habitat	Origin
Plagiobothrys sp.	popcornflower	CSS	N
BRASSICACEAE (CRUCIFERAE)	**MUSTARD FAMILY**		
Brassica nigra (L.) W.D.J. Koch	black mustard	NNG, CCS, DH	I
Brassica rapa L.	turnip, field mustard	DH	I
Brassica tournefortii Gouan	wild turnip	UDL	I
Caulanthus heterophyllus (Nutt.) Payson [= *Caulanthus heterophyllus* var. *heterophyllus* and *Caulanthus stenocarpus*]	slender-pod jewelflower	CSS	N
Erysimum ammophilum A. Heller	sand-loving wallflower, coast wallflower	CSS, TPF	N
Lepidium sp.	peppergrass	SMC	I
Lepidium didymium	swine cress	DH	
Lepidium latifolium L.	perennial pepperweed	DH	I
Lobularia maritima (L.) Desv.	sweet alyssum	DH	I
Raphanus sativus L.	radish	CSS, DH	I
Sisymbrium irio L.	London rocket	DH	I
CACTACEAE	**CACTUS FAMILY**		
Cylindropuntia [=*Opuntia*] *prolifera* (Engelm.) F.M. Knuth	coast cholla	CSS, MSS	N
Ferocactus viridescens (Torr. & A. Gray) Britton & Rose	San Diego barrel cactus	CSS	N
Mammillaria dioica K. Brandegee	fish-hook cactus	CSS, MSS	N
Opuntia littoralis (Engelm.) Cockerell.	coast prickly-pear, shore cactus	CSS	N
Opuntia oricola Philbrick	chaparral prickly-pear	CSS	N
CAPRIFOLIACEAE	**HONEYSUCKLE FAMILY**		
Lonicera sp.	honeysuckle	TPF	N
CARYOPHYLLACEAE	**PINK FAMILY**		
Cardionema ramosissimum (Weinm.) A. Nelson & J.F. Macbr.	tread lightly	SMC	N
Polycarpon tetraphyllum L.	four-leaved allseed	DH	I
Silene laciniata Cav. ssp. *laciniata* [=*Silene laciniata* ssp. *major*]	Mexican pink	SMC	N
Spergularia sp.	sand-spurrey	DH	
Stellaria media (L.) Vill.	common chickweed	TPF	I
CHENOPODIACEAE	**GOOSEFOOT FAMILY**		
Arthrocnemum subterminale [=*Salicornia subterminalis*] (Parish) Standl.	glasswort	SSM	N
Atriplex canescens (Pursh) Nutt.	four-wing saltbush, shad-scale	CSS	N
Atriplex lentiformis (Torr.) S. Watson	big saltbush	CSS	N

ATTACHMENT 2
PLANT SPECIES OBSERVED IN THE
RECONFIGURE TL 674A AT DEL MAR AND REMOVE FROM SERVICE TL 666D PROJECT SURVEY AREA
(continued)

Scientific Name	Common Name	Habitat	Origin
Atriplex semibaccata R. Br.	Australian saltbush	CSS, DH	I
Atriplex prostrata [=*Atriplex triangularis*] Boucher ex DC.	fat-hen, spearscale	SSM, EM	N
Bassia hyssopifolia (Pall.) Kuntze	five-hook bassia	EM	I
Chenopodium sp.	goosefoot	CSS	I
Chenopodium californicum (S. Watson) S. Watson	California goosefoot, California pigweed	CSS	N
Chenopodium murale L.	nettle-leaf goosefoot	CSS, DH	I
Salicornia virginica L.	pickleweed	SSM	N
Salsola sp.	tumbleweed	UDL, SMC	I
Salsola tragus L.	Russian thistle, tumbleweed	CSS, DH	I
Suaeda nigra (Raf.) J.F. Macbr.	bush seepweed	SSM	N
Suaeda taxifolia (Standl.) Standl.	woolly seablite	SSM	N
CISTACEAE	**ROCK-ROSE FAMILY**		
Crocanthemum [=*Helianthemum*] *scoparium* Nutt. Millsp.	peak rush-rose	SMC	N
CLEOMACEAE	**SPIDERFLOWER FAMILY**		
Peritoma [=*Isomeris*] *arborea* (Nutt.) H. H. Iltis	bladderpod	DH, UDL	N
CONVOLVULACEAE	**MORNING-GLORY FAMILY**		
Calystegia sp.	morning-glory	CSS	N
Calystegia macrostegia (Greene) Brummitt	morning-glory	CSS	N
Cressa truxillensis Kunth	alkali weed	SSM, DH	N
Cuscuta sp.	dodder	CSS	N
Cuscuta pacifica Costea & M. Wright var. *pacifica* [= *Cuscuta salina* var. *major*]	salicornia dodder, large-flower saltmarsh dodder	SSM	N
CRASSULACEAE	**STONECROP FAMILY**		
Crassula connata (Ruiz & Pav.) A. Berger	pygmy-weed	CSS, DH	N
Dudleya edulis (Nutt.) Moran	lady fingers	CSS	N
Dudleya lanceolata (Nutt.) Britton & Rose	lance-leaved dudleya, lanceleaf liveforever	TPF	N
Dudleya pulverulenta (Nutt.) Britton & Rose	chalk lettuce, chalk dudleya	CSS	N
CUCURBITACEAE	**GOURD FAMILY**		
Cucurbita foetidissima Kunth	buffalo gourd, calabazilla	CSS	N
Marah macrocarpa (Greene) Greene	wild cucumber	CSS	N
ERICACEAE	**HEATH FAMILY**		
Arctostaphylos glandulosa Eastw. ssp. *crassifolia* (Jeps.) P.V. Wells	Del Mar manzanita, Costa Baja manzanita	SMC	N

ATTACHMENT 2
PLANT SPECIES OBSERVED IN THE
RECONFIGURE TL 674A AT DEL MAR AND REMOVE FROM SERVICE TL 666D PROJECT SURVEY AREA
(continued)

Scientific Name	Common Name	Habitat	Origin
Comarostaphylis diversifolia (Parry) Greene ssp. *diversifolia*	summer holly	SMC	N
EUPHORBIACEAE	**SPURGE FAMILY**		
Euphorbia [=*Chamaesyce*] *albomarginata* Torr. & A. Gray	rattlesnake sandmat	CSS	N
Euphorbia [=*Chamaesyce*] *maculata* L.	spotted spurge	DH	I
Euphorbia peplus L.	petty spurge	CSS, DH	I
Ricinus communis L.	castor bean	DH	I
Stillingia linearifolia S. Watson	linear-leaf stillingia	CSS	N
FABACEAE (LEGUMINOSAE)	**LEGUME FAMILY**		
Acacia sp.	acacia	CSS	I
Acmispon americanus (Nutt.) Rydb. var. *americanus* [=*Lotus purshianus* var. *purshianus*]	Spanish-clover	DH	N
Acmispon glaber (Vogel) Brouillet [=*Lotus scoparius*]	deerweed, California broom	CSS/SMC	N
Astragalus trichopodus (Nutt.) A. Gray var. *lonchus* (M.E. Jones) Barneby	ocean locoweed	CSS, DH	N
Lupinus hirsutissimus Benth.	stinging lupine	CSS	N
Lupinus truncatus Nutt.	collar lupine	DH	N
Medicago polymorpha L.	California burclover	DH	I
Melilotus albus Medik.	white sweetclover	CSS, DH	I
Melilotus indicus (L.) All.	sourclover	CSS, DH, UDL	I
FAGACEAE	**OAK FAMILY**		
Quercus berberidifolia Liebm.	scrub oak	SMC	N
Quercus dumosa Nutt.	Nuttall's scrub oak	SMC	N
FRANKENIACEAE	**FRANKENIA FAMILY**		
Frankenia salina (Molina) I.M. Johnst.	alkali heath	SSM	N
GERANIACEAE	**GERANIUM FAMILY**		
Erodium botrys (Cav.) Bertol.	long-beak filaree	UDL, DH	I
Erodium cicutarium (L.) L'Hér. ex Aiton	redstem filaree	CSS, DH	I
Erodium moschatum (L.) L'Hér. ex Aiton	greenstem filaree	CSS, DH	I
GROSSULARIACEAE	**GOOSEBERRY FAMILY**		
Ribes speciosum Pursh	fuchsia-flowered gooseberry	CSS	N
LAMIACEAE	**MINT FAMILY**		
Marrubium vulgare L.	horehound	DH	I
Salvia apiana Jeps.	white sage	CSS, TPF	N

ATTACHMENT 2
PLANT SPECIES OBSERVED IN THE
RECONFIGURE TL 674A AT DEL MAR AND REMOVE FROM SERVICE TL 666D PROJECT SURVEY AREA
(continued)

Scientific Name	Common Name	Habitat	Origin
Salvia clevelandii (A. Gray) Greene	Cleveland sage, fragrant sage	SMC	N
Salvia columbariae Benth.	chia		N
Salvia mellifera Greene	black sage	SMC, CSS	N
MALVACEAE	**MALLOW FAMILY**		
Malacothamnus sp.	mallow	SMC	N
Malva parviflora L.	cheeseweed, little mallow	NNG, DH	I
Malvella leprosa (Ortega) Krapov.	alkali-mallow, white-weed	SSM, DH, EM	N
MOLLUGINACEAE [AIZOACEAE]	**CARPETWEED FAMILY**		
Mollugo verticillata		SMC	I
MONTIACEAE	**MONTIA FAMILY**		
Claytonia sp.	miner's lettuce	TPF	N
MYRSINACEAE	**MYRSINE FAMILY**		
Anagallis arvensis L.	scarlet pimpernel, poor-man's weatherglass	CSS	I
NYCTAGINACEAE	**FOUR O'CLOCK FAMILY**		
Mirabilis laevis [=*Mirabilis californica*] (Benth.) Curran var. *crassifolia* (Choisy) Spellenb.	wishbone bush	CSS	N
ONAGRACEAE	**EVENING-PRIMROSE FAMILY**		
Camissoniopsis [=*Camissonia*] *bistorta* (Torr. & A. Gray) W.L. Wagner & Hoch	California sun cup	CSS	N
Camissoniopsis [=*Camissonia*] *cheiranthifolia* (Spreng.) W.L. Wagner & Hoch ssp. *suffruticosa* (S. Watson) W.L. Wagner & Hoch	beach evening-primrose	DH	N
Eulobus californicus Torr. & A. Gray [=*Camissonia californica*]	false-mustard	DH	N
Oenothera elata Kunth ssp. *hirsutissima* (S. Watson) W. Dietr.	great marsh evening-primrose	CSS	N
OROBANCHACEAE	**BROOM-RAPE FAMILY**		
Castilleja foliolosa Hook. & Arn.	woolly Indidan paintbrush	TPF	N
OXALIDACEAE	**OXALIS FAMILY**		
Oxalis pes-caprae L.	Bermuda buttercup	CSS	I
PAPAVERACEAE	**POPPY FAMILY**		
Dendromecon rigida Benth.	bush poppy	SMC	N
Eschscholzia californica Cham.	California poppy	CSS	N

ATTACHMENT 2
PLANT SPECIES OBSERVED IN THE
RECONFIGURE TL 674A AT DEL MAR AND REMOVE FROM SERVICE TL 666D PROJECT SURVEY AREA
(continued)

Scientific Name	Common Name	Habitat	Origin
PHRYMACEAE [=SCROPHULARIACEAE]	**HOPSEED FAMILY**		
Mimulus aurantiacus Curtis	bush monkey-flower	UDL, SMC	N
PITTOSPORACEAE	**PITTOSPORUM FAMILY**		
Pittosporum undulatum Vent.	Victorian box, mock orange	UDL	I
PLANTAGINACEAE	**PLANTAIN FAMILY**		
Antirrhinum nuttallianum Benth. ex A. DC.	Nuttall's snapdragon	CSS	N
Plantago coronopus L.	cut-leaf plantain	DH	I
Plantago erecta E. Morris	dot-seed plantain	SMC, CSS	N
PLATANACEAE	**PLANE TREE OR SYCAMORE FAMILY**		
Platanus racemosa Nutt.	western sycamore	UDL	N
PLUMBAGINACEAE	**LEADWORT FAMILY**		
Limonium californicum (Boiss.) A. Heller	western marsh-rosemary	SSM	N
Limonium perezii (Stapf) F.T. Hubb.	Perez's marsh-rosemary	SSM, DH	I
POLEMONIACEAE	**PHLOX FAMILY**		
Navarretia sp.	holly-leaf skunkweed	SMC	N
POLYGONACEAE	**BUCKWHEAT FAMILY**		
Eriogonum fasciculatum Benth.	California buckwheat	CSS	N
Pterostegia drymarioides Fisch. & C.A. Mey.	California thread-stem, granny's hairnet	CSS	N
Rumex crispus L.	curly dock	CSS, DH, EM, SSM	I
RANUNCULACEAE	**BUTTERCUP FAMILY**		
Clematis pauciflora Nutt.	southern California clematis, few-flowered clematis	CSS	N
RHAMNACEAE	**BUCKTHORN FAMILY**		
Ceanothus tomentosus Parry	Ramona lilac	SMC	N
Ceanothus verrucosus Nutt.	wart-stemmed ceanothus	SMC, DH	N
Rhamnus crocea Nutt.	spiny redberry	SMC	N
ROSACEAE	**ROSE FAMILY**		
Heteromeles arbutifolia (Lindl.) M. Roem.	toyon, Christmas berry	SMC	N
RUBIACEAE	**MADDER OR COFFEE FAMILY**		
Galium angustifolium Nutt. ex A. Gray ssp. *angustifolium*	narrow-leaf bedstraw	CSS	N

ATTACHMENT 2
PLANT SPECIES OBSERVED IN THE
RECONFIGURE TL 674A AT DEL MAR AND REMOVE FROM SERVICE TL 666D PROJECT SURVEY AREA
(continued)

Scientific Name	Common Name	Habitat	Origin
Galium aparine L.	goose grass, stickywilly	DH	N
RUTACEAE	**RUE OR CITRUS FAMILY**		
Cneoridium dumosum (Nutt. ex Torr. & A. Gray) Baill.	bushrue	SMC	N
SALICACEAE	**WILLOW FAMILY**		
Salix gooddingii C.R. Ball.	Goodding's black willow	SWS	N
Salix lasiolepis Benth.	arroyo willow	SWS	N
SCROPHULARIACEAE	**FIGWORT FAMILY**		
Myoporum parvifolium R. Br.	slender myoporum	UDL	I
SOLANACEAE	**NIGHTSHADE FAMILY**		
Datura wrightii Regel	western Jimson weed	CSS, DH	N
Lycium californicum Nutt.	California box-thorn, California lycium	TPF	N
Nicotiana clevelandii A. Gray	Cleveland's tobacco	CSS	N
Nicotiana glauca Graham	tree tobacco	CSS, DH	I
Solanum parishii A. Heller	Parish's nightshade	CSS	N
TROPAEOLACEAE	**NASTURTIUM FAMILY**		
Tropaeolum majus L.	garden nasturtium	UDL	I
URTICACEAE	**NETTLE FAMILY**		
Parietaria hespera Hinton var. *californica* Hinton	California pellitory	CSS	N
Urtica urens L.	dwarf nettle	CSS, DH	I
ZYGOPHYLLACEAE	**CALTROP FAMILY**		
Tribulus terrestris L.	puncture vine	DH	I

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ATTACHMENT 2
PLANT SPECIES OBSERVED IN THE
RECONFIGURE TL 674A AT DEL MAR AND REMOVE FROM SERVICE TL 666D PROJECT SURVEY AREA
(continued)

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ATTACHMENT 2
PLANT SPECIES OBSERVED IN THE
RECONFIGURE TL 674A AT DEL MAR AND REMOVE FROM SERVICE TL 666D PROJECT SURVEY AREA
(continued)

HABITATS
CSS = Diegan Coastal Sage Scrub
TPF = Torrey pine forest
SMC = Southern Maritime Chaparral
SP = Saltpan
NNG = Non-native Grassland
SSM = Southern Coastal Salt Marsh
DH = Disturbed Habitat
UD = Urban/developed
UDL = Urban/developed (landscaped)
SWS = Southern Willow Scrub
EM = Emergent Marsh
MSS = Maritime succulent scrub

ORIGIN
N = Native to locality
I = Introduced species from outside locality

Attachment IV

Rare Plants Survey

Conducted 2016-2017

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April 13, 2017

Mr. Chris Terzich
San Diego Gas & Electric
8315 Century Park Court – CP21E
San Diego, California 92123

RE: 2017 Rare Plant Memo Report for the San Diego Gas & Electric Company TL674A Reconfiguration & TL666D Removal Project

Dear Mr. Terzich,

The purpose of this letter report is to present findings of the botanical surveys conducted during 2016 and 2017 for the proposed San Diego Gas & Electric (SDG&E) Company TL674A Reconfiguration & TL666D Removal Project located within the City of Del Mar and the City of San Diego, California. The purpose of the botanical surveys was to (1) compile a list of plant species that occur within the site, and (2) identify rare (special-status) plant species and map their distribution. Surveys were conducted on behalf of SDG&E.

Project Location and Description

The Proposed Project is located in the northwestern portion of the City of San Diego and in the City of Del Mar (Figure 1).The primary activity associated with the Proposed Project involves the removal of approximately six miles of existing overhead 69-kV transmission line (TL666D) between the existing Del Mar Substation (located northwest of the intersection of I-5 and Via De La Valle in the City of San Diego) and an existing steel pole (located near the intersection of Vista Sorrento Parkway and Pacific Plaza Drive in the City of San Diego) (Figure 2). In order to remove TL666D from service, a 69 kV transmission line (TL674A) will be reconfigured, extended to the Del Mar Substation, and renamed as TL6973 (Figure 2). In addition, two portions of separate existing 12 kV distribution lines will be converted from an overhead to underground configuration. The first portion (C510) will be removed from San Dieguito Lagoon and placed underground within San Dieguito Drive and Racetrack View Drive in the cities of Del Mar and San Diego (Figure 2). The second portion (C738) will be removed from Peñasquitos Lagoon and placed underground within the Sorrento Valley Pedestrian/Multi-Use Path (Figure 2).

Site Description

For the purpose of this report the rare plant survey report, survey area is referred to as the Biological Study Area (BSA). The BSA includes transmission line TL674A, transmission line TL666D, distribution line C510, distribution line C738, and associated project structures, access areas, and work areas (Figures 1 and 2). The BSA encompassed a 150-foot buffer around linear features such as transmission lines and a 100-foot buffer around nonlinear features (such as pole work areas, stringing site work areas, above/below ground temporary work areas, helicopter drop zones and landing zones, and staging yards).The BSA is approximately eight miles long and extends from Via de la Valle at its most northern location

and east of I-5 just west of Vista Sorrento Parkway at its most southern location. The BSA encompasses approximately 325 acres.

Fourteen vegetation communities and other cover types were identified within the BSA and consist of six upland vegetation types, four riparian and wetland type, and four other cover types (Figure 3). Upland vegetation communities within the BSA include Torrey pine forest, scrub oak chaparral, southern maritime chaparral, southern mixed chaparral, diegan coastal sage scrub, and diegan coastal sage scrub – coastal form. Riparian and wetland communities within the BSA include southern arroyo willow riparian forest, coastal and valley freshwater marsh, southern coastal salt marsh and open water/beach/salt pan/mudflat.

Survey Methodology

A floristic-level rare plant survey was performed within the BSA in September 2016 and March 2017 in accordance with survey protocols set forth by *Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed, and Candidate Plants* (USFWS 2000); *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFG 2009)[1]; and *CNPS Botanical Survey Guidelines* (CNPS 2001). The survey was conducted using meandering transects through all areas with suitable habitat. Some areas were inaccessible due to dense shrubs, cliffs, and/or deep water such as the islands in San Dieguito Lagoon. In such cases, binoculars were used to assess the area. Binocular surveys were adequate for larger and more distinct species such as summer holly (*Comarostaphylis diversifolia ssp. diversifolia*) and Torrey pine (*Pinus torreyana ssp. torreyana*), but had limitations for smaller plants such as estuary sea-blite (*Suaeda esteroa*). Phenology during the September 2016 and March 2017 survey was adequate to detect fall and spring-blooming species.

Plant species detected within the BSA in September 2016 were recorded and the locations of special status plants were mapped with a hand-held GPS unit with 5 meter accuracy. Plant species detected within the BSA in March 2017 were mapped using a Trimble R1 GNSS Receiver with submeter accuracy to improve mapping in refined work areas that were not available in September 2016. Data was collected using the ArcCollector mobile application and was synced into ArcGIS for analysis. For large occurrences of special status plant species, a polygon was drawn in ArcCollector to map the occupied area of the species. At each rare plant species location recorded, the botanist recorded the phenology of the rare plant species as vegetative, flowering, blooming or senescent and estimated the number of individuals present.

Scientific nomenclature of plant species in this rare plants survey report follows the Jepson eFlora (Jepson Flora Project 2016) or, when CRPR listed species are not recognized in Jepson, the CNPS Rare and Endangered Plant Inventory (CNPS 2016). Common names of plant species follow the CNPS Rare and Endangered Plant Inventory (CNPS 2016) for CRPR listed species and Calflora (Calflora 2016) for all other species.

[1] This document replaced the CDFG document *Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened and Endangered Plants and Natural Communities*.

Results

Approximately 344 plant species (220 native, 123 nonnative, and 1 unknown[2] species) were detected within the BSA. A total of 37 special-status plant species have potential to occur in the BSA based on database searches, literature review, and observations during botanical surveys (Table 1). Of these 37 special-status plant species, 15 were detected within the BSA (Table 1, Figure 4). One federally listed plant species was found within the BSA during the survey; however, no state listed species were found. Fourteen nonlisted special status species were detected within the BSA, including nine species listed as CRPR 1B and five listed as CRPR 2B were detected within the BSA. A discussion of each of special status plant species detected within the BSA is presented below.

Del Mar Manzanita - *Arctostaphylos glandulosa* ssp. *crassifolia*

Del Mar manzanita is listed as endangered by USFWS (USFWS 1996), is a CRPR 1B.1 species (CNPS 2016), and is a covered species under SDG&E's NCCP. Approximately 465 individuals of Del Mar manzanita were mapped within the BSA from Crest Canyon Open Space Park and the Torrey Pines State Natural Reserve Extension Area during 2016 and 2017 surveys (Figure 4). This species grows in the following vegetation communities: Diegan coastal sage scrub, disturbed habitat, nonnative vegetation, southern maritime chaparral, southern mixed chaparral, Torrey pine forest, and urban/developed. This species was also detected during the 2014 RECON surveys (Figure 4) (RECON 2014a; 2014b).

South Coast Saltscale - *Atriplex pacifica*

South coast saltscale is a CRPR 1B.2 species (CNPS 2016). This species grows on coastal bluffs that occur throughout the upland areas of the BSA. Two plants were detected within an existing access road at the northeast end of the BSA during 2016 and 2017 surveys (Figure 4). This species was not detected during 2014 surveys conducted by RECON.

Wart-stemmed Ceanothus – *Ceanothus verrucosus*

Wart-stemmed ceanothus is a CRPR 2B.2 species (CNPS 2016) and is a covered species under SDG&E's NCCP. Approximately 333 individuals of wart-stemmed ceanothus were mapped within the BSA where it grows in southern mixed chaparral, southern maritime chaparral, Torrey pine woodlands, and nonnative vegetation south of San Dieguito Lagoon during 2016 and 2017 surveys (Figure 4). This species was also detected during the 2014 RECON surveys (Figure 4) (RECON 2014b).

Orcutt's Pincushion – *Chaenactis glabriuscula* var. *orcuttiana*

Orcutt's pincushion is a CRPR 1B.1 species (CNPS 2016). It is a small annual herb in the sunflower family (Asteraceae) that grows from 4 to 12 inches tall and has yellow flowers from January through August. Approximately 350 individuals of Orcutt's pincushion were mapped within the BSA where it grows in southern maritime chaparral and Diegan coastal

[2] One plant identified to a genus that has both native and non-native species known to occur near the BSA.

sage scrub in Torrey Pines State Natural Reserve Extension Area and south of Los Peñasquitos Lagoon during 2016 and 2017 surveys (Figure 4). This species was also detected during the 2014 RECON surveys (Figure 4) (RECON 2014b)..

Summer Holly – *Comarostaphylis diversifolia ssp. diversifolia*

Summer holly is a CRPR 1B.2 species (CNPS 2016). This evergreen shrub in the heath family (Ericaceae) reaches heights of 15 feet and produces small white flowers from April through June (Munz 1974). Approximately 50 individuals of summer holly were mapped within the BSA growing in southern mixed chaparral habitat within Crest Canyon Open Space Park during 2016 and 2017 surveys (Figure 4). This species was also detected during the 2014 RECON surveys (Figure 4) (RECON 2014b).

Del Mar Mesa Sand Aster – *Corethrogyne filaginifolia* var. *linifolia*

Del Mar mesa sand aster is a CRPR 1B.1 species (CNPS 2016) and is a covered species under SDG&E's NCCP. Approximately 585 individuals of Del Mar sand aster were mapped between San Dieguito Lagoon and Los Penasquitos Lagoon growing scattered in openings in southern mixed chaparral, southern maritime chaparral, coastal sage scrub, nonnative vegetation, and Torrey pine forest during 2016 and 2017 surveys (Figure 4). The phenology was mostly senescent during surveys making it difficult to confirm the variety of all plants. However, there were usually a few plants in flower or fruit in each population. All *Corethrogyne filaginifolia* plants encountered during the BSA that were flowering or fruiting were confirmed to be var. *linifolia*. This species was also detected during the 2014 RECON surveys (Figure 4) (RECON 2014b).

Cliff Spurge - *Euphorbia misera*

Cliff spurge is a CRPR 2B.2 species (CNPS 2016). Habitat within the BSA for this species includes Diegan coastal sage scrub. Approximately 14 individuals were found adjacent to the Torrey Pines State Beach parking lot during 2016 and 2017 surveys (Figure 4). This species was not detected during 2014 surveys conducted by RECON.

Coast Barrel Cactus – *Ferocactus viridescens*

Coast barrel cactus is a CRPR 2B.1 species (CNPS 2016) and is a covered species under SDG&E's NCCP. Approximately 95 individuals of coast barrel cactus were mapped within the BSA growing in openings in southern maritime chaparral, Torrey pine forest, and Diegan coastal scrub from the Torrey Pines State Natural Reserve Extension Area southward during 2016 and 2017 surveys (Figure 4). This species was also detected during the 2014 RECON surveys (Figure 4) (RECON 2014RP).

Beach goldenaster – Heterotheca sessiliflora *ssp.* sessiliflora

Beach goldenaster is a CRPR 1B.1 species (CNPS 2016). This herbaceous perennial in the sunflower family (Asteraceae) grows from 7 to 50 inches in height and ranges from decumbent to erect in habit (Baldwin et al. 2012). Approximately 85 individuals of beach

goldenaster were mapped within the BSA growing in openings in southern mixed chaparral in Crest Canyon Open Space Park during 2016 and 2017 surveys (Figure 4). Most plants were flowering during the 2016 fall survey making them easy to see and map. Approximately 12 individuals were detected during the 2014 RECON surveys (Figure 4) (RECON 2014b).

San Diego Marsh-Elder – Iva hayesiana

San Diego marsh-elder is a CRPR 2B.2 species (CNPS 2016). Approximately 85 individuals of San Diego marsh-elder were mapped within the BSA during 2016 and 2017 surveys. Within the BSA, San Diego marsh-elder grows in southern coastal salt marsh, coastal and valley freshwater marsh, and Diegan coastal sage scrub restoration area in Los Penasquitos Lagoon and adjacent to the road on the east edge of the lagoon (Figure 4). This species was also detected during the 2014 RECON surveys (Figure 4) (RECON 2014b).

Sea Dahlia – *Leptosyne maritima*

Sea dahlia is a CRPR 2B.2 species (CNPS 2016). Approximately 602 individuals of sea dahlia were mapped within the BSA during 2016 and 2017 surveys (Figure 4). Observations were primarily in southern maritime chaparral and Torrey pine forest in the southern part of Torrey Pines State Natural Reserve Extension Area. This species was also detected during the 2014 RECON surveys (Figure 4) (RECON 2014b).

Coast Woolly-Heads – *Nemacaulis denudata var. denudata*

Coast woolly-heads is a CRPR 1B.1 species (CNPS 2016). This species prefers coastal dunes, especially well-protected dunes with minimal human disturbance. Approximately 14 individuals were found adjacent to the Torrey Pines State Beach parking lot during 2016 and 2017 surveys (Figure 4). This species was not detected during 2014 surveys conducted by RECON.

Torrey Pine – *Pinus torreyana* ssp. *torreyana*

Torrey pine is a CRPR 1B.2 species (CNPS 2016) and a covered species under SDG&E's NCCP. Approximately 276 individuals of Torrey pine were mapped throughout the BSA growing in Diegan coastal sage scrub, southern maritime chaparral, southern mixed chaparral, Torrey pine forest, nonnative vegetation, and developed areas during 2016 and 2017 surveys (Figure 4). This species was also detected during the 2014 RECON surveys (Figure 4) (RECON 2014b).

Nuttall's Scrub Oak – Quercus dumosa

Nuttall's scrub oak is a CRPR 1B.1 species (CNPS 2016). Approximately 88 individuals of Nuttall's scrub oak were mapped within the BSA growing in Diegan coastal sage scrub, scrub oak chaparral, southern maritime chaparral, southern mixed chaparral, Torrey pine forest, and nonnative vegetation from Crest Canyon Open Space Park southward during

2016 and 2017 surveys (Figure 4). This species was also detected during the 2014 RECON surveys (Figure 4) (RECON 2014b).

Estuary Sea-Blite – *Suaeda esteroa*

Estuary sea-blite is a CRPR 1B.2 species. Approximately 1,004 individuals of estuary sea-blite were mapped within the BSA growing in coastal salt marsh habitat in San Dieguito Lagoon during 2016 and 2017 surveys (Figure 4). The phenology was vegetative and flowering during the fall survey. Plants were mostly undetectable during the spring survey. Flowers were used to confirm the species identification. This species was not detected during 2014 surveys conducted by RECON.

Table 1
Sensitive Plant Species Detected or with Potential to Occur within the BSA

Common Name	Scientific Name	Sensitivity Status[1]	General Habitat Description (CNPS 2016)	Flowering Period	Findings[2]	Probability of Occurrence
Nuttall's acmispon (previously Nuttall's lotus)	*Acmispon prostrates (*previously *Lotus nuttallianus)*	CRPR: 1B.1 NCCP: Covered	Coastal dunes and sandy coastal scrub. Elevation 0–33 feet.	Annual/perennial herb, blooms March–July	Not Detected; High Potential	Suitable habitat present in upland habitat types – particularly Diegan coastal sage scrub located along the coast. The closest known occurrence of this species is immediately adjacent to the BSA on the south side of the Torrey Pines State Beach parking lot. Could possibly be found in sandy areas throughout BSA, but more likely closer to the coast. This species would likely be undetectable during a fall survey. This species was most recently detected in 2014 in the Torrey Pines State Natural Reserve Extension Area, approximately 0.85 mile west of the BSA.
spineshrub	*Adolphia californica*	CRPR: 2.B1	Chaparral, coastal scrub, and valley and foothill grassland/clay soils. Elevation 147–2,430 feet.	Deciduous shrub, blooms December–May	Not Detected; Moderate Potential	Suitable habitat is limited in the BSA. Habitat present north of Via de la Valle and scattered areas of short shrubs throughout upland areas in BSA outside of the actual project footprint. This species was most recently detected in 2008 on the south side of Gonzales Canyon, approximately 1 mile southeast of the BSA.

Common Name	Scientific Name	Sensitivity Status[1]	General Habitat Description (CNPS 2016)	Flowering Period	Findings[2]	Probability of Occurrence
Shaw's agave	*Agave shawii* var. *shawii*	CRPR: 2B.1 NCCP: Covered, NE	Coastal bluff scrub, coastal scrub, and maritime succulent scrub. Elevation 10–395 feet.	Evergreen shrub, blooms September –May	Not Detected Low Potential	Four individuals were identified as this species during 2014 survey in a restoration area north of Carmel Mountain Road (RECON 2014b). These plants have too narrow of leaves and too small of teeth to be *Agave shawii*. These were found planted in a restoration area and appear to be some species of horticultural agave, possibly *Agave americana*. This species is not known to naturally occur near the BSA and is more common in southern San Diego County along the coast. The most recent detection for this species was in 2008, 0.75 mile southwest of the BSA in Torrey Pines State Natural Reserve Extension Area.
aphanisma	*Aphanisma blitoides*	CRPR: 1B.2 NCCP: Covered, NE	Coastal bluff scrub, coastal dunes, and coastal scrub/sandy. Elevation 3–920 feet.	Annual herb, blooms March–June	Not Detected; Low Potential	Minimal suitable habitat present in the upland habitat BSA; however, the most recent detection of this species was in 1973 in Torrey Pines State Natural Reserve Extension Area outside of the BSA.
Del Mar manzanita	*Arctostaphylos glandulosa* ssp. *crassifolia*	ESA: Endangered CRPR: 1B.1 NCCP: Covered	Chaparral/maritime, sandy. Elevation 0–1,200 feet.	Evergreen shrub, blooms December–June	Detected	Approximately 465 plants were detected within maritime chaparral in the BSA between the lagoons. This species was also detected in the 2014 RECON survey (RECON 2014b).

Common Name	Scientific Name	Sensitivity Status[1]	General Habitat Description (CNPS 2016)	Flowering Period	Findings[2]	Probability of Occurrence
coastal dunes milkvetch	*Astragalus tener* var. *titi*	ESA: Endangered CESA: Endangered CRPR: 1B.1 NCCP: Covered, NE	Coastal bluff scrub, coastal dunes, coastal prairie. Elevation 0–150 feet.	Annual herb, blooms March–May	Not Detected; Low Potential	Minimal suitable habitat present. Suitable habitat types are not represented in the BSA. This species would not likely be detected during a fall survey. This species could possibly occur within upland areas in the BSA. The most recent detection of this species was in 1975 in Soledad Valley about 1 mile southwest of the BSA.
Coulter's saltbush	*Atriplex coulteri*	CRPR: 1B.2	Coastal bluff scrub, coastal dunes, and coastal scrub, valley and foothill grassland. Elevation 3–1,300 feet.	Perennial herb, blooms March–October	Not Detected; Low Potential	Minimal suitable habitat present in the BSA and preferred habitat types are not present in the BSA This species is most likely to be found in upland areas of the BSA. There are no recent detections of this species in the vicinity of the BSA.
south coast saltscale	*Atriplex pacifica*	CRPR: 1B.2	Coastal bluff scrub, coastal dunes, coastal scrub, and playas. Elevation 0–450 feet.	Annual herb, blooms March–October	Detected	Two plants were detected within an existing access road at the northeast end of the BSA.

Common Name	Scientific Name	Sensitivity Status[1]	General Habitat Description (CNPS 2016)	Flowering Period	Findings[2]	Probability of Occurrence
Encinitas baccharis	*Baccharis vanessae*	ESA: Threatened CESA: Endangered CRPR: 1B.1 NCCP: Covered, NE	Maritime chaparral and cismontane woodland Elevation 200–2,360 feet.	Deciduous shrub, blooms August–November	Not Detected; Low Potential	Suitable habitat present in the BSA, located west of I-5 between Carmel Valley Road and Del Mar Heights Road. The most recent detection for this species was a single plant in the 1990s, located on the south side of Carmel Valley, 0.9 mile east of the BSA.
golden-spined cereus	*Bergerocactus emoryi*	CRPR: 2B.2	Closed-cone coniferous forest, chaparral, coastal scrub. Elevation: 10–1,300 feet.	Perennial, stem succulent, blooms May–June	Not Detected; Moderate Potential	Suitable habitat present throughout the BSA in upland areas west of I-5. This species is most likely to be found in upland areas of the BSA. The most recent detection for this species was in 1998 in the Torrey Pines State Natural Reserve Extension Area about 0.75 mile southwest of the BSA.
San Diego goldenstar	*Bloomeria clevelandii*	CRPR: 1B.1 NCCP: Covered	Chaparral, coastal scrub, valley and foothill grasslands, vernal pools. Elevation 165–1,525 feet.	Perennial bulbiferous herb, blooms April–May	Not Detected; Moderate Potential	Suitable habitat present in the BSA, particularly along coastal and wetland habitat types. This species would not likely be detected during a fall survey. It also has potential to occur throughout much of the upland habitat types of the BSA. This species was last detected in 2001, approximately 1 mile east- northeast of the BSA, south of Carmel Mountain Road.

Common Name	Scientific Name	Sensitivity Status[1]	General Habitat Description (CNPS 2016)	Flowering Period	Findings[2]	Probability of Occurrence
wart-stemmed ceanothus	*Ceanothus verrucosus*	CRPR: 2B.2 NCCP: Covered	Chaparral. Elevation 3–1,200 feet.	Evergreen shrub, blooms December–May	Detected	Approximately 333 plants detected within maritime chaparral in the BSA south of San Dieguito Lagoon. This species was also detected in the 2014 RECON survey (RECON 2014b).
southern tarplant	*Centromadia parryi* ssp. *australis*	CRPR: 1B.1	Marshes and swamps, valley and foothill grassland, and vernal pools. Elevation 0–1,300 feet.	Annual herb, blooms May–November	Not Detected; High Potential	Suitable habitat present in the BSA along wetland habitat types and coastal valleys. This species is most likely to be found in flats and roadsides adjacent to lagoons. This species was most recently detected in 2005 in San Dieguito Lagoon, less than 0.10 mile northeast of the BSA.
Orcutt's pincushion	*Chaenactis glabriuscula* var. *orcuttiana*	CRPR: 1B.1	Coastal bluff scrub and coastal dunes. Elevation 0–328 feet.	Annual herb, blooms January–August	Detected	Approximately 350 individuals of Orcutt's pincushion were detected within the BSA where it grows in southern maritime chaparral and Diegan coastal sage scrub in Torrey Pines State Natural Reserve Extension Area and south of Los Peñasquitos Lagoon. The 2014 RECON survey found approximately 100 plants (RECON 2014b). These are intermediates to var. *glabriuscula*. Flora of North America notes that it appears to intergrade with var. *glabriuscula* shortly inland (Flora of North America 1993).

Common Name	Scientific Name	Sensitivity Status[1]	General Habitat Description (CNPS 2016)	Flowering Period	Findings[2]	Probability of Occurrence
Orcutt's spineflower	*Chorizanthe orcuttiana*	ESA: Endangered CESA: Endangered CRPR: 1B.1 NCCP: Covered, NE	Sandy openings in closed-cone coniferous forest, maritime chaparral, and coastal scrub. Elevation 10–410 feet.	Annual herb, blooms March–May	Not Detected; High Potential	Suitable habitat present west of I-5 in southern maritime chaparral and Diegan coastal sage scrub. This species was most recently detected in 2011, in the Torrey Pines State Natural Reserve Extension Area, along Gully Trail less than 0.2 mile west of the BSA.
long-spined spineflower	*Chorizanthe polygonoides* var. *longispina*	CRPR: 1B.2	Often on clay in chaparral, coastal scrub, meadows, seeps, grasslands, and vernal pools. Elevation 100–5,000 feet.	Annual herb, blooms April–July	Not Detected; High Potential	Suitable habitat present throughout the BSA, particularly west of I-5. This species was most recently detected in 2010, along the gated dirt road south of restrooms and open area between road and north branch of Broken Hill Trail in Torrey Pines State Natural Reserve Extension Area; 0.75 mile southwest of the BSA.
summer holly	*Comarostaphylis diversifolia* ssp. *diversifolia*	CRPR: 1B.2	Chaparral and cismontane woodland. Elevation 90–1,700 feet.	Evergreen shrub, blooms April–June	Detected	Approximately 50 plants present within chaparral in Crest Canyon Open Space Park. This species was also detected in the 2014 RECON survey (RECON 2014b).
Del Mar Mesa sand aster	*Corethrogyne filaginifolia* var. *linifolia*	CRPR: 1B.1 NCCP: Covered	Coastal bluff and coastal scrub. Elevation 20–500 feet.	Perennial herb, blooms May–September	Detected	Approximately 585 plants present in both disturbed and natural openings south of San Dieguito Lagoon. There is also good potential for it to occur along Via de la Valle. *C. filaginifolia* var. *linifolia* has been lumped with the more common *C. filaginifolia* var. *filaginifolia* in the most recent *Jepson Manual* (JFP 2016). This change is

Common Name	Scientific Name	Sensitivity Status[1]	General Habitat Description (CNPS 2016)	Flowering Period	Findings[2]	Probability of Occurrence
						controversial and, pending ongoing research, *C. filaginifolia* var. *linifolia* retains its CNPS ranking as a sensitive species. This species was also detected in the 2014 RECON survey (RECON 2014b).
short-leaved dudleya	*Dudleya brevifolia*	CESA: Endangered CRPR: 1B.1 NCCP: Covered, NE	Torrey sandstone in openings of maritime chaparral and coastal scrub. Elevation 100–820 feet.	Perennial herb, blooms April–May	Not Detected; Moderate Potential	Minimal suitable habitat present west of I-5 in southern maritime chaparral and Diegan coastal sage scrub. Could possibly be found in sandstone areas south of San Dieguito Lagoon. This species was most recently detected in 2011, in Torrey Pines State Reserve, about 0.75 mile southwest of the BSA.
Palmer's goldenbush	*Ericameria palmeri* var. *palmeri*	CRPR: 1B.1 NCCP: Covered, NE	Mesic chaparral and coastal scrub. Elevation 100–1,970 feet.	Evergreen shrub, blooms July–November	Not Detected; Low Potential	Although suitable habitat present; this species most recent occurrence in the vicinity of the BSA was in 1990, in Carmel Valley about 1 mile southwest of the BSA.
San Diego button-celery	*Eryngium aristulatum* var. *parishii*	ESA: Endangered CESA: Endangered CRPR: 1B.1 NCCP: Covered	Mesic coastal scrub, grasslands, and vernal pools.	Annual/perennial herb, blooms April–June	Not Detected; Low Potential	Suitable habitat is minimal and of marginal quality within the BSA. The best suitable habitat for this species occurs along seasonally wet areas near Via de la Valle. This species was most recently detected in 2009 along East Ocean Air Drive, about 0.8 mile east-northeast of the BSA.

Common Name	Scientific Name	Sensitivity Status[1]	General Habitat Description (CNPS 2016)	Flowering Period	Findings[2]	Probability of Occurrence
cliff spurge	*Euphorbia misera*	CRPR: 2B.2	Coastal bluff scrub, coastal scrub, and Mojavean desert scrub. Elevation 30–150 feet.	Deciduous shrub, blooms December–October	Detected;	Approximately 14 individuals were found adjacent to the Torrey Pines State Beach parking lot.
coast wallflower	*Erysimum ammophilum*	CRPR 1B.2 NCCP: Covered, NE	Chaparral (maritime), coastal dunes, coastal scrub. Elevation 0–197 feet.	Perennial herb, blooms February–June	Not Detected; Low Potential	Plants mapped during 2014 RECON survey (RECON 2014b); however, CNPS notes: "Occurrences from SDG Co. previously included in this species are *E. capitatum* ssp. *capitatum*" as opposed to *Erysimum ammophilum* (CNPS 2016). Jepson notes "Plants intermediate to *Erysimum capitatum* were formerly in southern coast." The two species can be distinguished based on fruit with *E. ammophilum* having seeds winged all around and *E. capitatum* having seeds winged only at tip or not winged (JFP 2016). Plants mapped by RECON in 2014 were in fruit during the 2016 fall survey. The seeds of these plants were not winged and thus are more appropriately considered *E. capitatum.*

Common Name	Scientific Name	Sensitivity Status[1]	General Habitat Description (CNPS 2016)	Flowering Period	Findings[2]	Probability of Occurrence
coast barrel cactus	*Ferocactus viridescens* var. *viridescens*	CRPR: 2B.1 NCCP: Covered	Chaparral, coastal scrub, valley and foothill grassland, and vernal pools. Elevation 33–493 feet.	Stem succulent, blooms May–June	Detected	Approximately 95 individuals present in the coastal scrub and maritime chaparral communities from the Torrey Pines Reserve Extension Area southward in the BSA. This species was also detected in the 2014 RECON survey (RECON 2014b).
Palmer's frankenia	*Frankenia palmeri*	CRPR: 2B.1	Coastal dunes, marshes and swamps (coastal salt), and playas. Elevation 0–33 feet.	Perennial herb, blooms May–June	Not Detected; High Potential	Suitable habitat present for this species around the lagoons. The most recent detection for this species is 2010 record located along San Dieguito Lagoon about 0.75 mile east of the BSA.
beach goldenaster	*Heterotheca sessiliflora* ssp. *sessiliflora*	CRPR: 1B.1	Chaparral (coastal), coastal dunes and coastal scrub. Elevation 0–197 feet.	Perennial herb, blooms March–December	Detected	Approximately 85 individuals detected in the coastal scrub and maritime chaparral communities between the lagoons in the BSA. This species was also detected in the 2014 RECON survey (RECON 2014b).

Common Name	Scientific Name	Sensitivity Status[1]	General Habitat Description (CNPS 2016)	Flowering Period	Findings[2]	Probability of Occurrence
decumbent goldenbush	*Isocoma menziesii* var. *decumbens*	CRPR: 1B.1	Chaparral and coastal scrub (sandy, often disturbed areas). Elevation 33–443 feet.	Perennial shrub, blooms April–November	Not Detected; Moderate Potential	Suitable habitat present in upland areas that contain sandy habitat. The closest and most recent record of this species is a 2004 occurrence along the north shore of Peñasquitos Lagoon about 0.2 mile west of the BSA. Varieties within this species are taxonomically problematic. Populations are extremely variable and many plants don't clearly fit under any one variety. Plants in the BSA fit most closely with the non-special-status variety *vernonoides*.
San Diego marsh-elder	*Iva hayesiana*	CRPR: 2B.2	Marshes, swamps, and playas. Elevation 33–1,640 feet.	Perennial herb, blooms April–October	Detected	Approximately 85 individuals detected within the brackish marsh and salt marsh communities in the Los Peñasquitos Lagoon portion of the BSA. This species was also detected in the 2014 RECON survey (RECON 2014b).
Coulter's goldfields	*Lasthenia glabrata* ssp. *coulteri*	CRPR: 1B.1	Marshes and swamps, playas, and vernal pools. Elevation 3–4,000 feet.	Annual herb, blooms February–June	Not Detected; Low Potential	Minimal low-quality habitat present. The most recent detection for this species was in 1969 in the Sorrento Slough on the edge of the BSA.

Common Name	Scientific Name	Sensitivity Status[1]	General Habitat Description (CNPS 2016)	Flowering Period	Findings[2]	Probability of Occurrence
sea dahlia	*Leptosyne maritima*	CRPR: 2B.2	Coastal bluff and coastal scrub. Elevation 20–500 feet.	Perennial herb, blooms March–May	Detected	Approximately 602 individuals of sea dahlia were mapped within the BSA. Detections were primarily located in southern maritime chaparral and Torrey pine forest in the south part of Torrey Pines State Natural Reserve Extension Area. Approximately 140 individuals found during 2014 RECON survey from the Torrey Pines State Natural Reserve Extension Area to Carmel Valley Road (RECON 2014b)..
coast woolly-heads	*Nemacaulis denudata* var. *denudata*	CRPR: 1B.1	Coastal dunes. Elevation 0–300 feet.	Annual herb, blooms April–September	Detected	Approximately 14 individuals were found adjacent to the Torrey Pines State Beach parking lot.
California orcutt grass	*Orcuttia californica*	CRPR: 1B.1 NCCP: Covered	Vernal pools. Elevation 50–2,165 feet.	Annual herb, blooms April–August	Not Detected; Low Potential	Marginal habitat in ditch along Via de la Valle. The most recent detection for this species was in 2009 in the Peñasquitos Substation, about 0.8 mile east-northeast of the BSA; south of intersection of Carmel Mountain Road and Ocean Air Drive.

Common Name	Scientific Name	Sensitivity Status[1]	General Habitat Description (CNPS 2016)	Flowering Period	Findings[2]	Probability of Occurrence
Brand's star phacelia	*Phacelia stellaris*	CRPR: 1B.1	Coastal dunes and coastal scrub. Elevation 10–3,440 feet.	Annual herb, blooms March–June	Not Detected; Low Potential	Suitable habitat occurs in the upland coastal sage scrub habitat types of the BSA. A known historical location for this species occurs in Torrey Pines State Natural Reserve Extension Area 0.5 mile southwest of the BSA, but the date of detection is unknown. Given the missing date, it's assumed that this point is more than 25 years old.
Torrey pine	*Pinus torreyana* var. *torreyana*	CRPR: 1B.2 NCCP: Covered	Closed-cone coniferous forest and chaparral/ sandstone. Elevation 98–525 feet.	Evergreen coniferous tree	Detected	Approximately 276 individuals are scattered throughout the BSA south of San Dieguito Lagoon. This species was also detected in the 2014 RECON survey (RECON 2014b).
Nuttall's scrub oak	*Quercus dumosa*	CRPR: 1B.1	Closed-cone coniferous forest, chaparral, and coastal scrub. Elevation 49–1,312 feet.	Evergreen shrub, blooms February–April	Detected	Approximately 88 individuals were detected and are scattered throughout the BSA in upland areas south of San Dieguito Lagoon. This species was also detected in the 2014 RECON survey (RECON 2014b).
chaparral ragwort	*Senecio aphanactis*	CRPR: 2B.2	Chaparral, cismontane woodland and coastal scrub. Elevation 50–2,625 feet.	Annual herb, blooms January–May	Not Detected; Low Potential	Minimal suitable habitat is present in the upland coastal scrub habitat types of the BSA. . The most recent detection for this species was in 1894 in Del Mar, 0.75 mile west-southwest of the BSA.

Common Name	Scientific Name	Sensitivity Status[1]	General Habitat Description (CNPS 2016)	Flowering Period	Findings[2]	Probability of Occurrence
estuary sea-blite	*Suaeda esteroa*	CRPR: 1B.2	Marshes and swamps. Elevation 0–16 feet.	Perennial herb, blooms May–January	Detected	Approximately 1,004 individuals are scattered throughout the southern edge of San Dieguito Lagoon.

[1] Sensitivity Status Key
ESA: Federal Endangered Species Act (ESA) Endangered
CESA: California Endangered Species Act (CESA) Endangered
CRPR: California Rare Plant Rank:
1B: Plants rare, threatened, or endangered in California and elsewhere
2B: Plants rare, threatened, or endangered in California, but more common elsewhere

Decimal notations: .1 – Seriously endangered in California, .2 – Fairly endangered in California, .3 – Not very endangered in California
NCCP: Covered Species in SDG&E NCCP Subregional Natural Community Conservation Plan (SDG&E 1995)
NE: Narrow Endemic in SDGE NCCP

[2] Findings:
Detected – Species detected during Proposed Project surveys
Not detected – Species not detected during Proposed Project surveys
Low potential – Suitable habitat present, but highly disturbed and/or extremely limited in area and/or no species occurrences recently (i.e., last 25 years) recorded within the vicinity
Moderate potential – Suitable habitat present, but moderately disturbed or limited in area and species known to recently (i.e., last 25 years) occur within the vicinity
High potential – Suitable habitat present, and species known to recently (i.e., last 25 years) occur within the vicinity or previously recorded in the BSA

If you have any questions or comments regarding this letter report, please contact me at (619) 610-7654.

Sincerely,

Michael Anguiano
Senior Biologist
michael.anguiano@aecom.com

Attachments:
Figure 1 – Regional and Vicinity Map
Figure 2 – Proposed Project Location and Biological Study Area Overview
Figure 3 – Vegetation Communities and Cover Types within Biological Study Area
Figure 4 – Special Status Plant Species within Biological Study Area and Vicinity
Appendix A – List of Plant Species Detected within the BSA

Certification Statement

The qualified botanist who conducted rare plant surveys for SDG&E's proposed TL674A Reconfiguration & TL666D Removal Project certifies that the information in this survey report fully and accurately represents the work performed. The signatures of the botanist who conducted the surveys (September 21 – 29, 2016 and March 17 – 20, 2017) are included below.

Keir Morse
Botanist

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RECON 2014b. Rare Plants Survey for the Reconfigure TL 674A at Del Mar and Remove from Service TL 666D Project (RECON Number 7203-1)

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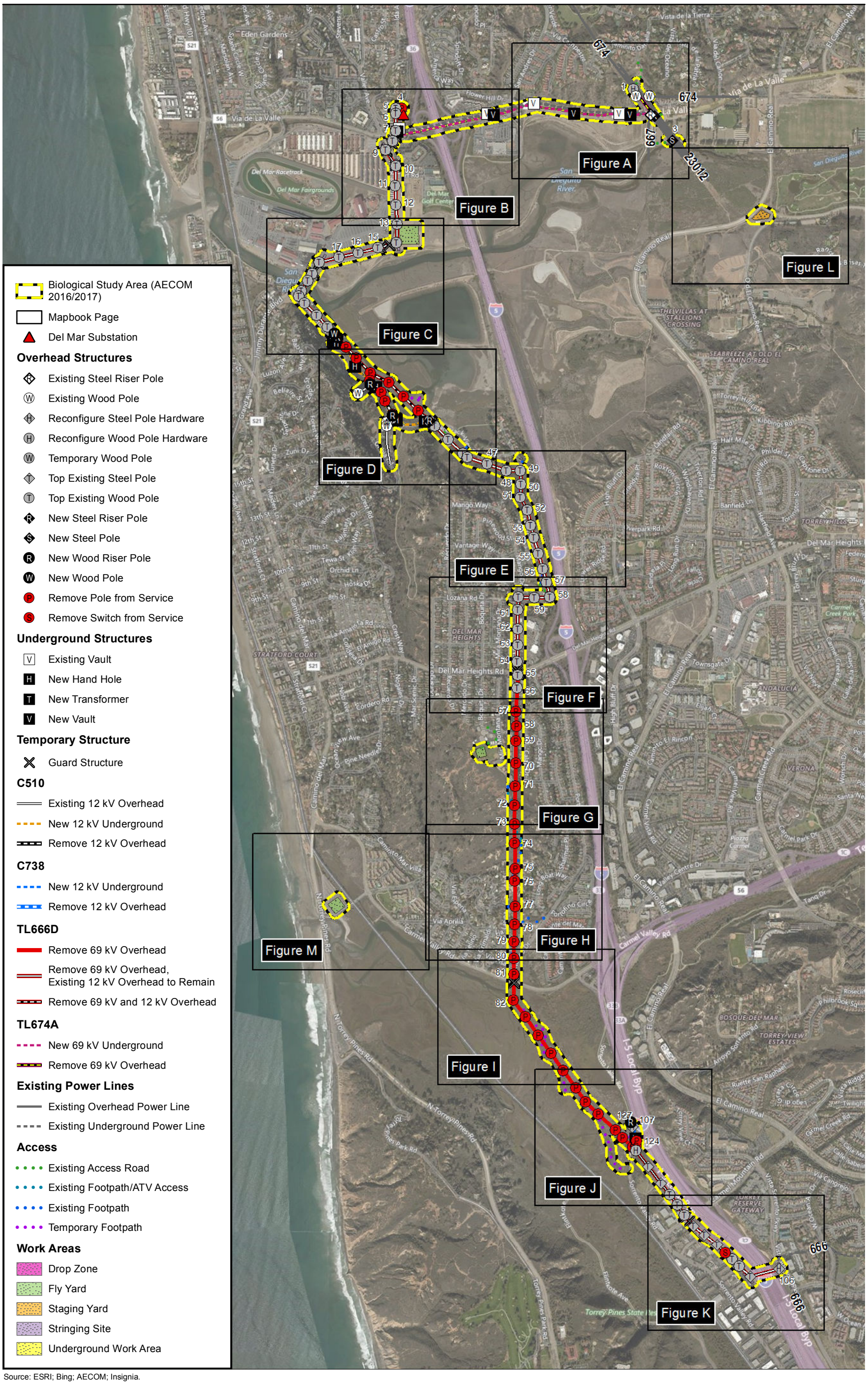
FIGURES

Source: ESRI, AECOM.

1.5 0 1.5 Miles

1:95,040 1 in = 1.5 miles

Figure 1
Regional and Vicinity Map



Source: ESRI; Bing; AECOM; Insignia.

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1:24,000 1 in = 2,000 feet

Figure 2
Proposed Project Location and Biological Study Area
Detail Mapbook Overview

Path: P:_6051\60515408_SDGE_Del_Mar\900-CAD-GIS\920-929 GIS-Graphics\922_Maps\BTR\ProjectFeatures_overview.mxd, 5/30/2017, augellop

Source: ESRI; Bing; AECOM; Insignia.

350 175 0 350 Feet

1:4,200 1 inch = 350 feet

Figure 2a
Proposed Project Location and Biological Study Area

Path: P:_6051\60515408_SDGE_Del_Mar\900-CAD-GIS\920-929 GIS-Graphics\922_Maps\BTR\ProjectFeatures_mapbook.mxd, 5/30/2017, augellop

Source: ESRI; Bing; AECOM; Insignia.

350 175 0 350 Feet

1:4,200 1 inch = 350 feet

Figure 2b
Proposed Project Location and Biological Study Area

Path: P:_6051\60515408_SDGE_Del_Mar\900-CAD-GIS\920-929 GIS-Graphics\922_Maps\BTR\ProjectFeatures_mapbook.mxd, 5/30/2017, augellop

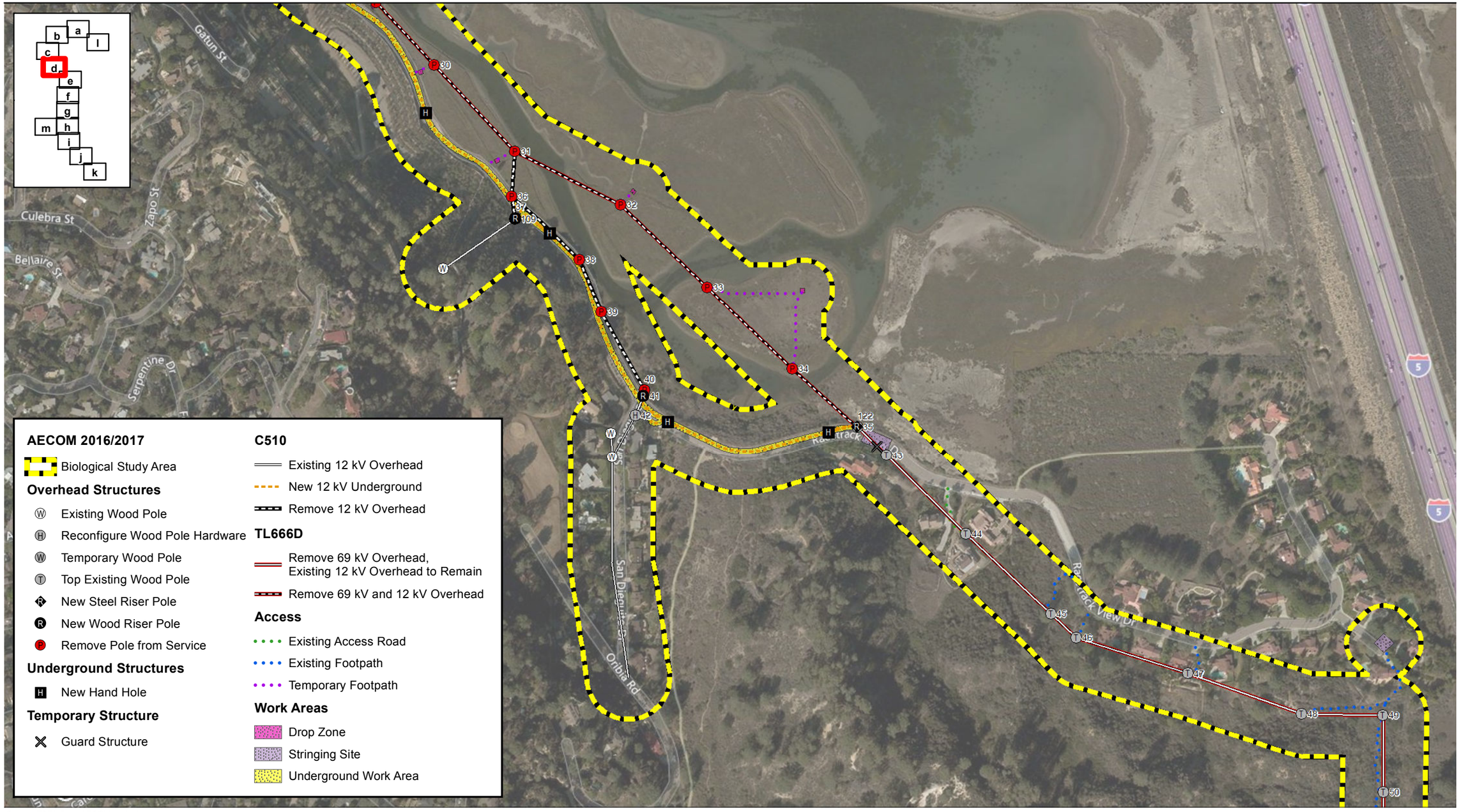
Source: ESRI; Bing; AECOM; Insignia.

350 175 0 350 Feet

1:4,200 1 inch = 350 feet

Figure 2c
Proposed Project Location and Biological Study Area

Path: P:_6051\60515408_SDGE_Del_Mar\900-CAD-GIS\920-929 GIS-Graphics\922_Maps\BTR\ProjectFeatures_mapbook.mxd, 5/30/2017, augellop



Source: ESRI; Bing; AECOM; Insignia.

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1:4,200 1 inch = 350 feet

Figure 2d
Proposed Project Location and Biological Study Area

Path: P:_6051\60515408_SDGE_Del_Mar\900-CAD-GIS\920-929 GIS-Graphics\922_Maps\BTR\ProjectFeatures_mapbook.mxd, 5/30/2017, augellop

Source: ESRI; Bing; AECOM; Insignia.

350 175 0 350 Feet

1:4,200 1 inch = 350 feet

Figure 2e
Proposed Project Location and Biological Study Area

Path: P:_6051\60515408_SDGE_Del_Mar\900-CAD-GIS\920-929 GIS-Graphics\922_Maps\BTR\ProjectFeatures_mapbook.mxd, 5/30/2017, augellop

Source: ESRI; Bing; AECOM; Insignia.

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1:4,200 1 inch = 350 feet

Figure 2f
Proposed Project Location and Biological Study Area

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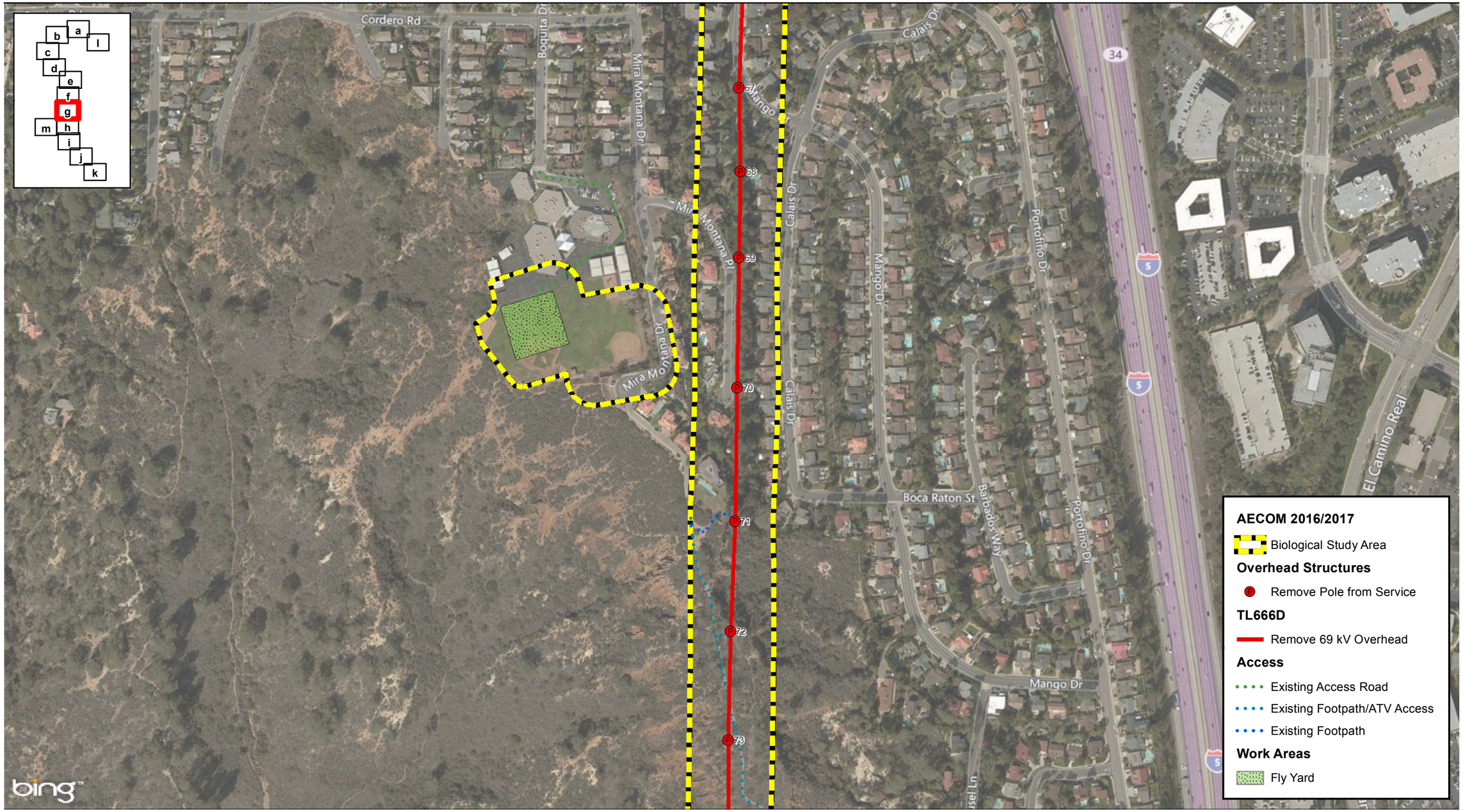

Source: ESRI; Bing; AECOM; Insignia.

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1:4,200 1 inch = 350 feet

Figure 2g
Proposed Project Location and Biological Study Area

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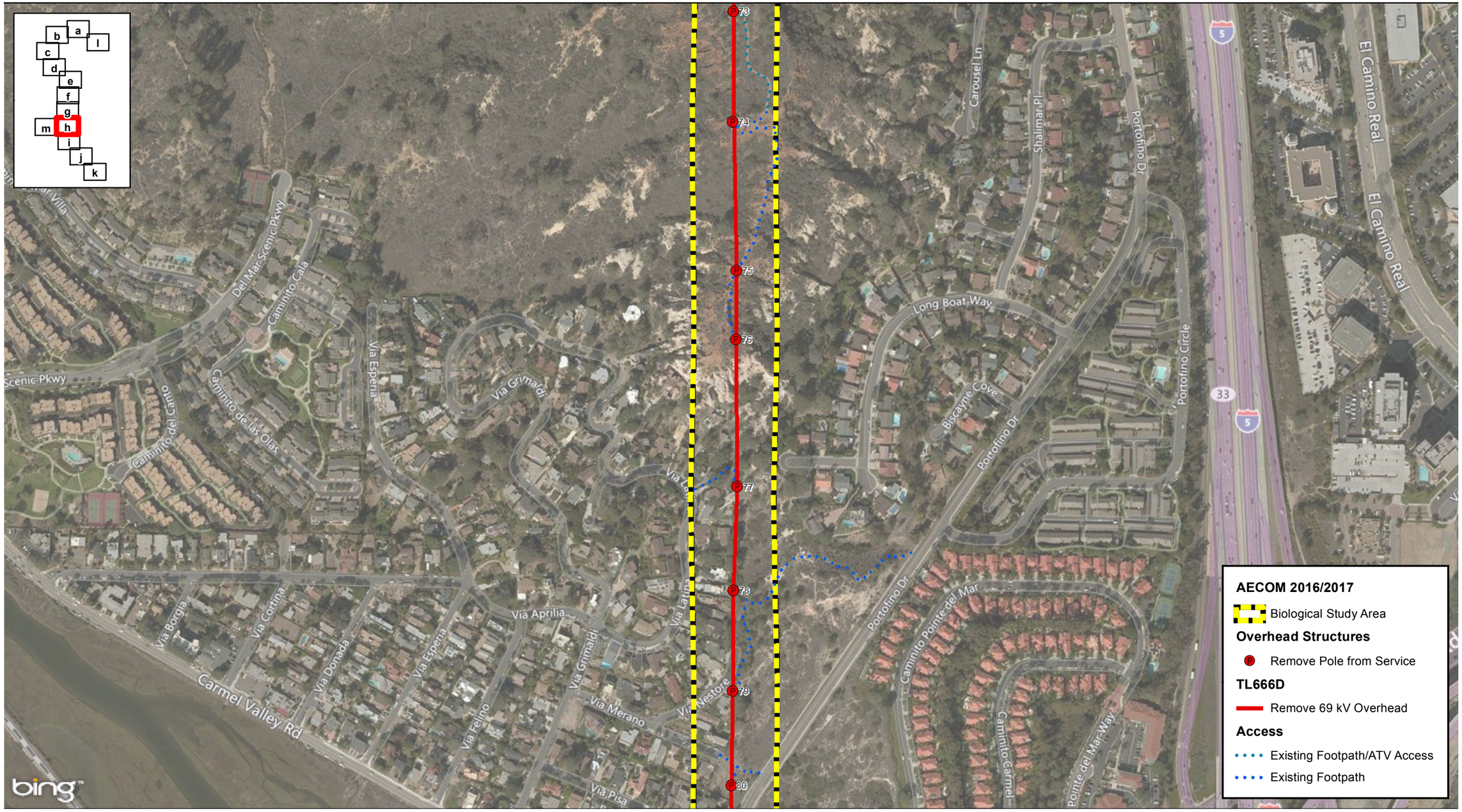

Source: ESRI; Bing; AECOM; Insignia.

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1:4,200 1 inch = 350 feet

Figure 2h
Proposed Project Location and Biological Study Area

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Source: ESRI; Bing; AECOM; Insignia.

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1:4,200 1 inch = 350 feet

Figure 2i
Proposed Project Location and Biological Study Area

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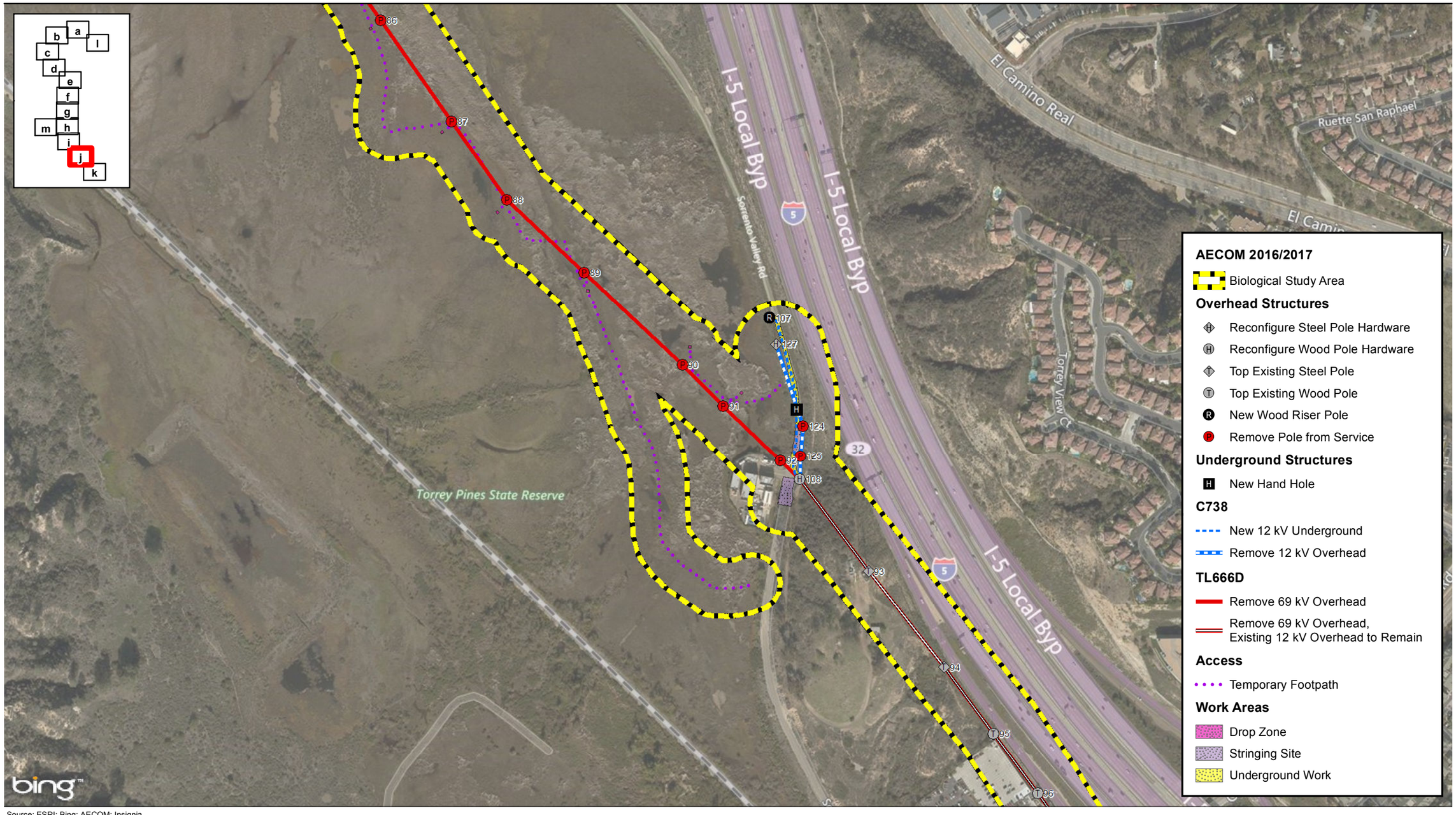

Source: ESRI; Bing; AECOM; Insignia.

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1:4,200 1 inch = 350 feet

Figure 2j
Proposed Project Location and Biological Study Area

Path: P:_6051\60515408_SDGE_Del_Mar\900-CAD-GIS\920-929 GIS-Graphics\922_Maps\BTR\ProjectFeatures_mapbook.mxd, 5/30/2017, augellop

Source: ESRI; Bing; AECOM; Insignia.

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1:4,200 1 inch = 350 feet

Figure 2k
Proposed Project Location and Biological Study Area

Path: P:_6051\60515408_SDGE_Del_Mar\900-CAD-GIS\920-929 GIS-Graphics\922_Maps\BTR\ProjectFeatures_mapbook.mxd, 5/30/2017, augellop

Source: ESRI; Bing; AECOM; Insignia.

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1:4,200 1 inch = 350 feet

Figure 2l
Proposed Project Location and Biological Study Area

Path: P:_6051\60515408_SDGE_Del_Mar\900-CAD-GIS\920-929 GIS-Graphics\922_Maps\BTR\ProjectFeatures_mapbook.mxd, 5/30/2017, augellop

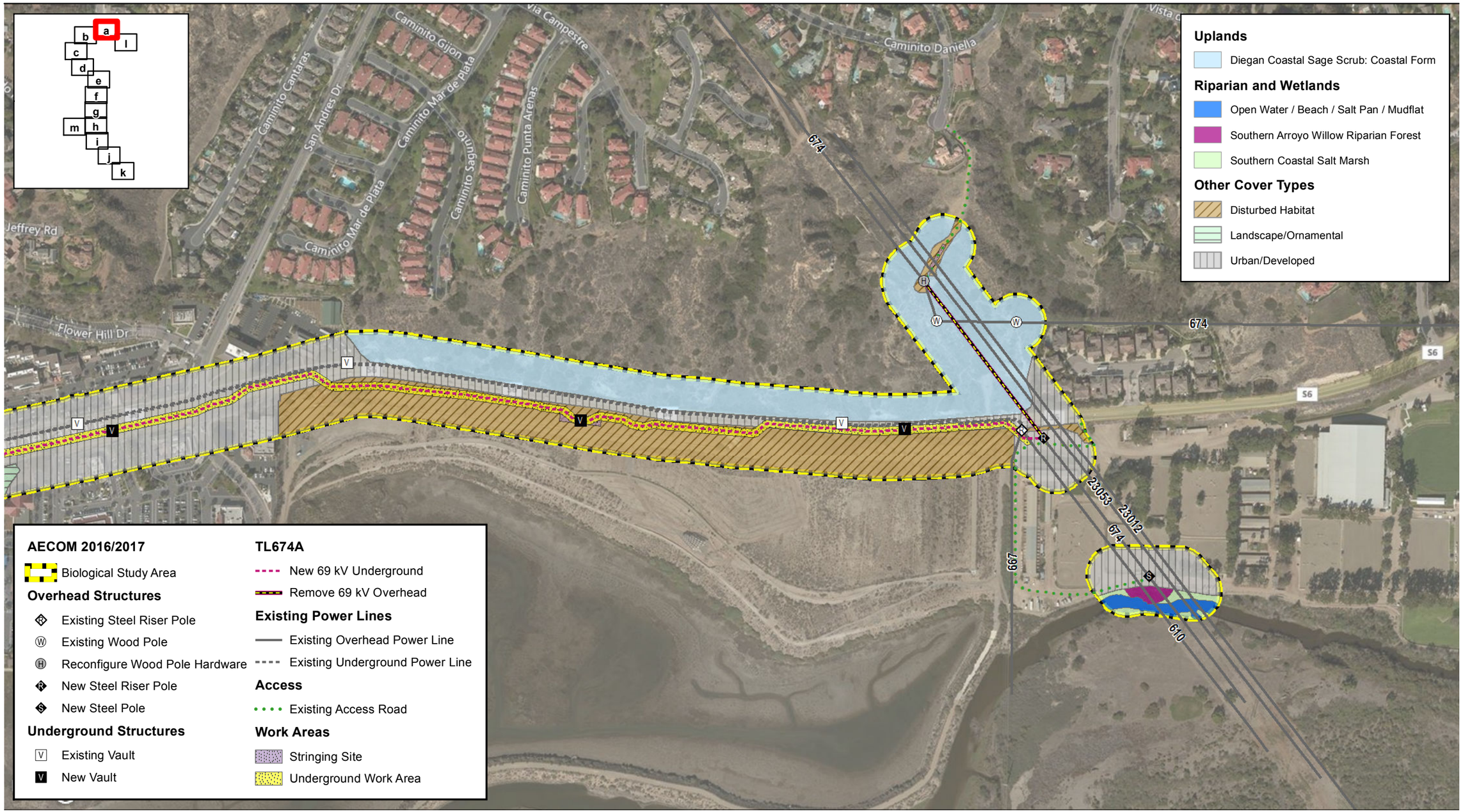
Source: ESRI; Bing; AECOM; Insignia.

350 175 0 350 Feet

1:4,200 1 inch = 350 feet

Figure 2m
Proposed Project Location and Biological Study Area

Path: P:_6051\60515408_SDGE_Del_Mar\900-CAD-GIS\920-929 GIS-Graphics\922_Maps\BTR\ProjectFeatures_mapbook.mxd, 5/30/2017, augellop



Source: ESRI; Bing; AECOM, Insignia.

350 175 0 350 Feet

1:4,200 1 inch = 350 feet

Figure 3a
Vegetation Communities and Cover Types within Biological Study Area

Path: P:_6051\60515408_SDGE_Del_Mar\900-CAD-GIS\920-929 GIS-Graphics\922_Maps\BTR\veg_mapbook.mxd, 5/30/2017, augellop

Source: ESRI; Bing; AECOM, Insignia.

350 175 0 350 Feet

1:4,200 1 inch = 350 feet

Figure 3b
Vegetation Communities and Cover Types within Biological Study Area

Path: P:_6051\60515408_SDGE_Del_Mar\900-CAD-GIS\920-929 GIS-Graphics\922_Maps\BTR\veg_mapbook.mxd, 5/30/2017, augellop

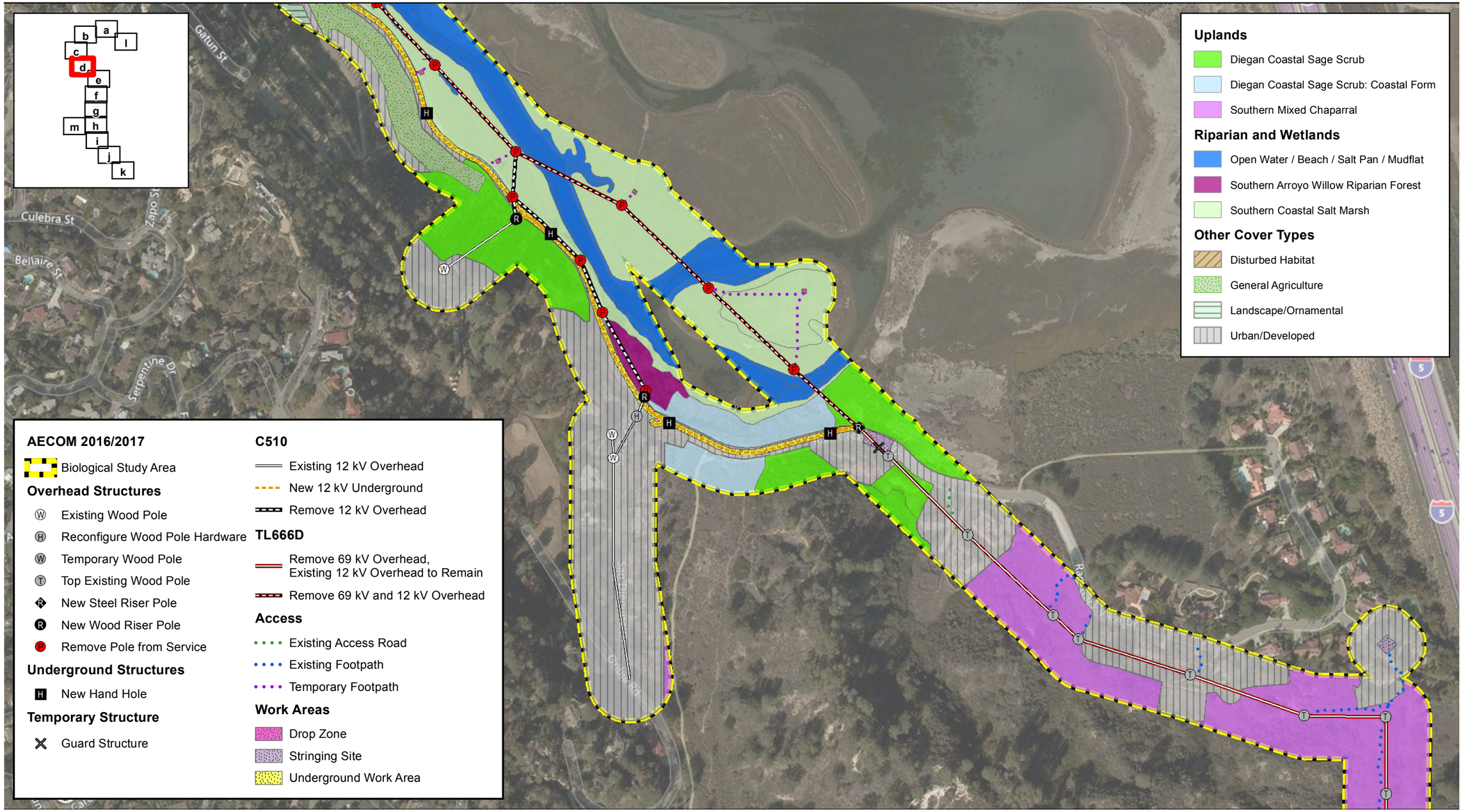
Source: ESRI; Bing; AECOM, Insignia.

350 175 0 350 Feet

1:4,200 1 inch = 350 feet

Figure 3c
Vegetation Communities and Cover Types within Biological Study Area

Path: P:_6051\60515408_SDGE_Del_Mar\900-CAD-GIS\920-929 GIS-Graphics\922_Maps\BTR\veg_mapbook.mxd, 5/30/2017, augellop



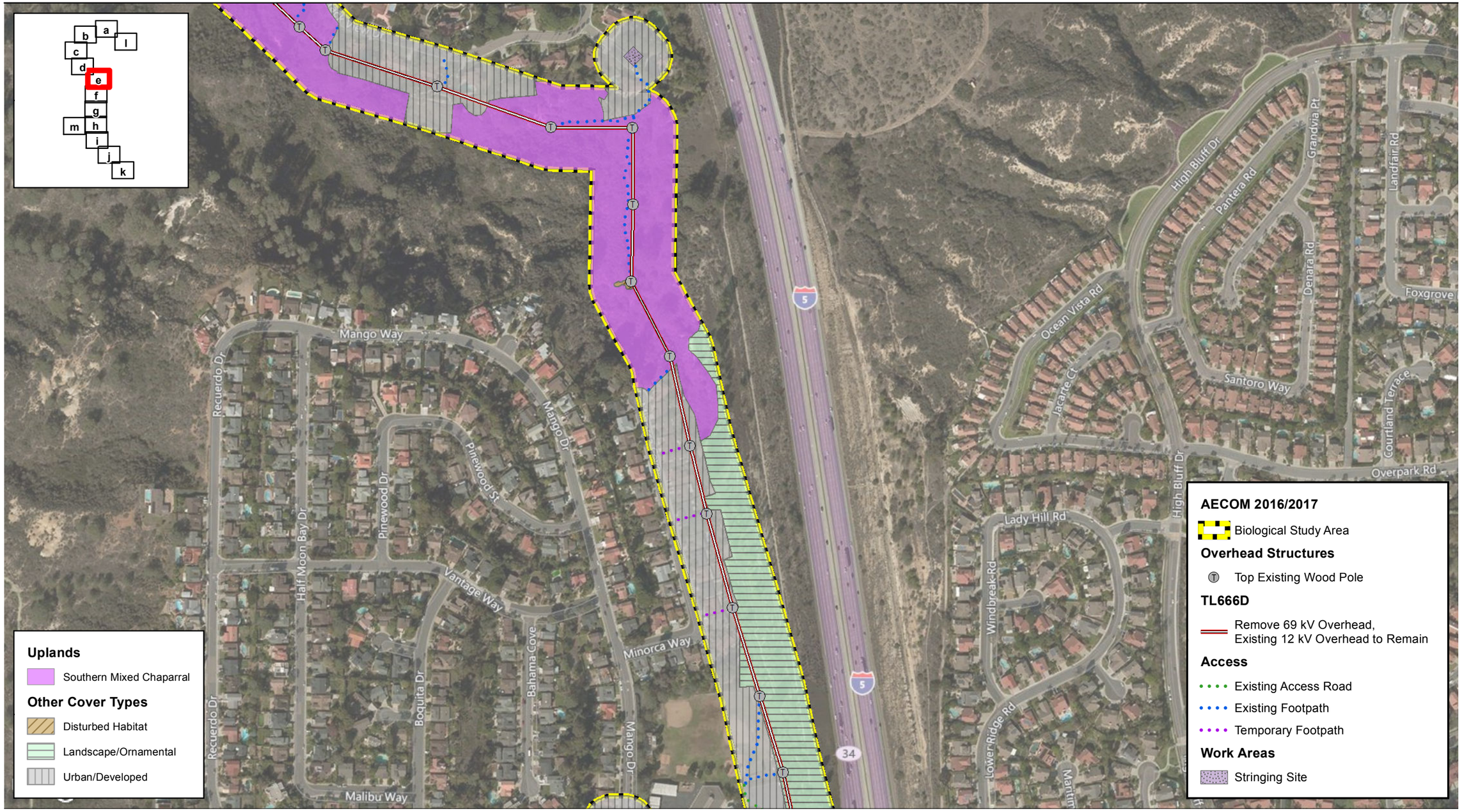
Source: ESRI; Bing; AECOM, Insignia.

350 175 0 350 Feet

1:4,200 1 inch = 350 feet

Figure 3d
Vegetation Communities and Cover Types within Biological Study Area

Path: P:_6051\60515408_SDGE_Del_Mar\900-CAD-GIS\920-929 GIS-Graphics\922_Maps\BTR\veg_mapbook.mxd, 5/30/2017, augellop



Source: ESRI; Bing; AECOM, Insignia.

350 175 0 350 Feet

1:4,200 1 inch = 350 feet

Figure 3e
Vegetation Communities and Cover Types within Biological Study Area

Path: P:_6051\60515408_SDGE_Del_Mar\900-CAD-GIS\920-929 GIS-Graphics\922_Maps\BTR\veg_mapbook.mxd, 5/30/2017, augellop

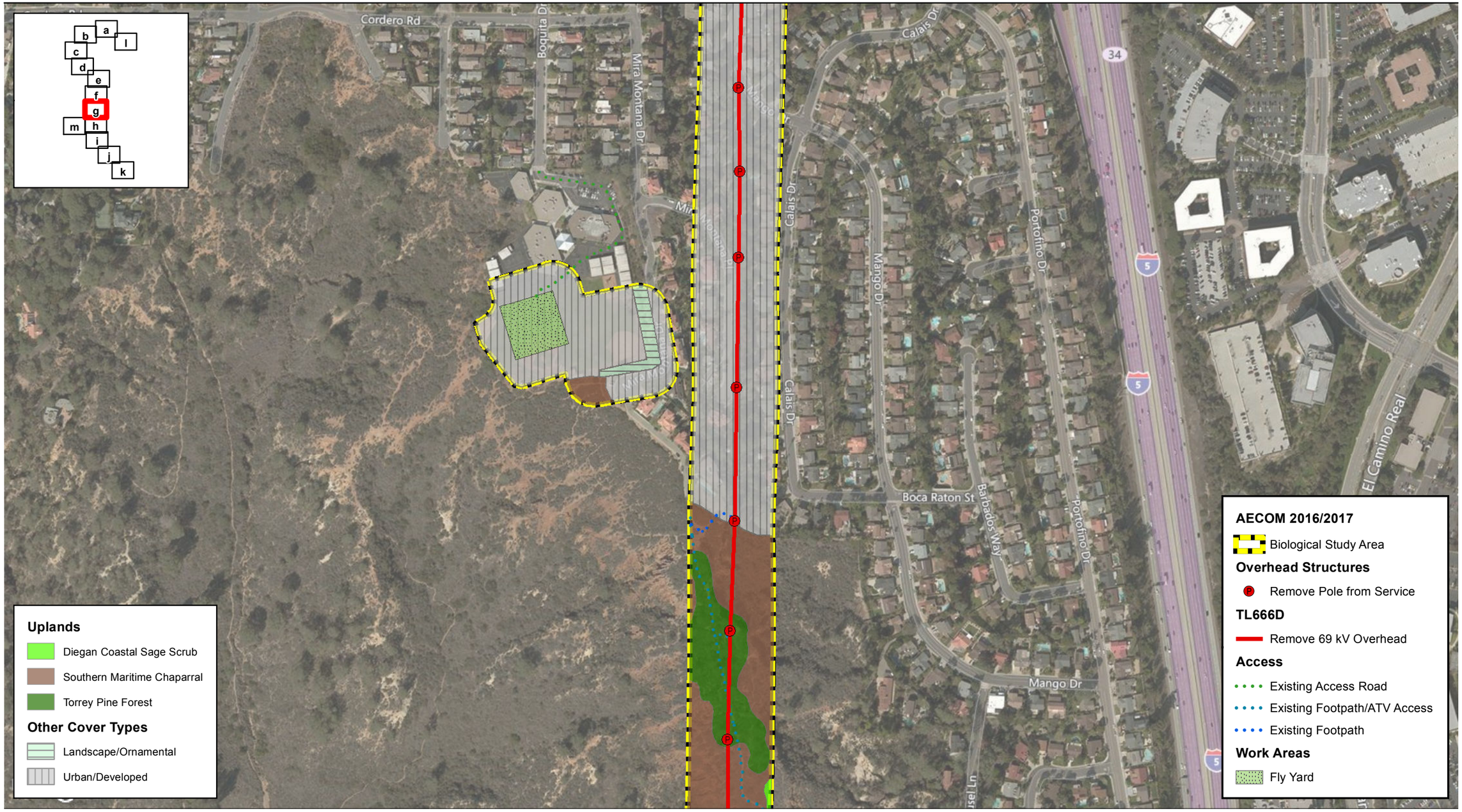
Source: ESRI; Bing; AECOM, Insignia.

350 175 0 350 Feet

1:4,200 1 inch = 350 feet

Figure 3f
Vegetation Communities and Cover Types within Biological Study Area

Path: P:_6051\60515408_SDGE_Del_Mar\900-CAD-GIS\920-929 GIS-Graphics\922_Maps\BTR\veg_mapbook.mxd, 5/30/2017, augellop



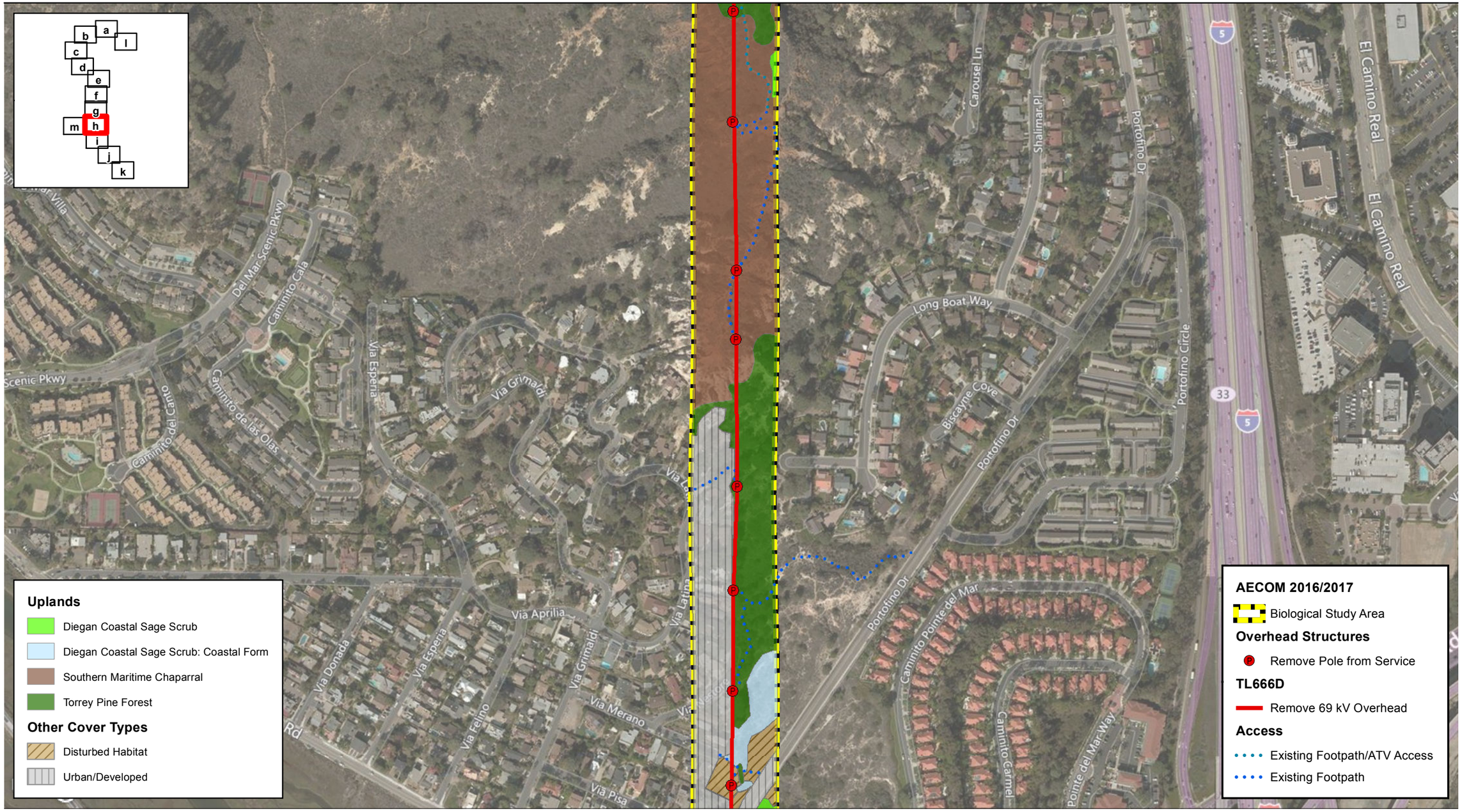
Source: ESRI; Bing; AECOM, Insignia.

350 175 0 350 Feet

1:4,200 1 inch = 350 feet

Figure 3g
Vegetation Communities and Cover Types within Biological Study Area

Path: P:_6051\60515408_SDGE_Del_Mar\900-CAD-GIS\920-929 GIS-Graphics\922_Maps\BTR\veg_mapbook.mxd, 5/30/2017, augellop



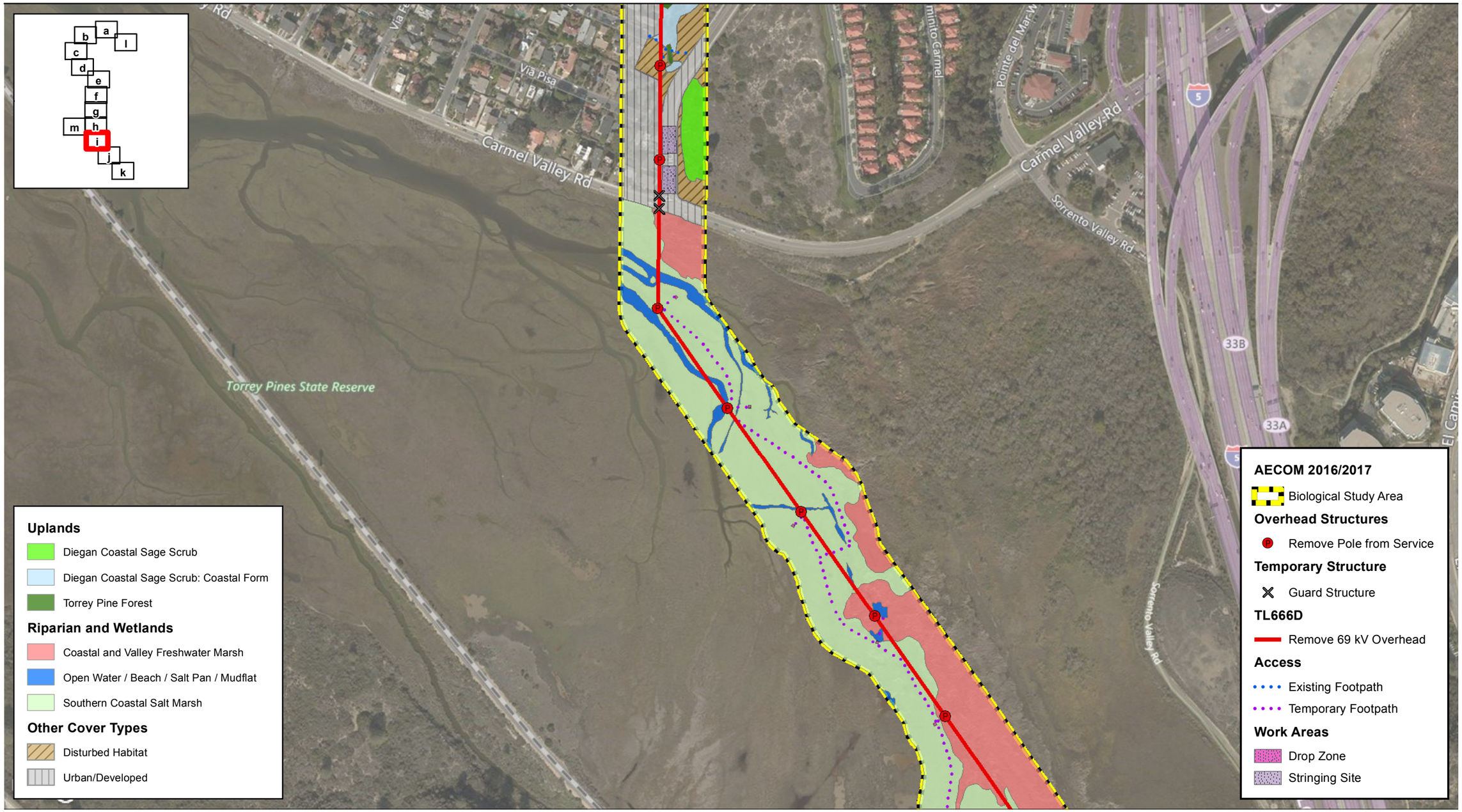
Source: ESRI; Bing; AECOM, Insignia.

350 175 0 350 Feet

1:4,200 1 inch = 350 feet

Figure 3h
Vegetation Communities and Cover Types within Biological Study Area

Path: P:_6051\60515408_SDGE_Del_Mar\900-CAD-GIS\920-929 GIS-Graphics\922_Maps\BTR\veg_mapbook.mxd, 5/30/2017, augellop



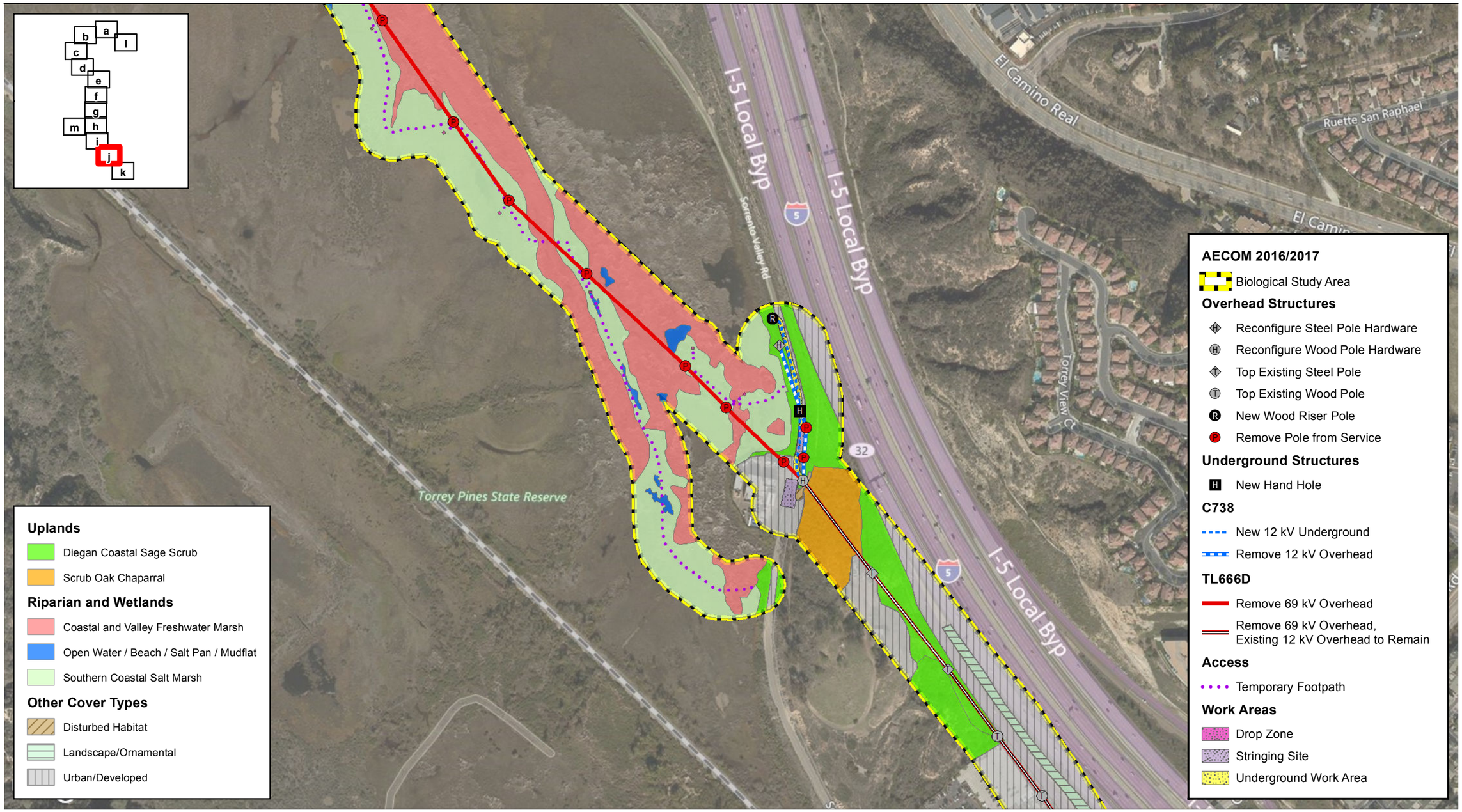
Source: ESRI; Bing; AECOM, Insignia.

350 175 0 350 Feet

1:4,200 1 inch = 350 feet

Figure 3i
Vegetation Communities and Cover Types within Biological Study Area

Path: P:_6051\60515408_SDGE_Del_Mar\900-CAD-GIS\920-929 GIS-Graphics\922_Maps\BTR\veg_mapbook.mxd, 5/30/2017, augellop



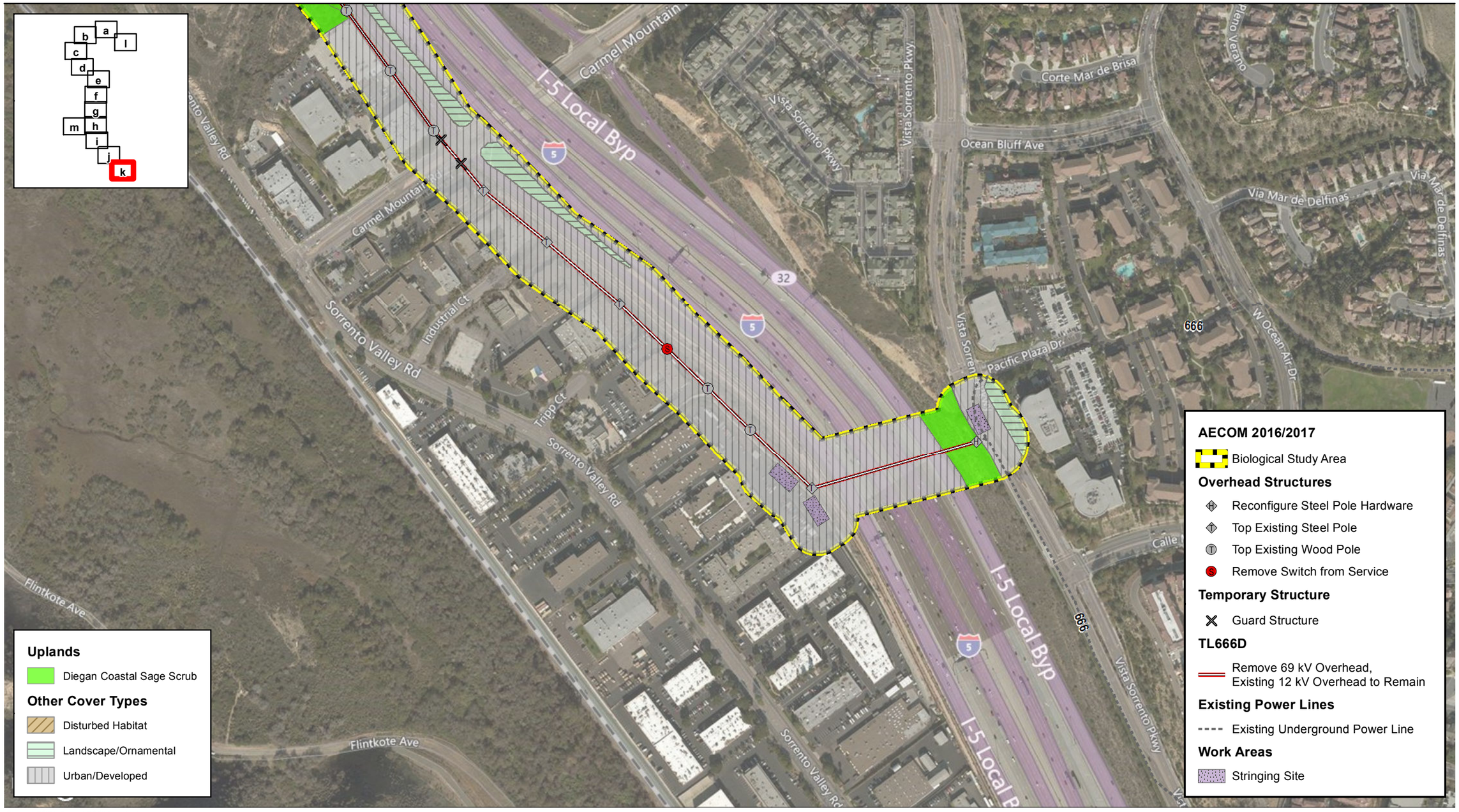
Source: ESRI; Bing; AECOM, Insignia.

350 175 0 350 Feet

1:4,200 1 inch = 350 feet

Figure 3j
Vegetation Communities and Cover Types within Biological Study Area

Path: P:_6051\60515408_SDGE_Del_Mar\900-CAD-GIS\920-929 GIS-Graphics\922_Maps\BTR\veg_mapbook.mxd, 5/30/2017, augellop



Source: ESRI; Bing; AECOM, Insignia.

350 175 0 350 Feet

1:4,200 1 inch = 350 feet

Figure 3k
Vegetation Communities and Cover Types within Biological Study Area

Path: P:_6051\60515408_SDGE_Del_Mar\900-CAD-GIS\920-929 GIS-Graphics\922_Maps\BTR\veg_mapbook.mxd, 5/30/2017, augellop

Source: ESRI; Bing; AECOM, Insignia.

350 175 0 350 Feet

1:4,200 1 inch = 350 feet

Figure 3l
Vegetation Communities and Cover Types within Biological Study Area

Path: P:_6051\60515408_SDGE_Del_Mar\900-CAD-GIS\920-929 GIS-Graphics\922_Maps\BTR\veg_mapbook.mxd, 5/30/2017, augellop

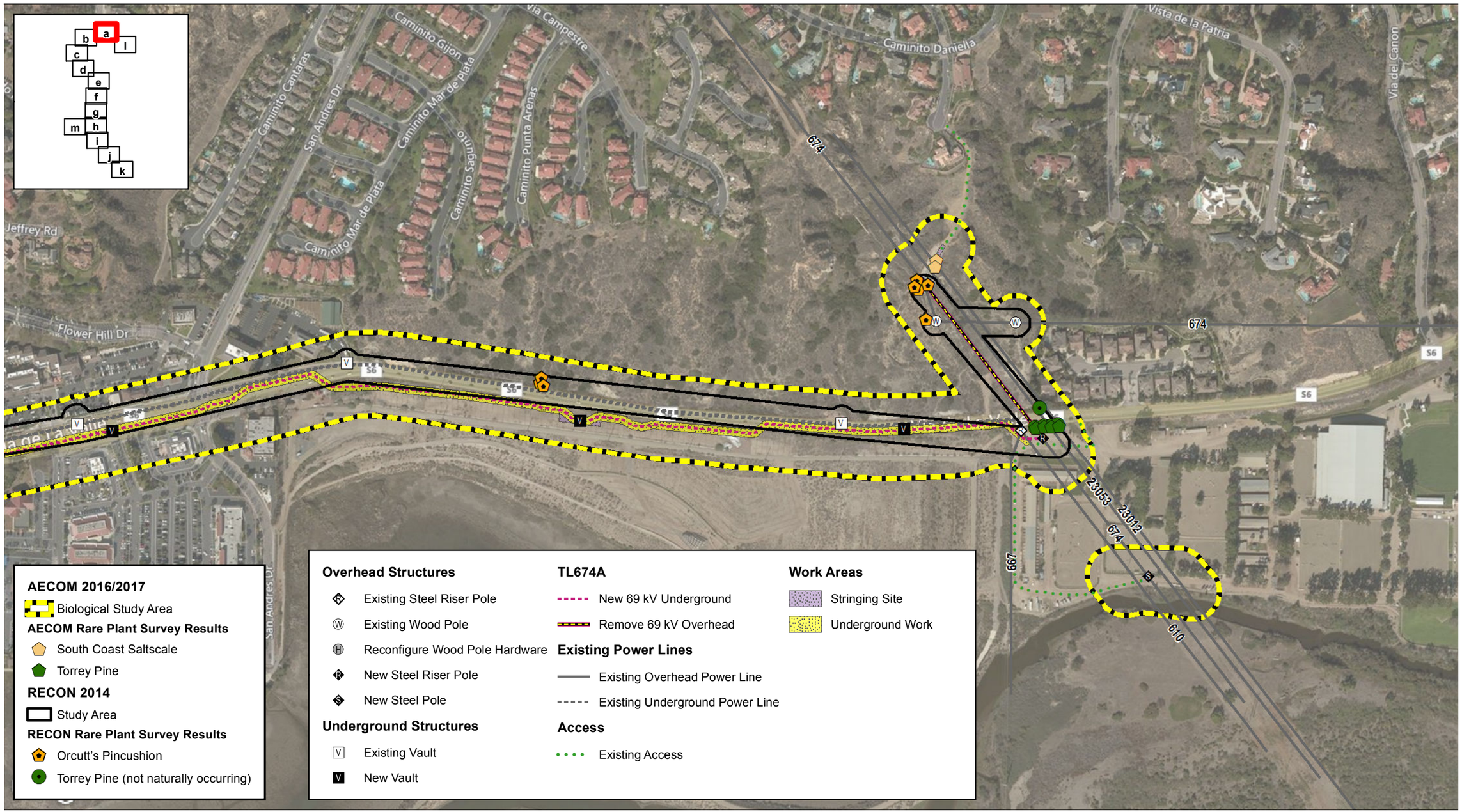
Source: ESRI; Bing; AECOM, Insignia.

350 175 0 350 Feet

1:4,200 1 inch = 350 feet

Figure 3m
Vegetation Communities and Cover Types within Biological Study Area

Path: P:_6051\60515408_SDGE_Del_Mar\900-CAD-GIS\920-929 GIS-Graphics\922_Maps\BTR\veg_mapbook.mxd, 5/30/2017, augellop



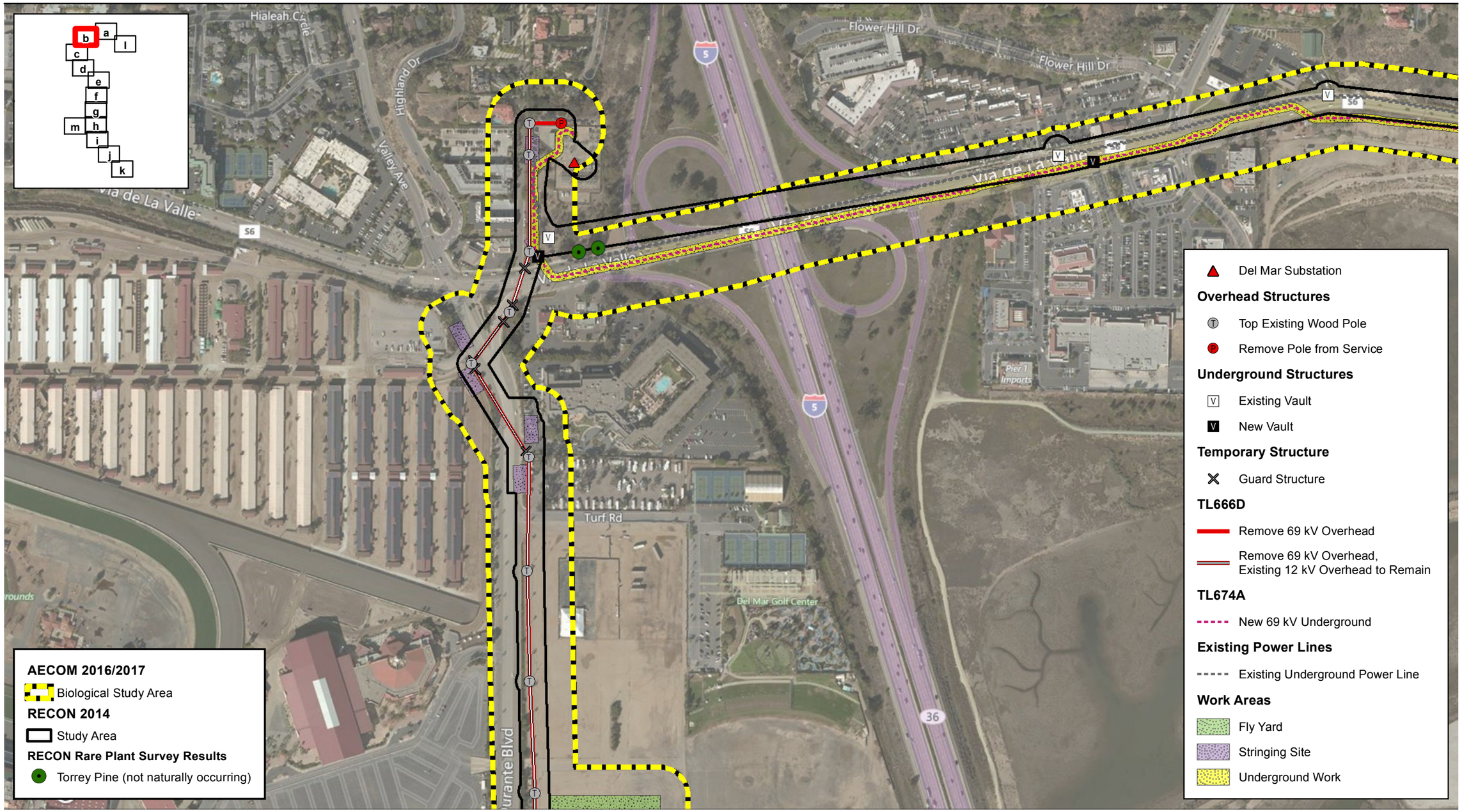
Source: ESRI; Bing; AECOM; RECON.

350 175 0 350 Feet

1:4,200 1 inch = 350 feet

Figure 4a
Special-Status Plant Species within Biological Study Area and Vicinity

Path: P:_6051\60515408_SDGE_Del_Mar\900-CAD-GIS\920-929 GIS-Graphics\922_Maps\BTR\special_status_plants_mapbook.mxd, 5/30/2017, augellop



Source: ESRI; Bing; AECOM; RECON.

350 175 0 350 Feet

1:4,200 1 inch = 350 feet

Figure 4b
Special-Status Plant Species within Biological Study Area and Vicinity

Path: P:_6051\60515408_SDGE_Del_Mar\900-CAD-GIS\920-929 GIS-Graphics\922_Maps\BTR\special_status_plants_mapbook.mxd, 5/30/2017, augellop

Source: ESRI; Bing; AECOM; RECON.

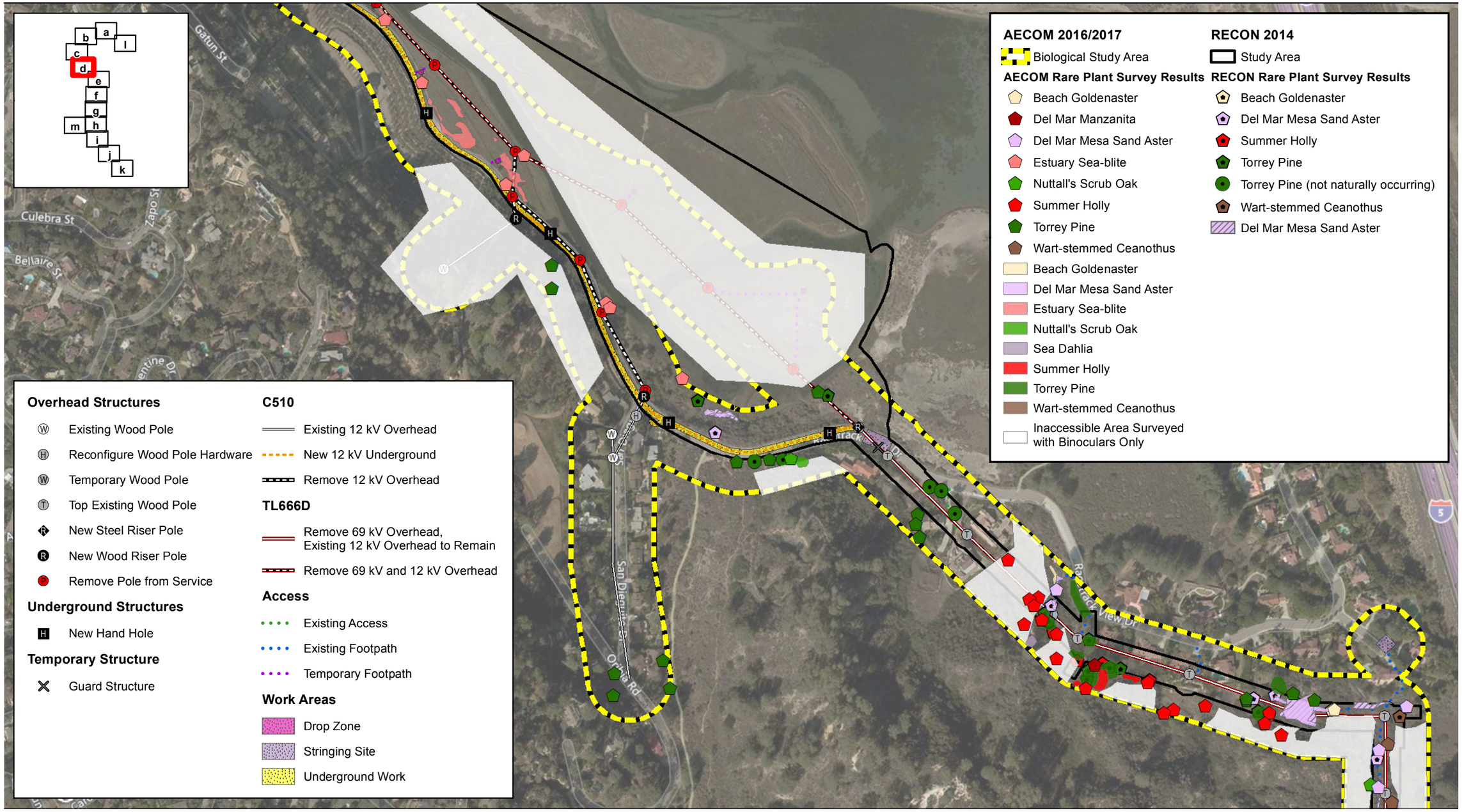
350 175 0 350 Feet

1:4,200 1 inch = 350 feet

Figure 4c

Special-Status Plant Species within Biological Study Area and Vicinity

Path: P:_6051\60515408_SDGE_Del_Mar\900-CAD-GIS\920-929 GIS-Graphics\922_Maps\BTR\special_status_plants_mapbook.mxd, 5/30/2017, augellop



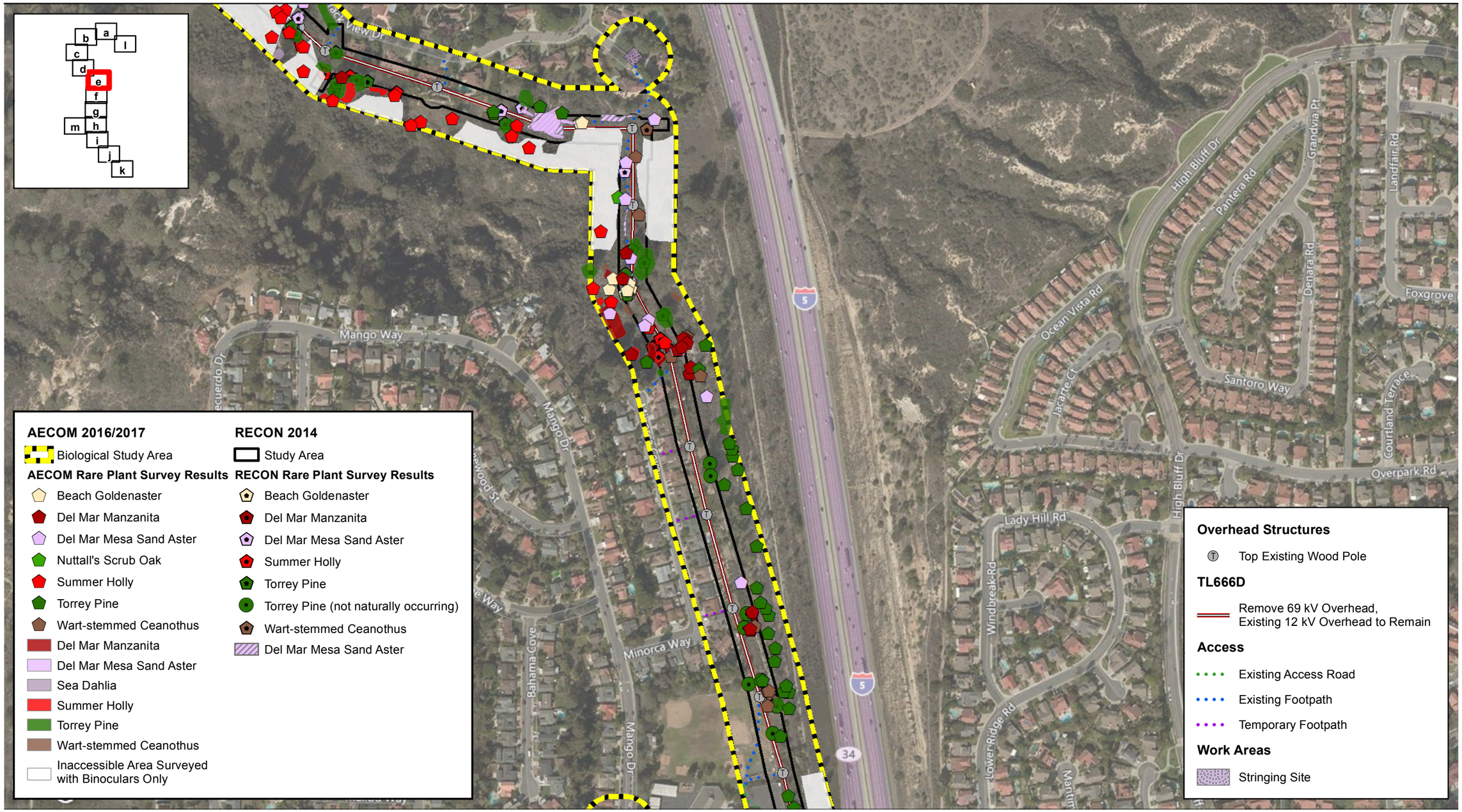
Source: ESRI; Bing; AECOM; RECON.

350 175 0 350 Feet

1:4,200 1 inch = 350 feet

Figure 4d
Special-Status Plant Species within Biological Study Area and Vicinity

Path: P:_6051\60515408_SDGE_Del_Mar\900-CAD-GIS\920-929 GIS-Graphics\922_Maps\BTR\special_status_plants_mapbook.mxd, 5/30/2017, augellop



Source: ESRI; Bing; AECOM; RECON.

350 175 0 350 Feet

1:4,200 1 inch = 350 feet

Figure 4e
Special-Status Plant Species within Biological Study Area and Vicinity

Path: P:_6051\60515408_SDGE_Del_Mar\900-CAD-GIS\920-929 GIS-Graphics\922_Maps\BTR\special_status_plants_mapbook.mxd, 5/30/2017, augellop

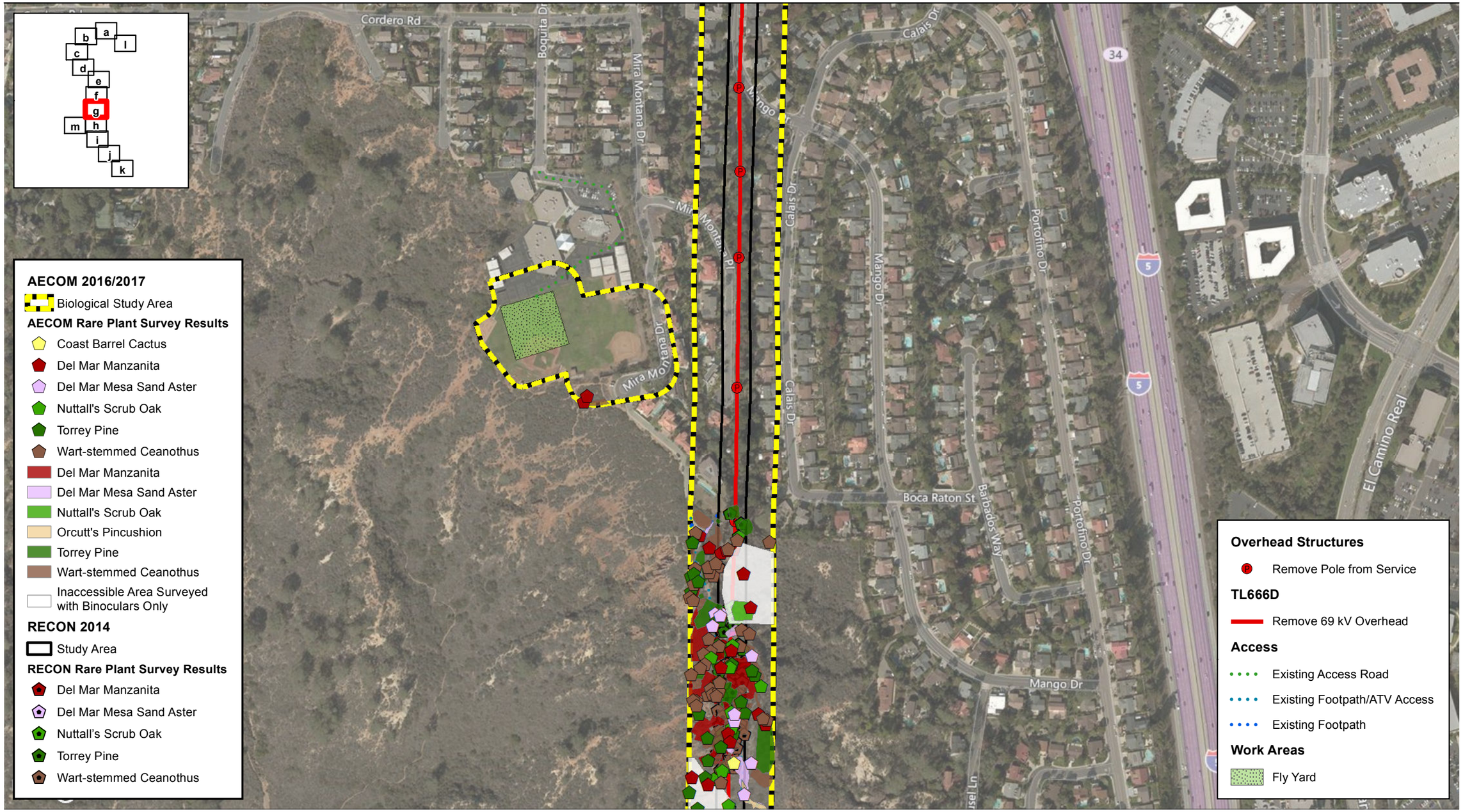
Source: ESRI; Bing; AECOM; RECON.

350 175 0 350 Feet

1:4,200 1 inch = 350 feet

Figure 4f
Special-Status Plant Species within Biological Study Area and Vicinity

Path: P:_6051\60515408_SDGE_Del_Mar\900-CAD-GIS\920-929 GIS-Graphics\922_Maps\BTR\special_status_plants_mapbook.mxd, 5/30/2017, augellop



Source: ESRI; Bing; AECOM; RECON.

350 175 0 350 Feet

1:4,200 1 inch = 350 feet

Figure 4g

Special-Status Plant Species within Biological Study Area and Vicinity

Path: P:_6051\60515408_SDGE_Del_Mar\900-CAD-GIS\920-929 GIS-Graphics\922_Maps\BTR\special_status_plants_mapbook.mxd, 5/30/2017, augellop

Source: ESRI; Bing; AECOM; RECON.

350 175 0 350 Feet

1:4,200 1 inch = 350 feet

Figure 4h
Special-Status Plant Species within Biological Study Area and Vicinity

Path: P:_6051\60515408_SDGE_Del_Mar\900-CAD-GIS\920-929 GIS-Graphics\922_Maps\BTR\special_status_plants_mapbook.mxd, 5/30/2017, augellop

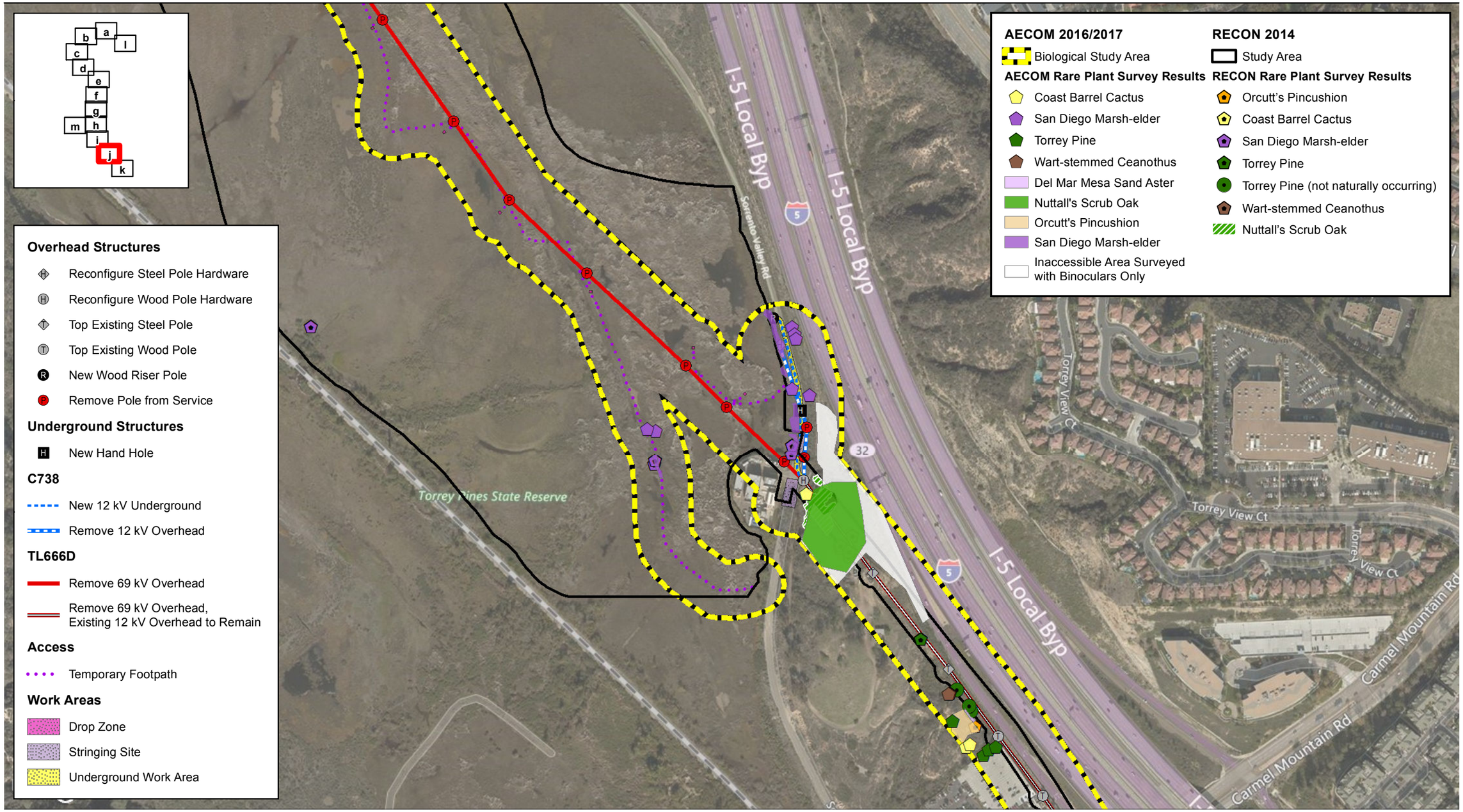
Source: ESRI; Bing; AECOM; RECON.

350 175 0 350 Feet

1:4,200 1 inch = 350 feet

Figure 4i
Special-Status Plant Species within Biological Study Area and Vicinity

Path: P:_6051\60515408_SDGE_Del_Mar\900-CAD-GIS\920-929 GIS-Graphics\922_Maps\BTR\special_status_plants_mapbook.mxd, 5/30/2017, augellop



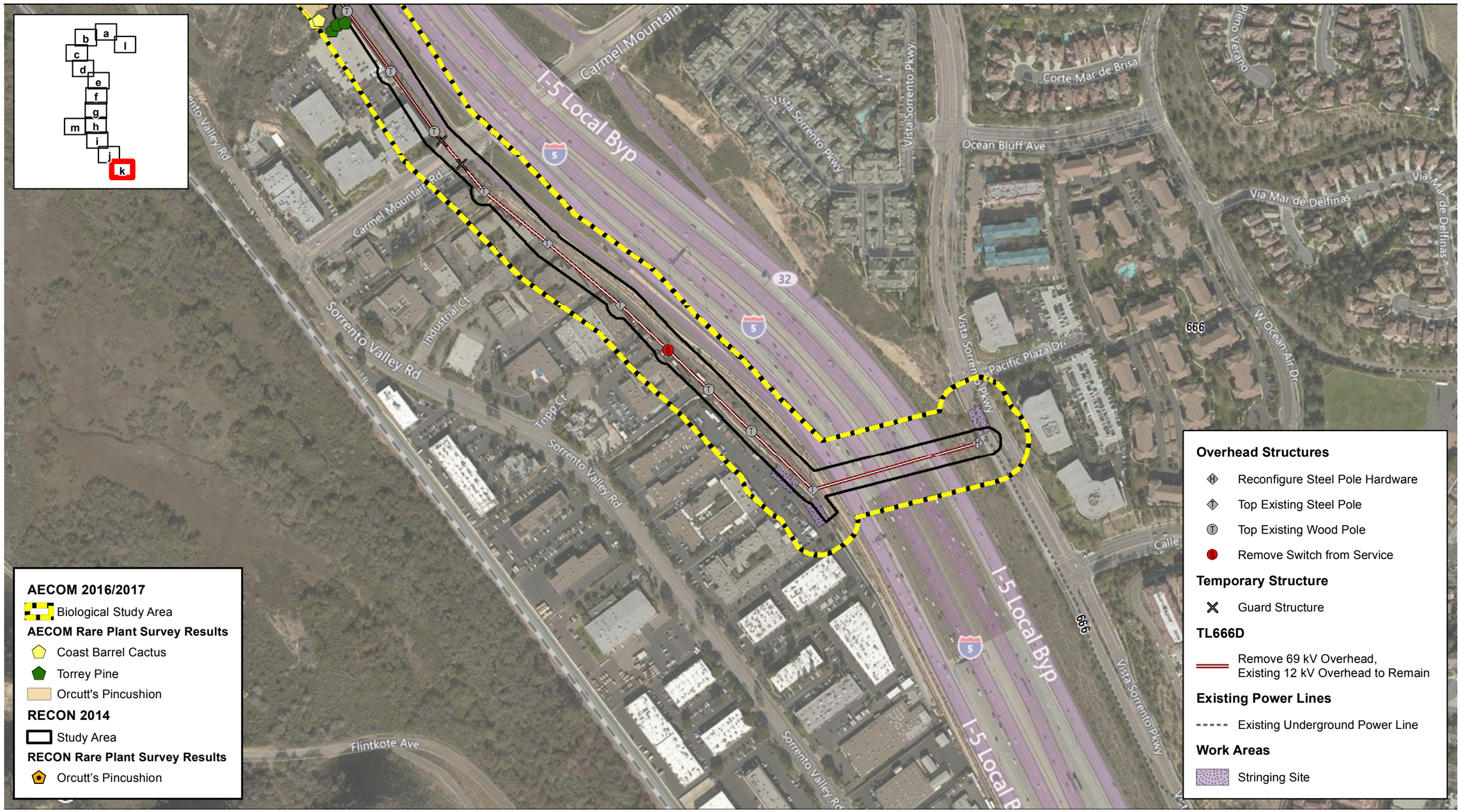
Source: ESRI; Bing; AECOM; RECON.

350 175 0 350 Feet

1:4,200 1 inch = 350 feet

Figure 4j
Special-Status Plant Species within Biological Study Area and Vicinity

Path: P:_6051\60515408_SDGE_Del_Mar\900-CAD-GIS\920-929 GIS-Graphics\922_Maps\BTR\special_status_plants_mapbook.mxd, 5/30/2017, augellop



Source: ESRI; Bing; AECOM; RECON.

350 175 0 350 Feet

1:4,200 1 inch = 350 feet

Figure 4k
Special-Status Plant Species within Biological Study Area and Vicinity

Path: P:_6051\60515408_SDGE_Del_Mar\900-CAD-GIS\920-929 GIS-Graphics\922_Maps\BTR\special_status_plants_mapbook.mxd, 5/30/2017, augellop

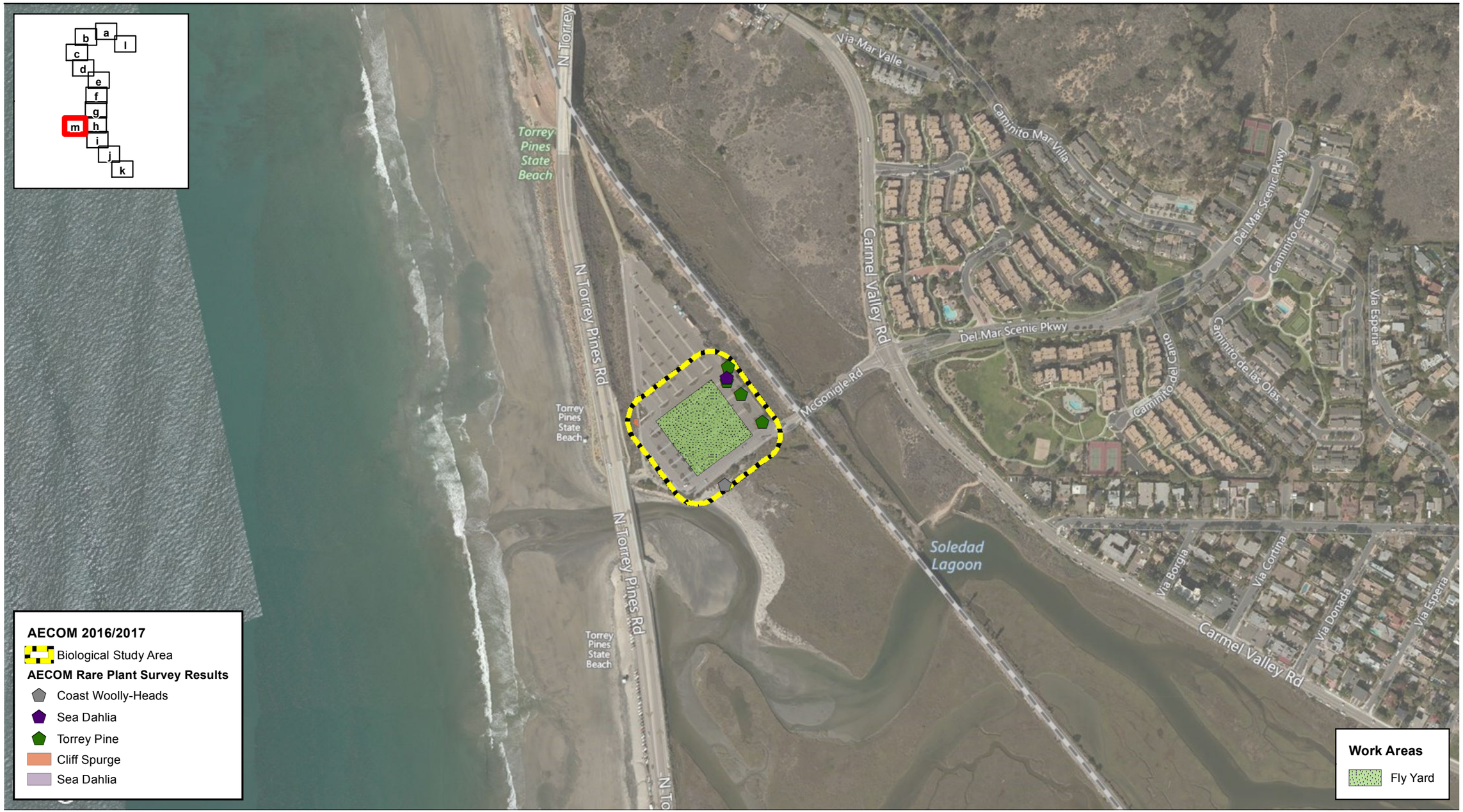
Source: ESRI; Bing; AECOM; RECON.

350 175 0 350 Feet

1:4,200 1 inch = 350 feet

Figure 4l
Special-Status Plant Species within Biological Study Area and Vicinity

Path: P:_6051\60515408_SDGE_Del_Mar\900-CAD-GIS\920-929 GIS-Graphics\922_Maps\BTR\special_status_plants_mapbook.mxd, 5/30/2017, augellop



Source: ESRI; Bing; AECOM; RECON.

350 175 0 350 Feet

1:4,200 1 inch = 350 feet

Figure 4m
Special-Status Plant Species within Biological Study Area and Vicinity

Path: P:_6051\60515408_SDGE_Del_Mar\900-CAD-GIS\920-929 GIS-Graphics\922_Maps\BTR\special_status_plants_mapbook.mxd, 5/30/2017, augellop

APPENDIX A

LIST OF PLANT SPECIES DETECTED WITHIN THE BSA

Appendix A
List of Plant Species Detected within the BSA

Scientific Name	Common Name	Nativity	Sensitivity Status[1]
Adoxaceae			
Sambucus nigra ssp. *caerulea*	Blue elderberry	native	
Agavaceae			
Agave sp[4]	Agave	non-native	
Yucca schidigera	Mohave yucca	native	
Aizoaceae			
Carpobrotus edulis	Iceplant	invasive non-native	
Malephora crocea	Coppery iceplant	non-native	
Mesembryanthemum crystallinum	Crystalline iceplant	invasive non-native	
Mesembryanthemum nodiflorum	Small flowered iceplant	non-native	
Tetragonia tetragonioides	New zealand spinach	invasive non-native	
Alliaceae			
Allium haematochiton	Red-skinned onion	native	
Amaranthaceae			
Amaranthus albus	Tumbleweed	non-native	
Anacardiaceae			
Malosma laurina	Laurel sumac	native	
Rhus aromatica[2]	Fragrant sumac	native	
Rhus integrifolia	Lemonade berry	native	
Schinus molle	Peruvian pepper tree	invasive non-native	
Schinus terebinthifolius	Brazilian pepper tree	invasive non-native	
Toxicodendron diversilobum	Poison oak	native	
Apiaceae			
Apiastrum angustifolium	Wild celery	native	
Apium graveolens	Celery	non-native	
Bowlesia incana[2]	Hoary bowlesia	native	
Conium maculatum	Poison hemlock	invasive non-native	
Daucus pusillus	Wild carrot	native	
Foeniculum vulgare	Fennel	invasive non-native	
Lomatium lucidum	Shiny biscuitroot	native	
Sanicula crassicaulis	Pacific sanicle	native	

Scientific Name	Common Name	Nativity	Sensitivity Status[1]
Apocynaceae			
Funastrum cynanchoides var. *hartwegii*	Climbing milkweed	native	
Arecaceae			
Phoenix canariensis	Canary island date palm	invasive non-native	
Washingtonia robusta[2]	Mexican fan palm	invasive non-native	
Asphodelaceae			
Asphodelus fistulosus	Onionweed	invasive non-native	
Asparagaceae			
Asparagus asparagoides	African asparagus fern	invasive non-native	
Asparagus setaceus	Common asparagus fern	non-native	
Asteraceae			
Acourtia microcephala	Sacapellote	native	
Ambrosia acanthicarpa[2]	Annual bursage	native	
Ambrosia psilostachya	Ragweed	native	
Artemisia californica	Coastal sage brush	native	
Artemisia douglasiana	California mugwort	native	
Artemisia dracunculus	Tarragon	native	
Baccharis pilularis ssp. *consanguinea*	Coyote brush	native	
Baccharis salicifolia ssp. *salicifolia*	Mule fat	native	
Baccharis sarothroides	Broom baccharis	native	
Bahiopsis laciniata	San Diego sunflower	native	
Carduus pycnocephalus	Italian thistle	invasive non-native	
Centaurea melitensis	Tocalote	invasive non-native	
Chaenactis glabriuscula var. *glabriuscula*	Yellow pincushion	native	
Chaenactis glabriuscula var. *orcuttiana*	Orcutt's pincushion	native	CRPR: 1B.1
Cirsium occidentale var. *occidentale*	Cobweb thistle	native	
Cirsium vulgare	Bullthistle	invasive non-native	
Corethrogyne filaginifolia var. *linifolia*	Del Mar Mesa sand aster	native	CRPR: 1B.1 NCCP: Covered
Cotula australis	Australian cotula	non-native	
Cotula coronopifolia	Brass buttons	invasive non-native	
Cynara cardunculus	Cardoon	invasive non-native	
Deinandra fasciculata	Clustered tarweed	native	
Dimorphotheca ecklonis	Blue & white daisybush	non-native	

Scientific Name	Common Name	Nativity	Sensitivity Status[1]
Encelia californica	Bush sunflower	native	
Encelia farinosa	Brittlebush	native	
Erigeron bonariensis	Flax-leaved horseweed	non-native	
Erigeron canadensis	Canada horseweed	native	
Erigeron sumatrensis	Tropical horseweed	non-native	
Eriophyllum confertiflorum var. *confertiflorum*	Golden yarrow	native	
Gazania linearis	Gazania	invasive non-native	
Glebionis coronaria	Crown daisy	non-native	
Grindelia camporum	Gumweed	native	
Hazardia squarrosa	Saw toothed goldenbush	native	
Hedypnois cretica	Crete weed	non-native	
Helianthus annuus	Hairy leaved sunflower	native	
Helminthotheca echioides	Bristly ox-tongue	invasive non-native	
Heterotheca grandiflora	Telegraph weed	native	
Heterotheca sessiliflora ssp. *sessiliflora*	Beach goldenaster	native	CRPR: 1B.1
Isocoma menziesii var. *vernonioides*	Green leaved dune goldenbush	native	
Iva hayesiana	San diego marsh-elder	native	CRPR: 2B.2
Jaumea carnosa	Marsh jaumea	native	
Lactuca serriola	Prickly lettuce	invasive non-native	
Laennecia coulteri	Coulter's horseweed	native	
Lasthenia gracilis	Needle goldfields	native	
Leptosyne maritima	Sea dahlia	native	CRPR: 2B.2
Logfia filaginoides	California cottonrose	native	
Logfia gallica	Narrowleaf cottonrose	non-native	
Matricaria discoidea	Pineapple weed	native	
Osmadenia tenella	Osmadenia	native	
Pluchea odorata var. *odorata*	Salt marsh fleabane	native	
Pluchea sericea	Arrow weed	native	
Porophyllum gracile	Odora	native	
Pseudognaphalium biolettii	Two-color rabbit-tobacco	native	
Pseudognaphalium californicum	Ladies' tobacco	native	
Pseudognaphalium luteoalbum[2]	Jersey cudweed	non-native	
Pseudognaphalium stramineum	Cottonbatting plant	native	
Pulicaria paludosa	Spanish false fleabane	non-native	

Scientific Name	Common Name	Nativity	Sensitivity Status[1]
Senecio californicus	California butterweed	native	
Silybum marianum	Milk thistle	invasive non-native	
Sonchus asper ssp. *asper*	Sow thistle	invasive non-native	
Sonchus oleraceus	Sow thistle	non-native	
Stephanomeria diegensis	San diego wreathplant	native	
Stephanomeria virgata[2]	Rod wirelettuce	native	
Stylocline gnaphaloides	Everlasting stylocline	native	
Symphyotrichum subulatum	Eastern annual saltmarsh aster	native	
Taraxacum officinale[2]	Common dandelion	non-native	
Uropappus lindleyi	Silverpuffs	native	
Xanthium strumarium	Cocklebur	native	
Bigoniaceae			
Tecoma capensis[2]	Cape honeysuckle	non-native	
Boraginaceae			
Amsinckia intermedia	Common fiddleneck	native	
Amsinckia menziesii	Menzies' fiddleneck	native	
Cryptantha intermedia	Common popcorn flower	native	
Echium candicans	Pride of madeira	invasive non-native	
Eriodictyon crassifolium var. *crassifolium*	Thick leaved yerba santa	native	
Eucrypta chrysanthemifolia var. *chrysanthemifolia*	Common eucrypta	native	
Heliotropium curassavicum var. *oculatum*	Seaside heliotrope	native	
Pectocarya linearis ssp. *ferocula*	Slender combseed	native	
Pectocarya penicillata	Sleeping combseed	native	
Phacelia distans	Common phacelia	native	
Phacelia parryi	Parry's phacelia	native	
Phacelia ramosissima	Branching phacelia	native	
Pholistoma racemosum	San Diego fiesta flower	native	
Plagiobothrys sp.	Popcorn flower	native	
Brassicaceae			
Brassica nigra	Black mustard	invasive non-native	
Brassica rapa[2]	Field mustard	invasive non-native	
Brassica tournefortii	Saharan mustard	invasive non-native	
Caulanthus heterophyllus	San Diego wild cabbage	native	
Cardamine californica	Milkmaids	native	

Scientific Name	Common Name	Nativity	Sensitivity Status[1]
Draba cuneifolia	Wedge-leaved draba	native	
Erysimum capitatum var. *capitatum*	Western wallflower	native	
Lepidium didymum	Lesser swine cress	non-native	
Lepidium latifolium	Broadleaved pepperweed	invasive non-native	
Lobularia maritima[2]	Sweet alyssum	invasive non-native	
Hirschfeldia incana	Short-podded mustard	invasive non-native	
Raphanus sativus[2]	Radish	invasive non-native	
Sisymbrium irio[2]	London rocket	invasive non-native	
Cactaceae			
Cylindropuntia californica var. *parkeri*	Brownspined pricklypear	native	
Cylindropuntia prolifera	Coastal cholla	native	
Ferocactus viridescens	San Diego barrel cactus	native	CRPR: 2B.1 NCCP: Covered
Mammillaria dioica	Fish hook cactus	native	
Opuntia littoralis	Coast prickly-pear	native	
Opuntia oricola[2]	Chaparral prickly-pear	native	
Opuntia xvaseyi	Vasey's prickly-pear	native	
Caprifoliaceae			
Lonicera subspicata var. *denudata*	Johnston's honeysuckle	native	
Caryophyllaceae			
Cardionema ramosissimum	Sand mat	native	
Loeflingia squarrosa	Spreading loeflingia	native	
Polycarpon depressum	California polycarpon	native	
Polycarpon tetraphyllum	Four-leaved allseed	non-native	
Sagina apetala	Dwarf pearlwort	native	
Silene gallica	Common catchfly	non-native	
Silene laciniata ssp. *laciniata*	Cardinal catchfly	native	
Spergula arvensis	Corn spurrey	non-native	
Stellaria media[2]	Chickweed	non-native	
Chenopodiaceae			
Arthrocnemum subterminale	Parish's glasswort	native	
Atriplex canescens	Hoary saltbush	native	
Atriplex lentiformis	Big saltbush	native	
Atriplex pacifica	South Coast saltscale	native	CRPR: 1B.2

Scientific Name	Common Name	Nativity	Sensitivity Status[1]
Atriplex prostrata	Fat-hen	non-native	
Atriplex semibaccata	Australian saltbush	invasive non-native	
Bassia hyssopifolia	Five horn bassia	invasive non-native	
Chenopodium californicum[2]	California goosefoot	native	
Chenopodium murale	Nettle leaf goosefoot	non-native	
Salicornia pacifica	Pickelweed	native	
Salsola australis	Russian thistle	invasive non-native	
Salsola tragus[2]	Russian thistle	invasive non-native	
Suaeda esteroa	Estuary sea-blite	native	CRPR: 1B.2
Suaeda nigra	Bush seepweed	native	
Suaeda taxifolia	Woolly sea-blite	native	
Cistaceae			
Crocanthemum aldersonii	Alderson's rush-rose	native	
Crocanthemum scoparium[2]	Bisbee peak rushrose	native	
Cleomaceae			
Peritoma arborea var. *arborea*	Bladderpod	native	
Convolvulaceae			
Calystegia macrostegia	Island false-bindweed	native	
Cressa truxillensis	Alkali weed	native	
Cuscuta californica var. *californica*	Short flowered dodder	native	
Cuscuta pacifica var. *pacifica*	Dodder	native	
Dichondra occidentalis	Western dichondra	native	
Crassulaceae			
Crassula connata	Sand pygmyweed	native	
Crassula ovata	Jade plant	non-native	
Crassula tillaea	Mediterranean pygmy weed	non-native	
Dudleya edulis	Fingertips	native	
Dudleya lanceolata	Southern california dudleya	native	
Dudleya pulverulenta	Chalk dudleya	native	
Cucurbitaceae			
Cucurbita foetidissima	Missouri gourd	native	
Marah macrocarpa	Chilicothe	native	

Scientific Name	Common Name	Nativity	Sensitivity Status[1]
Cyperaceae			
Bolboschoenus maritimus ssp. *paludosus*	Saltmarsh bulrush	native	
Carex praegacilis[2]	Clustered field sedge	native	
Carex triquetra	Triangular-fruit sedge	native	
Cyperus eragrostis	Tall cyperus	native	
Cyperus involucratus	Umbrella plant	non-native	
Schoenoplectus acutus var. *occidentalis*[2]	Tule	native	
Schoenoplectus californicus	California bulrush	native	
Ericaceae			
Arctostaphylos glandulosa ssp. *crassifolia*	Del mar manzanita	native	ESA: Endangered CRPR: 1B.1 NCCP: Covered
Comarostaphylis diversifolia ssp. *diversifolia*	Summer Holly	native	CRPR: 1B.2
Xylococcus bicolor	Mission manzanita	native	
Euphorbiaceae			
Croton californicus	Desert croton	native	
Euphorbia maculata	Spotted spurge	non-native	
Euphorbia misera	cliff spurge	native	CRPR: 2B.2
Euphorbia peplus	Petty spurge	non-native	
Euphorbia polycarpa	Smallseed sandmat	native	
Euphorbia serpens	Matted sandmat	native	
Ricinus communis	Castor bean	invasive non-native	
Stillingia linearifolia[2]	Linear-leaved stillingia	native	
Fabaceae			
Acacia cyclops	Coastal wattle	non-native	
Acacia redolens	Bank catclaw	non-native	
Acacia saligna	Orange wattle	non-native	
Acmispon americanus var. *americanus*[2]	American bird's foot trefoil	native	
Acmispon glaber var. *glaber*	Deerweed	native	
Acmispon heermannii	Heermann's lotus	native	
Acmispon micranthus	Small-flowered lotus	native	
Acmispon strigosus	Strigose lotus	native	
Astragalus trichopodus var. *lonchus*	Southern california milkvetch	native	
Lathyrus vestitus var. *alefeldii*	San Diego pea	native	

Scientific Name	Common Name	Nativity	Sensitivity Status[1]
Lupinus bicolor	Miniature lupine	native	
Lupinus hirsutissimus	Stinging lupine	native	
Lupinus truncatus	Blunt-leaved lupine	native	
Medicago polymorpha	Bur clover	invasive non-native	
Melilotus albus	White sweetclover	invasive non-native	
Melilotus indicus	Annual yellow sweetclover	non-native	
MTrifolium hirtum	Rose clover	non-native	
Fagaceae			
Quercus berberidifolia	Inland scrub oak	native	
Quercus dumosa	Nuttall's scrub oak	native	CRPR: 1B.1
Quercus Xacutidens	Torrey's hybrid oak	native	
Frankeniaceae			
Frankenia salina	Yerba reuma, alkali heath	native	
Geraniaceae			
Erodium botrys	Broad-leaf filaree	non-native	
Erodium cicutarium	Red-stemmed filaree	invasive non-native	
Erodium moschatum	White-stemmed filaree	non-native	
Grossulariaceae			
Ribes indecorum	White-flowered gooseberry	native	
Ribes speciosum	Fuchsia-flowered gooseberry	native	
Iridaceae			
Chasmanthe floribunda	African cornflag	non-native	
Sisyrinchium bellum	Blue eyed grass	native	
Juncaceae			
Juncus acutus ssp. *leopoldii*	Southwestern spiny rush	native	
Lamiaceae			
Marrubium vulgare	White horehound	invasive non-native	
Salvia apiana	White sage	native	
Salvia clevelandii	Cleveland sage	native	
Salvia columbariae	Chia	native	
Salvia mellifera	Black sage	native	

Scientific Name	Common Name	Nativity	Sensitivity Status[1]
Malvaceae			
Malacothamnus fasciculatus var. *fasciculatus*	Chaparral bush mallow	native	
Malva parviflora	Cheeseweed mallow	non-native	
Malvella leprosa	Alkali mallow	native	
Molluginaceae			
Mollugo verticillata[2]	Green carpetweed	non-native	
Montiaceae			
Calandrinia menziesii	Red maids	native	
Calyptridium monandrum	Common pussypaws	native	
Claytonia perfoliata ssp. mexicana	Southern miner's lettuce	native	
Myrsinaceae			
Lysimachia arvensis	Scarlet pimpernel	non-native	
Myrtaceae			
Eucalyptus sp.	Gum tree	invasive non-native	
Nyctaginaceae			
Mirabilis laevis var. *crassifolia*	California four o'clock	native	
Onagraceae			
Camissoniopsis bistorta	California sun cup	native	
Camissoniopsis cheiranthifolia ssp. *suffruticosa*	Shrubby beach primrose	native	
Camissoniopsis hirtella	Hairy sun cup	native	
Camissoniopsis lewisii	Lewis' evening-primrose	native	
Camissoniopsis robusta	Robust sun cup	native	
Eulobus californicus[2]	California primrose	native	
Oenothera elata ssp. *hirsutissima*	Hairy evening primrose	native	
Orobanchaceae			
Castilleja foliolosa	Woolly paintbrush	native	
Cordylanthus rigidus ssp. *setigerus*	Bird's beak	native	
Oxalidaceae			
Oxalis pes-caprae	Bermuda-buttercup	invasive non-native	
Papaveraceae			
Dendromecon rigida	Bush poppy	native	
Eschscholzia californica	California poppy	native	
Phrymaceae			
Mimulus aurantiacus	Sticky monkeyflower	native	

Scientific Name	Common Name	Nativity	Sensitivity Status[1]
Pinaceae			
Pinus torreyana ssp. *torreyana*	Torrey pine	native	CRPR: 1B.2 NCCP: Covered
Pittosporaceae			
Pittosporum undulatum[2]	Australian cheesewood	non-native	
Plantaginaceae			
Antirrhinum nuttallianum ssp. *nuttallianum*	Nuttall's snapdragon	native	
Antirrhinum nuttallianum ssp. *subsessile*	Nuttall's snapdragon	native	
Castilleja foliolosa	Woolly paintbrush	native	
Nuttallanthus texanus	Blue toadflax	native	
Plantago coronopus	Cut leaf plantain	invasive non-native	
Plantago erecta	Dotseed plantain	native	
Plantago major	Common plantain	non-native	
Plantago ovata var. insularis	Desert plantain	native	
Platanaceae			
Platanus racemosa[2]	Western sycamore	native	
Plumbaginaceae			
Limonium californicum	Marsh rosemary	native	
Limonium perezii	Canarian sea lavender	non-native	
Limonium sinuatum	Statice	non-native	
Poaceae			
Aristida adscensionis	Sixweeks three-awn	native	
Aristida purpurea	Purple three-awn	native	
Arundo donax	Giant reed	invasive non-native	
Avena barbata	Slender oat	invasive non-native	
Avena fatua[2]	Wild oat	invasive non-native	
Brachypodium distachyon	False brome	invasive non-native	
Bromus diandrus	Ripgut brome	invasive non-native	
Bromus hordeaceus[2]	Soft brome	invasive non-native	
Bromus madritensis ssp. *rubens*	Foxtail brome	invasive non-native	
Cortaderia selloana	Uruguayan pampas grass	invasive non-native	
Crypsis schoenoides	Swamp grass	non-native	
Cynodon dactylon[2]	Bermuda grass	invasive non-native	
Distichlis littoralis	Shore grass	native	

Scientific Name	Common Name	Nativity	Sensitivity Status[1]
Distichlis spicata	Salt grass	native	
Ehrharta calycina	Perennial veldt grass	invasive non-native	
Ehrharta erecta[2]	Panic veldt grass	invasive non-native	
Ehrharta longiflora	Long-flowered veldt grass	invasive non-native	
Elymus condensatus	Giant wild rye	native	
Eragrostis sp.[2]	Love grass	unknown[3]	
Festuca bromoides	Brome fescue	non-native	
Festuca myuros[2]	Rattail fescue	invasive non-native	
Festuca octoflora	Sixweeks fescue	native	
Festuca perennis	Italian rye grass	non-native	
Hordeum murinum ssp. *leporinum*	Foxtail barley	invasive non-native	
Lamarckia aurea	Goldentop	non-native	
Melica imperfecta	Small-flowered melica	native	
Melinis repens	Natal grass	non-native	
Muhlenbergia microsperma	Littleseed muhly	native	
Nassella tenuissima	Finestem needlegrass	invasive non-native	
Parapholis incurva[2]	Sickle grass	non-native	
Paspalum dilatatum	Dallis grass	non-native	
Pennisetum setaceum	Fountaingrass	invasive non-native	
Polypogon monspeliensis	Annual beard grass	invasive non-native	
Schismus barbatus	Common Mediterranean grass	invasive non-native	
Stipa coronata	Crested needle grass	native	
Stipa lepida	Foothill needle grass	native	
Stipa miliacea var. *miliacea*[2]	Smilo grass	invasive non-native	
Stipa pulchra	Purple needle grass	native	
Polemoniaceae			
Navarretia sp.	Navarretia	native	
Polygonaceae			
Emex spinosa	Devil's thorn	invasive non-native	
Eriogonum fasciculatum var. *foliolosum*	California buckwheat	native	
Lastarriaea coriacea	Leather spineflower	native	
Nemacaulis denudata var. denudata	coast woolly-heads	native	CRPR: 1B.2
Pterostegia drymarioides	Fairy mist	native	
Rumex crispus	Curly dock	invasive non-native	

Scientific Name	Common Name	Nativity	Sensitivity Status[1]
Polypodiaceae			
Polypodium californicum	California polypody	native	
Primulaceae			
Lysimachia arvensis	Scarlet pimpernel	non-native	
Primula cleavelandii var. *clevelandii*	Cleveland's shooting star	native	
Pteridaceae			
Pentagramma glandulovisicida	San Diego silverback fern	native	
Pentagramma triangularis	Goldback fern	native	
Pentagramma viscosa	Coastal silverback fern	native	
Ranunculaceae			
Clematis pauciflora	Virgin's bower	native	
Resedaceae			
Oligomeris linifoiia	Narrow-leaved cambess	native	
Rhamnaceae			
Ceanothus tomentosus	Woolly leaf ceanothus	native	
Ceanothus verrucosus	Wart-stemmed ceanothus	native	CRPR: 2B.2 NCCP: Covered
Delphinium cardinale	Scarlet larkspur	native	
Rhamnus crocea	Redberry	native	
Rosaceae			
Adenostoma fasciculatum	Chamise	native	
Cercocarpus minutiflorus	Smooth mountain mahogany	native	
Heteromeles arbutifolia	Toyon	native	
Rubiaceae			
Galium angustifolium ssp. *angustifolium*	Narrow leaved bedstraw	native	
Galium aparine	Cleavers	non-native	
Rutaceae			
Cneoridium dumosum	Bushrue	native	
Salicaceae			
Salix gooddingii	Gooding's willow	native	
Salix lasiolepis	Arroyo willow	native	
Saururaceae			
Anemopsis californica	Yerba mansa	native	

Scientific Name	Common Name	Nativity	Sensitivity Status[1]
Scrophulariaceae			
Myoporum parvifolium[2]	Slender myoporum	non-native	
Myoporum sp.	Myoporum	non-native	
Selaginellaceae			
Selaginella bigelovii	Bigelow's moss fern	native	
Selaginella cinerascens	Ashy spike-moss	native	
Solanaceae			
Datura wrightii	Jimsonweed	native	
Lycium californicum	California boxthorn	native	
Nicotiana clevelandii	Cleveland's tobacco	native	
Nicotiana glauca	Tree tobacco	invasive non-native	
Solanum parishii	Parish's purple nightshade	native	
Themidaceae			
Dichelostemma capitatum	Blue dicks	native	
Tropaeolaceae			
Tropaeolum majus	Garden nasturtium	non-native	
Typhaceae			
Typha domingensis	Cattail	native	
Urticaceae			
Parietaria hespera	California pellitory	native	
Urtica urens	Dwarf nettle	non-native	
Violaceae			
Viola pedunculata	California golden violet	native	
Zygophyllaceae			
Tribulus terrestris[2]	Puncture vine	non-native	

[1] Sensitivity Status Key
ESA: Federal Endangered Species Act (ESA) Endangered
CESA: California Endangered Species Act (CESA) Endangered
CRPR: California Rare Plant Rank:
1B: Considered rare, threatened, or endangered in California and elsewhere
2B: Plants rare, threatened, or endangered in California, but more common elsewhere

Decimal notations: .1 – Seriously endangered in California, .2 – Fairly endangered in California, .3 – Not very endangered in California
NCCP: SDG&E NCCP Subregional Natural Community Conservation Plan (SDG&E 1995)

[2] Plants not found during AECOM 2016 fall and 2017 spring surveys, but found during 2014 RECON surveys (RECON, 2014). Reasons for discrepancies could be changes in survey boundaries, seasonal variation, and possible misidentifications. Three sensitive species from the RECON list were not included in this list, including: *Artemisia palmeri* - mapped outside of the current survey boundaries; *Erysimum ammophilum* – This species was misidentified. The species in the BSA is *Erysimum capitatum* ssp. *capitatum; and Agave shawii* – This species was misidentified. The species in the BSA is a horticultural Agave planted in a restoration area. One common plant from the RECON list was also not included in this list, including: *Euphorbia albomarginata* – This is a desert species that would not occur in the BSA. This species in the BSA is *Euphorbia polycarpa*.

[3] 2014 RECON surveys identified one plant to a genus that has both native and non-native species known to occur near the BSA. These genera were not observed during the 2016-2017 AECOM surveys.

[4] Identified as *Agave shawii* in 2014 RECON surveys. These plants have too narrow of leaves and too small of teeth to be *Agave shawii*. These were found planted in a restoration area and appear to be some species of horticultural Agave, possibly *Agave americana*.

Attachment V

Focused Surveys for Light-Footed Ridgway's Rail[1], Belding's Savannah Sparrow, Western Snowy Plover, and California Least Tern

Conducted 2014

[1] At the time of this survey, Light-Footed Ridgway's Rail was known as Light-Footed Clapper Rail. The species is now referred to as Light-Footed Ridgway's Rail, and is analyzed as such in the IS/MND.

Konecny Biological Services
Biological Consulting, Research, Conservation

October 17, 2014

RECON
1927 Fifth Avenue
San Diego, CA 92101

Attn: Ms. Brenna Ogg

Re: Results of Focused Surveys for the Light-footed Clapper Rail, Belding's Savannah Sparrow, Western Snowy Plover, and California Least Tern for the San Diego Gas & Electric Reconfigure Tie Line 674A at Del Mar and Remove from Service Tie Line 666D Project, Diego County, California, 2014.

Dear Ms. Ogg:

This letter report presents the results of focused surveys for the light-footed clapper rail (*Rallus longirostris levipes*) (LFCR), Belding's subspecies of the Savannah sparrow (*Passerculus sandwichensis beldingi*) (BSS), western snowy plover (*Charadrius alexandrines nivosus*) (WSP), and California least tern (*Sternula antillarum browni*) (CLT) for the San Diego Gas & Electric (SDG&E) Reconfigure Tie Line (TL) 674A at Del Mar and Remove from Service TL 666D Project (Project) in north-coastal San Diego County, California. The LFCR and CLT are listed endangered species by the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW). The WSP is listed as a threatened species by the USFWS. The BSS is listed as an endangered species by CDFW. LFCR, BSS, WSP, and CLT are also covered species under SDG&E's Natural Community Conservation Plan. Recent genetic studies have been conducted that show *R. l. levipes* is more correctly *R. obsoletus levipes*; and the common name changed from the LFCR to the light-footed Ridgeway's rail (Chesser *et al* 2014). However, LFCR nomenclature will be retained in this report.

Surveys for the LFCR, WSP, CLT, and BSS were conducted by wildlife biologist John Konecny. The LFCR surveys were conducted in accordance with the recommendations provided to the USFWS by the Clapper Rail Study Team (2009). This activity is authorized by Konecny Biological Services's (KBS) USFWS section 10(a) permit number TE837308-6, and a CDFW Memorandum of Understanding.

INTRODUCTION

Light-footed Clapper Rail

The LFCR is a slender, tawny-breasted bird with grayish edges on brown centered back feathers, olive wing coverts, vertical white bars on the flanks, a white stripe over the eye, and a partially orange bill. LFCR occurred historically along the coast of southern California from Carpinteria Marsh in Santa Barbara County south to San Quintín, Baja California, Mexico (Grinnell and Miller 1944; USFWS 1994).

The LFCR is a permanent resident of coastal salt marsh traversed by tidal sloughs, usually characterized by cordgrass (*Spartina foliosa*) and pickleweed (*Salicornia* spp.) (Grinnell and Miller 1944; USFWS 1994). LFCRs have also nested in freshwater marsh characterized by cattails (*Typha* sp.) and bulrush (*Scirpus* sp.) at Buena Vista, Agua Hedionda, Batiquitos, San Elijo, and San Dieguito lagoons in San Diego County (Zembal *et al.* 2013) and in spiny rush (*Juncus acutus*) at Naval Air Station (NAS) Point Mugu.

LFCRs forage primarily on crustaceans when present. They will also feed on mollusks, small fish, aquatic insects, grasshoppers, small vertebrates, and in some cases, seeds (Eddleman and Conway 1998); and within emergent vegetation or along the ecotone between mudflats and marsh (Zembal and Fancher 1988). LFCRs also forage for crabs in the central drains of tidal creeks at low tide. Surface gleaning and shallow probing comprise approximately 90% of foraging time. They very irregularly probe deep into the substrate (Zembal and Fancher 1988).

Populations of LFCRs have undergone decline in the United States due to the rail's limited distribution and destruction and degradation of coastal salt marsh habitat. The statewide LFCR population in 2013 was reported to be 525 pairs in 22 marshes (Zembal *et al.* 2013), which represents the highest count since the statewide census began in 1980. The 2013 total is four pairs greater than the 2012 count of 521 pairs. Fifty-six percent of these pairs were found in two coastal salt marsh complexes at Upper Newport Bay and the Tijuana Marsh National Wildlife Refuge (NWR). Seven other marshes–NAS Point Mugu, Batiquitos Lagoon, San Elijo Lagoon, San Dieguito Lagoon, Buena Vista Lagoon, Seal Beach NWR, and Kendall-Frost Marsh in Mission Bay–each had between 10 and 45 pairs, representing an additional 36% of the state total. The remaining 13 marshes each had between one and eight pairs.

Zembal and Massey (1986) have shown that paired LFCR can be detected "clappering" throughout the year but have a bimodal peak in vocalizing during mid-February to mid-April and again in September through October. The initial peak in "clappering" vocalizing corresponds to the onset of breeding season, and the second peak is thought to function in pair formation in the fall (Zembal and Massey 1986). In contrast to "clappering," single male and female "kekking" is highly seasonal, almost exclusively occurring between February and June.

Belding's Subspecies of the Savannah Sparrow

The BSS is a small, dark brown sparrow with a heavily streaked breast, a short squared tail, and a yellow lore. The BSS inhabits coastal salt marsh characterized by several species of pickleweed. Historically, the sparrow ranged from Goleta in Santa Barbara County, south to El Rosario, Baja California, Mexico (Grinnell and Miller 1944; Van Rossen 1947). More than 75% of the coastal wetland habitats within this range have been lost or highly degraded (Wiley and Zembal 1989), and the remainder suffer from the effects of increasing human populations. The greatly reduced amount of habitat, increasing human impacts in the remnants, and small population sizes led CDFW to list the BSS as an endangered species in 1974. There were an estimated 3,372 breeding territories of the BSS in southern California during the last range-wide survey in 2010 (Zembal and Hoffman 2010), with 43 breeding territories present at San Dieguito Lagoon, most of which were located west of the Atchison, Topeka, and Santa Fe railroad tracks (railroad tracks) (Zembal and Hoffman 2010).

Western Snowy Plover

The WSP is a small, pale sandy brown shorebird with a thin dark bill, grayish legs, dark ear patches, and dark patches on either side of the upper breast. The coastal population of WSP occurs along the Pacific coast from southern Washington to southern Baja California (Small 1994).

WSP preferred habitat is sandy dune-backed beaches, sand spits, bayshore sand flats, salt evaporation ponds, alkaline flats, and the shores of alkaline sink lakes (Small 1994). WSP forage for invertebrates in sand, low foredune vegetation, and washed up kelp. Seasonal movements bring WSP's from the north and northeast and possibly the California interior to coastal beaches beginning in October. WSP's nesting season is between March 1 and September 30. Northern breeders depart from the coastal areas beginning in mid-March.

California Least Tern

The CLT is the smallest North American tern. It has a grey mantle and a black cap and nape, with a white forehead during the breeding season, and a yellow bill with a dark tip. The CLT is a once abundant, migratory seabird that returns to coastal California and Baja Mexico to breed from over wintering regions in Central and South America. In 2012 there were an estimated 4,263-6,421 breeding pairs that produced 557-628 fledglings in southern California (Frost 2013). Historic nesting locales were primarily sandy, ocean beach strand areas near estuaries and river mouths. Such beaches and coastal nesting opportunities for the least tern have become intensively disturbed or eliminated by human activities, such as seaside recreation, roads, marinas, ports, and houses. During the breeding season, April through September, the CLT feeds itself and its young entirely on fish captured from near shore waters, estuaries, lagoons, bays, and river mouths (Massey 1974). Filling, channelizing, or water quality degradation contributed to the decline of the least tern population by eliminating or degrading foraging areas. The CLT was added to the State and Federal list of endangered species in 1970 (USFWS 1973) due to the tern's diminished population level, which was caused primarily by disruption of or unavailability of breeding sites and adjacent foraging waters.

Efforts were begun to identify and protect breeding sites and adjacent winter areas. Annual population censuses were begun by California Department of Fish and Game in 1973, and fledgling production estimates were begun in 1978. Critical habitat designations were considered, but never proposed, while the CLT Recovery Plan was completed in 1980.

As a colonial nesting seabird, CLT nesting colonies can be low to high density, with group mobbing of some predators by breeding adults and cryptically colored eggs and chicks being principal defense methods. Least tern nesting areas are typically flat, open areas near the coast with light colored, sandy substrate, and little vegetation (Massey 1974). In the Unites States, very few "natural" nesting areas remain. Many have been created or are highly modified man-made areas. Some least tern nesting sites are next to aircraft taxiways and highways, within industrial port areas, or in flood-prone areas, and several are on southern California beaches (Frost 2012). Many CLT nesting colonies remain concentrated in relatively small areas that are very vulnerable to predation or disturbance.

When an active CLT nesting colony is disturbed in some manner, nesting pairs may respond in several ways, depending on several factors such as type of disturbance, loss of eggs, loss of chicks, loss of adults, and number of other pairs similarly disturbed. The responses may include nesting again within the same colony, renesting at a nearby colony, or abandoning attempts to breed in that season. Renesting attempts after the first month of the breeding season occur during the influx of two-year old pairs breeding for the first time. The CLT also shows strong year after year fidelity to successfully used breeding sites, or proximal clusters of sites, and may return to a previously disturbed site after several years of absence.

PROJECT LOCATION

The SDG&E Project area is generally linear in shape, roughly paralleling an east–west portion of Via de la Valle and extending south and west along the eastern and southern sides of the Del Mar Fairgrounds, southeast through San Dieguito Lagoon, south through the community of Del Mar Heights, southeast through Los Peñasquitos Lagoon, and southeast along a portion of Interstate 5. The survey area for LFCR, BSS, WSP, and CLT comprises two locations in coastal San Diego County, California, which include areas where suitable habitat for these species occurs within the 300-foot-wide transmission corridor for the Project (Figure 1). The northern location, referred to hereafter as the San Dieguito site, is within the western portion of San Dieguito Lagoon at the western terminus of the San Dieguito River Valley, east of Jimmy Durante Boulevard, west of Interstate 5, and immediately north of Racetrack Drive, in the cities of Del Mar and San Diego, California (Figure 2). The San Dieguito site is bordered on the west side by the

22nd Agricultural District Del Mar Fairgrounds. This site extends eastward from San Dieguito Drive approximately 3,370 feet (1,156-meters) to Interstate 5. Specifically, this site is located within Township 14 South, Range 4 West, Sections 11, 12, and two unnumbered sections of the U.S. Geological Survey Del Mar OEW, CA 7.5-minute quadrangle.

The southern location, referred to hereafter as the Los Peñasquitos site, is immediately south of Carmel Valley Road, east of the railroad tracks, and west of Interstate 5 and Sorrento Valley Road, in the western portion of the City of San Diego. The Los Peñasquitos site extends 4,200 feet (1,280 meters) southeastward to the Sorrento Valley pump station (Figure 3). A staging area was added to the project in the Los Peñasquitos Natural Preserve parking lot, the buffer area extending 300 feet (91 meters) into the marsh south of the parking lot and southwest of the railroad tracks. Specifically, this site is located within Township 14 South, Range 4 West, and in Section 25 of the U.S. Geological Survey Del Mar 7.5-minute quadrangle.

PROJECT SITE DESCRIPTION

San Dieguito Site

The San Dieguito site is a mosaic of intertidal mudflat, open water, and expanses of southern coastal salt marsh. The San Dieguito River flows through the western and southern area of the survey area. The southern coastal salt marsh onsite is characterized by woody glasswort (*Salicornia virginica*), Parish's glasswort (*S. subterminalis*), and alkali-heath (*Frankenia salina*). Active salt marsh restoration is being conducted on the north and south sides of the San Dieguito River. Elevation of the San Dieguito site is approximately 4 to 17 feet (1 to 5 meters) above mean sea level.

Los Peñasquitos Site

At the Los Peñasquitos site, much of the area west of Interstate 5 is southern coastal salt marsh, coastal brackish marsh, and coastal fresh water marsh. An area of southern willow riparian woodland dominated by arroyo willow (*Salix lasiolepis*) and mule fat (*Baccharis salicifolia*), with an understory of Douglas mugwort (*Artemisia douglasiana*) and southwestern spiny rush. Diegan coastal sage scrub characterized by California sagebrush (*A. californica*), flat-top buckwheat (*Eriogonum fasciculatum*), and San Diego sagewort (*A. palmeri*) are present on the northeast portion of the site. Patches of cattail and bulrush are embedded throughout the riparian woodland. The riparian woodland transitions southward and west into southern coastal salt marsh characterized by pickleweed and alkali-heath. The saltmarsh transitions into brackish and freshwater marsh with large patches of cattails. The staging area buffer area, south of the Los Peñasquitos Natural Preserve parking lot, is predominately coastal saltmarsh, characterized by alkali-heath and marsh jaumea (*Jaumea carnosa*), and coastal dunes on the west side, with pickle weed on the southern fringe. Elevation of the Los Peñasquitos site is approximately 10 feet (3 meters) above mean sea level.

METHODS

Six focused LFCR survey events were conducted at least seven days apart within the Project survey area between March 10th and May 30th, 2014. Each survey event consisted of two survey days, one at the San Dieguito and one at the Los Peñasquitos site. Each survey lasted approximately three hours. The surveys were conducted in accordance with the recommendations provided to the USFWS by the Clapper Rail Study Team (2009). Surveys for the BSS, WSP, and CLT were conducted concurrently with those for the LFCR. Three additional surveys for the WSP and CLT were conducted, one in each of May, June, and July. A summary of the environmental conditions on the six survey dates is provided in Table 1 below.

Table 1. Summary of Weather Conditions During Six Light-footed Clapper Rail, Belding's Savannah Sparrow, Western Snowy Plover, and California Least Tern Surveys; and Three Additional Surveys for the Western Snowy Plover and California Least Tern for the San Diego Gas and Electric Reconfigure Tie Line 674A at Del Mar and Remove from Service Tie Line 666D Project, County of San Diego, California, 2014.

Survey #	Date	Surveyor (Species)*	Time	Weather Conditions
1A	03/10/2014	JK (LFCR)(BSS)	0620-0930	50% overcast,53-70°F, wind 1-3 mph
1B	03/12/2014	JK, MW (LFCR)(BSS)	0630-1000	50% overcast, 54-63°F, wind 1-3 mph
2A	03/17/2014	JK (LFCR)(BSS)(WSP)	0630-1020	100% overcast, 54-64°F, wind 1-5
2B	03/19/2014	JK (LFCR)(BSS)(WSP)	0625-1020	100% overcast, 54-63°F, wind 5-7 mph
3A	03/28/2014	JK (LFCR)(WSP)	1610-1835	80% overcast, 63-61°F, wind 3-7 mph
3B	03/29/2014	JK (LFCR)(WSP)	1615-1835	80% overcast, 67-63°F, wind 3-7 mph
4A	04/05/2014	JK (LFCR)(WSP)	1610-1835	60% overcast, 63-59°F, wind 5-7 mph
4B	04/06/2014	JK (LFCR)(WSP)	1610-1840	70% overcast, 67-64°F, wind 7-10 mph
5A	04/12/2014	JK (LFCR)(CLT)(WSP)	0620-1130	75% overcast, 57-63°F, wind 7-10 mph
5B	04/13/2014	JK (LFCR)(CLT)(WSP)	0625-1130	80% overcast, 57-67°F, wind 1-3 mph
6A	05/14/2014	JK (LFCR)(CLT)(WSP)	0630-1130	0% overcast, 71-93°F, wind 7-10 mph
6B	05/15/2014	JK (LFCR)(BSS)(CLT)(WSP)	0615-1120	0% overcast, 63-92°F, wind 5-7 mph
7A	05/25/2014	JK (CLT)(WSP)	0610-1115	100% overcast, 62-66°F, wind 5-7 mph
7B	05/26/2014	JK (CLT)(BSS)(WSP)	0620-1110	100% overcast, 62-73°F, wind 5-7 mph
8	06/16/2014	JK (CLT)(WSP)	0550-1200	100% overcast, 63-69°F, wind 1-3 mph
9	07/7/2014	JK (CLT)(WSP)	0540-1200	100% overcast, 66-74°F, wind 1-3 mph

*JK-John Konecny; MW-Mandy Weston; A-San Dieguito: B-Los Peñasquitos; LFCR-Light-footed Clapper Rail; BSS-Belding's Subspecies of the Savannah Sparrow; WSP-Western Snowy Plover; CLT-California Least Tern

The surveys were conducted by walking the project alignment and an approximate 150-foot (91-meter) buffer, stopping at areas where there was appropriate habitat, and listening for vocalizing LFCR. If rails were not detected passively, a digital call-prompt of the LFCR "dueting" was played with an iPod and amplified speakers at 30-second intervals. A response was listened for approximately 10 minutes before proceeding to the next survey station. Binoculars were used to scan the survey area for BSS, WSP, and CLT. No call prompting was done for the BSS, WSP, and CLT.

RESULTS and DISCUSSION

San Dieguito Site

No LFCR was detected during the six focused surveys at the San Dieguito site in 2014. In its present condition there is very little habitat for this species on this site. There is coastal salt marsh habitat present in the San Dieguito River between Jimmy Durante Boulevard and the southeast terminus of the line, but its vegetation is low and sparse, and there is considerable saltmarsh restoration work going on in the area. During the 2012 range-wide surveys, 45 pairs of LFCR were detected in the east end of the lagoon, at or upstream of El Camino Real (Zembal *et al.* 2013).

At least thirteen BSS territories (Figure 4) were detected in the southern coastal salt marsh north and east of Race Track Drive and on the opposite side of the channel. Most of these observations were of pairs that were posted and singing. This number is consistent with that found in 2010 during the BSS rangewide survey (Zembal and Hoffman 2010).

CLTs were observed foraging in the open water of the San Dieguito River between the railroad tracks and Jimmy Durante Boulevard on May 25th and June 16th, and again on July7th, 2014. These may have been courting individuals or early foragers from another nesting site. No CLT nested in the survey area at San Dieguito Lagoon in 2013. CLT undoubtedly nested in the area historically but have not been present in the past 10 years, probably due to the amount of urbanization and disturbance. There are some CLT areas immediately west and east of Interstate 5 that have been incorporated into the San Dieguito mitigation plan. Colonization of these areas may return the open water of the lower San Dieguito River to foraging habitat. No other CLTs were observed in the survey area, neither foraging or on the ground.

No WSPs were observed. Like the CLT, WSP undoubtedly bred in this area historically, but have not recently, probably do to urbanization and disturbance.

Los Peñasquitos Site

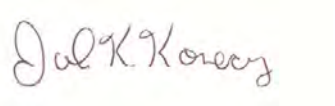
Two pairs of LFCR and two BSS territories were detected at the Los Peñasquitos site in 2014 (Figure 5). Pair R1 was detected during the first survey on March 12 as an advertising "kekking" male. This individual became paired sometime in the next two weeks, and a "duetting" pair was detected April 6th and 13th. A "duetting" pair of LFCR (R2 on Figure 5) was detected responding to a call prompt on March 19th. This pair was detected again, passively, on April 6th and May 15th. BSS was also observed in the pickleweed, south of the buffer for the staging area.

No CLT or WSP were detected at the Los Peñasquitos site during the surveys of 2014. WSP is known to use the coastal dunes, south of the staging area during the winter (J. Konecny pers. obs.)

CERTIFICATION

I certify that the information in this survey report and attached exhibits fully and accurately represents my work. The results of focused surveys for listed species are typically considered valid for one year by the USFWS and CDFW. If you have any questions or require additional information, please call me at (760) 489-5276.

Sincerely,



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TE837308-6

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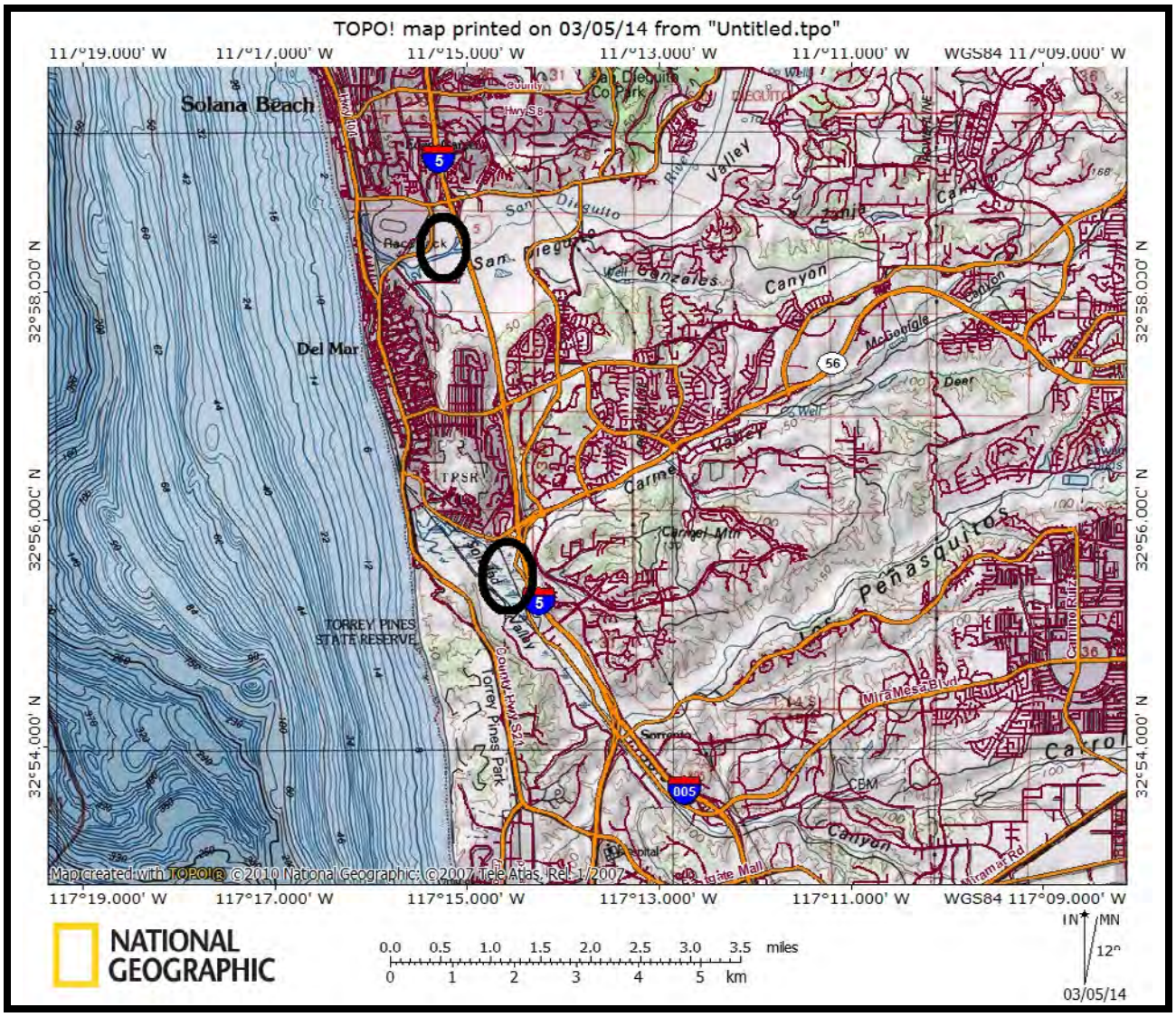

Figure 1. **General Location (black ovals) of the Light-footed Clapper Rail, Belding's Savannah Sparrow, California Least Tern, and Western Snowy Plover Survey Areas for the San Diego Gas and Electric Reconfigure Tie Line 674A at Del Mar and Remove from Service Tie Line 666D Project, San Diego County, California, 2014.**

Figure 2. **Northern Location (San Dieguito Site) of the Light-footed Clapper Rail, Belding's Savannah Sparrow, California Least Tern, and Western Snowy Plover Survey Area (tie line in yellow) for the San Diego Gas and Electric Reconfigure Tie Line 674A at Del Mar and Remove from Service Tie Line 666D Project, San Diego County, California, 2014.**

Figure 3. **Southern Location (Los Peñasquitos Site) of the Light-footed Clapper Rail, Belding's Savannah Sparrow, California Least Tern, and Western Snowy Plover Survey Area (line to be removed and staging area in yellow) for the San Diego Gas and Electric Reconfigure Tie Line 674A at Del Mar Remove From Service Tie Line 666D Project, San Diego County, California, 2014.**

Figure 4. **Location of Thirteen Belding's Savannah Sparrow Territories (*1-*13 in red) at the San Dieguito Site in the San Diego Gas and Electric Reconfigure Tie Line 674A at Del Mar and Remove from Service TL 666D Project Survey Area, San Diego County, California, 2014.**

Figure 5. **Location of the Two Light-footed Clapper Rail Pairs (R1 and R2 in red) and Two Belding's Savannah Sparrow Territories (BSS1 and BSS2 in red) at the Los Peñasquitos Site in the San Diego Gas and Electric Reconfigure TL 674A at Del Mar and Remove From Service Tie Line 666D Project Survey Area, San Diego County, California, 2014.**

Attachment VI

Focused Surveys for Light-Footed Ridgway's Rail and Belding's Savannah Sparrow

Conducted 2017

BLACKHAWK Environmental

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May 24, 2017

Ms. Stacey Love
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U.S. Fish and Wildlife Service – Carlsbad Fish and Wildlife Office
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Re: 2017 Survey Results for Light-footed Ridgway's Rail and Belding's Savannah Sparrow for the San Diego Gas & Electric Transmission Line 674A Reconfiguration and Transmission Line 666D Removal Project Cities of San Diego and Del Mar, San Diego County, California

Dear Ms. Love:

Blackhawk Environmental Inc. (Blackhawk) was contracted through AECOM, Inc. to complete surveys for light-footed Ridgway's rail (*Rallus obsoletes levipes*; RIRA) and Belding's savannah sparrow (*Passerculus sandwichensis beldingi*; BSSP) for the proposed San Diego Gas & Electric Transmission Line 674A Reconfiguration and Transmission Line 666D Removal Project (Project) in the City of Del Mar; San Diego County, California (Figure 1). Six RIRA surveys were conducted by Bonnie L. Peterson (USFWS permit TE038701-2 and California Department of Fish and Wildlife (CDFW) Memorandum of Understanding (MOU)) in accordance with the recommendations provided to the United States Fish and Wildlife Service (USFWS) by the Clapper Rail Study Team (Konecny et al. 2009). Antonette T. Gutierrez (USFWS permit TE50992B-0 and CDFW MOU) conducted BSSP surveys concurrent with light-footed Ridgway's rail for the first four surveys, and the last two surveys were performed independently.

For this report, the survey area is referred to as the Biological Study Area (BSA). The BSA encompassed a 300-foot-wide transmission corridor approximately seven miles long and extends from Via de la Valle at its most northern location and east of Interstate 5 just west of Vista Sorrento Parkway at its most southern location (Figure 1). Within the BSA, there were two locations of suitable habitat for RIRA and BSSP to occur; one in the southern portion of the alignment and the other in the northern portion of the alignment. The southern site, referred to as the Los Peñasquitos site, is located within Los Peñasquitos lagoon, south of Carmel Valley Road, east of the railroad tracks, and west of Interstate 5 and Sorrento Valley Road. The southern site, referred to as the San Dieguito site, is located within the western portion of San Dieguito Lagoon; it parallels Jimmy Durante Boulevard, west of Interstate 5, and is immediately north of Racetrack Drive. The two sites are located within Township 14 South, Range 4 West, Sections 11, 12, and two unnumbered sections of the U.S. Geological Survey *Del Mar* OEW, CA 7.5-minute quadrangle (Figure 2).

Los Peñasquitos Site

The Los Peñasquitos site is part of the Torrey Pines State Natural Reserve and is designated a Natural Preserve. The lagoon system is characterized by mudflats with meandering deep open water channels and shallow open water ponds surrounded by coastal salt marsh, coastal brackish marsh, and coastal and valley fresh water marsh. The coastal salt marsh supports large tracks of salt marsh pickleweed (*Salicornia pacifica*), estuary seablite (*Suaeda esteroa*), intermittent stands of alkali-heath (*Frankenia salina*) and marsh jaumea (*Jaumea carnosa*). The coastal and brackish marsh and coastal and valley freshwater marsh habitats are dominated by similar plant species including rushes (*Juncus* spp.), bulrushes (*Schoenoplectus* spp.), and cattail (*Typha* ssp.). The Los Peñasquitos site also included a small area of coastal saltmarsh and coastal dunes, occurring adjacent to the Los Peñasquitos Natural Preserve parking lot. The saltmarsh was characterized by salt marsh pickleweed and alkali-heath. Rushes and camissonia or beach evening primrose *(Camissoniopsis cheiranthifolia)* separated the salt marsh from coastal dunes. Elevation of the Los Peñasquitos site is approximately 10 feet (three meters) above mean sea level.

San Dieguito Site

The San Dieguito site is located in the westernmost segment of the San Dieguito lagoon and the San Dieguito River Park trail system. It is a unique ecosystem of intertidal marsh composed of various habitats including open water, mudflats and southern coastal salt marsh. The southern coastal salt marsh onsite is dominated by *Salicornia* species including salt marsh pickleweed and Parish's glasswort (*Arthrocnemum subterminale*). The southern coastal salt marsh habitat also supports alkali-heath and estuary seablite. There is a very limited amount of marsh habitat located at this site with only two small patches within the BSA (Photograph 2). East on the site, salt marsh restoration is being conducted on the north and south sides of the San Dieguito River. Elevation of the San Dieguito site is approximately four to 17 feet (one to five meters) above mean sea level.

LIGHT-FOOTED RIDGEWAY'S RAIL SPECIES ACCOUNT

The light-footed Ridgway's rail (formerly Clapper) Rail is a sedentary marsh bird that can be found year-round in the coastal marshes of southern California and northern Baja, Mexico (Grinnell and Miller 1944). This subspecies was listed as endangered in October 1970 by the USFWS and endangered and fully protected in 1971 by CDFW. The listings were prompted by a large decline in population which was attributed, almost exclusively, to habitat loss and degradation.

Historically the RIRA nests in salt marsh habitat and almost exclusively in cordgrass. RIRAs build their nests attached to the cordgrass, enabling the nests to rise and lower with the tides (Massey et. al. 1984). The RIRA is an opportunistic forager that eats primarily invertebrates such as beetles, snails, crayfish, decapods, and isopods (USFWS 1985). Nesting starts in mid-March and extends into August. Both parents share in the incubation and rearing of the chicks.

In recent years, with the loss of habitat and habitat quality, the RIRA has taken advantage of freshwater marsh in some areas. The RIRAs began by moving into the reeds, mostly cattails and bulrushes, immediately adjacent to the saltwater marsh in areas where the marsh was dense enough to protect from predation and human activity, and could be used to anchor their nests in much the same manner

as they do with cordgrass. In some areas, such as the San Dieguito River, the rail has moved up river and is nesting entirely in freshwater marsh habitat.

BELDING'S SAVANNAH SPARROW SPECIES ACCOUNT

The Belding's savannah sparrow is a non-migratory bird that occurs in coastal salt marshes. This small song bird has been categorized as endangered in the State of California since 1974. It ranges historically from Goleta in Santa Barbara County, California on the north, south to el Rosario, Baja California, Mexico (Grinnell and Miller 1944).

The BSSP is an endemic subspecies of Savannah sparrow (Massey 1979) that nests in the mid- and upper-littoral zones of coastal salt marshes (Powell 1993), where males actively defend territories around dry, non-inundated substrates (Wheelwright and Rising 1993). It typically nests in salt marsh pickleweed above the highest tide line. Nesting season extends from mid-February to August (Unitt 2004). The BSSP depends entirely on the salt-marsh ecosystem not only for nesting but also for foraging. BSSP forage throughout the salt-marsh, within the vegetation, along intertidal mudflats, and sometimes on neighboring sand dunes (Bradley 1973, Zedler 1982, Zembal et al. 1988).

SURVEY METHODS

Biologist Bonnie Peterson (BP) conducted RIRA surveys and Antonette Gutierrez (AG) conducted BSSP assessments for this Project (Table 1 and 2). Surveys were conducted in accordance with the above mentioned permits, MOUs and established guidelines. Six presence/absence surveys were conducted for the RIRA and BSSP between February 15th and April 30th, 2017 with at least one week between surveys. Surveys for both species were conducted concurrently on the same day with the exceptions of surveys five and six. One survey for RIRA at each site was conducted at dusk, and the remaining five surveys started at dawn. Dawn surveys began at or just before sunrise and proceed for no more than three hours after sunrise. The dusk surveys began two hours before sunset and continued until dark. Passive listening was first conducted to detect spontaneous calls from rails followed by recorded vocalizations if RIRA was not initially detected in the area. Recorded vocalizations included a series of approximately three calls repeated at five to 10 minute intervals to allow the rails time to respond. If RIRA were found to be present, taped vocalizations ceased. Surveys for BSSP occurred between dawn and 1015. BSSP surveys included passively surveying for birds using binoculars and/or spotting scopes and listening for singing birds. No BSSP playback recordings were used. All surveys were conducted during favorable weather conditions.

SURVEY RESULTS

Los Peñasquitos Site

Five RIRA territories were identified within the BSA (Figure 3) along with one territory immediately adjacent to the BSA. Most of the RIRA territories indentified were occupied by pairs based on their vocalizations. The RIRA territories were all located on the southern portion of the lagoon and were all located within large continuous stands of freshwater and brackish marsh.

Table 1. Survey Conditions Los Peñasquitos

Survey #	Date	Species	Personnel	Time	Conditions
1	3/14/17	RIRA,BSSP	BP, AG	0715-1000	53°-70°, 0-1 BS, 0%-10% cloud cover
2	3/23/17	RIRA,BSSP	BP, AG	0630-1000	57°-65°, 2-3 BS, 80%-20% cloud cover
3	3/30/17	RIRA,BSSP	BP, AG	0645-1015	52°-65°, 1 BS, 10% cloud cover
4	4/11/17	RIRA,BSSP	BP, AG	0615-1000	50°-62°,1 BS, 30%-5% cloud cover
5	4/18/17	RIRA	BP	1720-1930	68°-63°,2 BS, 0%-100% cloud cover
5	4/18/17	BSSP	AG	0630-1000	60°-64°, 0-1 BS, 100% cloud cover
6	4/26/17	RIRA	BP	0600-0910	53°-66°, 0-1 BS, 30%-10% cloud cover
6	4/29/17	BSSP	AG	0615-0940	50-70°, 0-1BS, no cloud cover

Conditions: °F = degrees Fahrenheit. Beaufort scale (BS) using Seaman's terms describes the wind speed.
Observers: BP = Bonnie Peterson; AG=Antonette Gutierrez

Table 2. Survey Conditions San Dieguito

Survey #	Date	Species	Personnel	Time	Conditions
1	3/17/17	RIRA,BSSP	BP, AG	0620-0915	56°-66°, 0-1 BS, Fog, 100%-95% cloud cover
2	3/24/17	RIRA,BSSP	BP, AG	0645-0900	50°-58°, no wind, no cloud cover
3	3/31/17	RIRA,BSSP	BP, AG	0650-0900	54°-64°, 0-1 BS, no cloud cover
4	4/10/17	RIRA,BSSP	BP, AG	0630-0930	51°-66°, 1-1 BS, no cloud cover
5	4/17/17	RIRA	BP	1800-1940	65°-63°, 2-0 BS, 20%-100% cloud cover
5	4/17/17	BSSP	AG	0630-0900	52°-59°, 1-1 BS, 40%-30% cloud cover
6	4/27/17	RIRA	BP	0615-0750	63°-64°, 0-1 BS, 100% cloud cover
6	4/30/17	BSSP	AG	0630-0940	52°-74°, 0-2 BS, no cloud cover

Conditions: °F = degrees Fahrenheit. Beaufort scale (BS) using Seaman's terms describes the wind speed.
Observers: BP = Bonnie Peterson; AG=Antonette Gutierrez

Four BSSP territories were consistently detected within the southern coastal saltmarsh habitat (Figure 3). All of these observations were singly perched, singing males. During survey two, the lagoon was flooded, and four additional BSSP singly perched, singing males were observed in the northern portion of the alignment in areas of inundated southern coastal salt marsh. These birds were not detected in these areas again during any of the other surveys and were not counted as additional territories. No BSSP were detected within the BSA boundary for the proposed staging area at the Los Peñasquitos Reserve parking lot; however there was one BSSP adjacent to the survey area singing and perched in the coastal salt marsh along the southern border.

San Dieguito Site

No RIRA territories were detected within the BSA during any of the surveys. There are two areas within the survey area where marsh habitat has started to emerge (Photograph 3 and 4). These patches have the potential to support RIRA in future years, provided they continue to expand and increase in height. A notable result included the detection of a single RIRA approximately 400 feet outside of and to the east of the BSA (Figure 4).

Fifteen BSSP territories were observed throughout the coastal salt marsh (Figure 4). Most of these observations were of pairs that were posted and singing. Several BSSP territories extend adjacent to but outside of the BSA; however only four of those territories were in immediate proximity to the alignment and were not included as BSSP territories within the alignment.

Also notable was the nesting colony of great blue herons (*Ardea herodias;* GBHE) and great egrets (*Ardea alba*, GREG) at the edge of the BSA in the northwestern part of the San Dieguito site (Figure 4; Photograph 5). Nesting behaviors at the nest colony were observed throughout the RIRA and BSSP surveys with nestlings observed by survey 4. At least four GBHE nests and four GREG nests were observed. Personal communications from the homeowner where the nest colony is located indicated that snowy egrets (*Egretta thula*) occupy the nest colony in the summer months after the GBHE and GREG have vacated the nests.

DISCUSSION AND RECOMMENDATIONS

Los Peñasquitos Site

The Los Peñasquitos lagoon has large continuous stands of fresh and brackish marsh habitat that is utilized by the RIRA for nesting and foraging. This habitat is considered high quality since it is an undisturbed, large, mature patch. There appears to have been an increase in the number of RIRA territories compared to the 2014 survey for this Project (Konecny 2014). Flooding appears to be a common event at this location due to closure of the mouth of the lagoon (Zembal et. al. 2015; Photograph 1) and this could be the reason for fluctuations in the number of rails present.

In Los Peñasquitos, the coastal salt marsh habitat is of high quality for BSSP, due to its large, undisturbed, mature characteristics, with regular tidal flow regimes. Most of this BSSP-suitable habitat is located in the eastern and central portions of the BSA and have previously supported BSSP (Konecny 2014). The BSSP territories that were detected for 2017 were found on the edges of the BSA in lower-quality coastal salt marsh habitat (Photograph 2). The use of these new areas was likely due to the coastal salt marsh being completely or partially inundated up until survey five. The mouth of the lagoon was intermittently closed to the ocean up until survey 5, when the mouth of the lagoon was being actively dredged. During the flooded conditions, BSSP were displaced and observed in areas where the highest shrubs were above the waterline within and adjacent to the BSA. If there is consistent maintenance to keep the lagoon mouth open, it is likely that BSSP will reestablish in the areas centrally located within the BSA and should eventually set up territories in the coastal salt marsh in the eastern portion of the site.

San Dieguito Site

RIRA were not located within the BSA at the San Dieguito site due to the lack of suitable nesting habitat. Marsh habitat is currently establishing in two areas and, with time to increase in height and expand in size, these patches could be colonized by RIRA in future years.

BSSP are well-represented within the BSA at the San Dieguito site. Two additional territories were found within the BSA compared to those from the surveys recorded by Konecny in 2014 and Zembal in 2010 during the BSSP rangewide survey (Zembal and Hoffman 2010). High quality habitat supports this species, and with the active restoration of the lagoon, it is anticipated that more territories will be established in the restored southern coastal marsh areas within and adjacent to the BSA.

If construction is to occur within the general bird breeding season, pre-construction nesting bird surveys are recommended to comply with the Migratory Bird Treaty Act (MBTA) and CDFW Codes of the 3500 series; these laws protect the vast majority of nesting birds within California. Surveys should occur for raptors from about January 15th through July 30th, and surveys for non-raptors should occur from about February 15th through August 30th. RIRA and BSSP surveys should follow USFWS protocol and CDFW recommendations. Surveys should be conducted according to Project work areas and those scheduled within a week look-ahead up to 100 feet from Project work areas for non-listed bird species and up to 500 feet for listed species and raptors. Surveys should be completed within seven days of work activities commencing, and refreshed as necessary to ensure MBTA and CDFW compliance throughout the construction phase. If RIRA and BSSP are present in the BSA and adjacent to the Project during work in the breeding season, appropriate avoidance and minimization measures should be implemented.

CONCLUSION

The project should occur outside of the nesting season to protect the RIRA and BSSP. The presence of these listed species makes adverse effects from the Project possible. If the Project is allowed to proceed during the bird breeding season, the Project may affect nesting birds. To offset Project impacts, Blackhawk recommends the following:

1) Supply a biological monitor to ensure that there are no impacts to nesting RIRA and BSSP.

2) Conduct pre-construction nesting bird surveys and refresh as necessary at active and scheduled work areas according to the Project schedule up to seven days ahead of time.

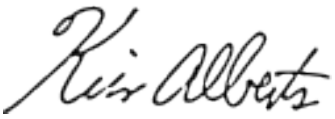
3) Avoid or minimize impacts to coastal saltmarsh, brackish water, freshwater, and mudflat habitats.

4) Implement appropriate no-work buffers and/or adaptive mitigation measures for actively nesting birds (defined as those with tended eggs and/or young) that may be affected by Project activities. Established buffers should consider a range of variables, including but not necessarily limited to: the species of bird; nesting stage; time of year; type, duration and intensity of work activity; size of work crew; types of equipment and vehicles to be used;

vegetative and/or topographic screening of the nest to the work area; vertical and horizontal distances of the nest to the nearest edge of the work area; and the availability and implementation of adaptive measures to reduce potential impacts, including soundwalls, staggered work schedules, sound dampeners, mufflers, etc. An optimal buffer/adaptive measure combination simultaneously allows work to continue as unhindered as possible and allows the nesting bird to naturally progress throughout its nesting cycle.

If you have any questions regarding this report, please feel free to call me at 619-972-8714 or e-mail me at kris@blackhawkenv.com, and I will address all questions and concerns.

Sincerely,



Kris Alberts
Principal Biologist
USFWS Permit TE039640-4

ATTACHMENTS

A: Project Vicinity & Location Map

B: Photo Page

C: Wildlife Species List

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ATTACHMENT A

Figures

Blackhawk Environmental

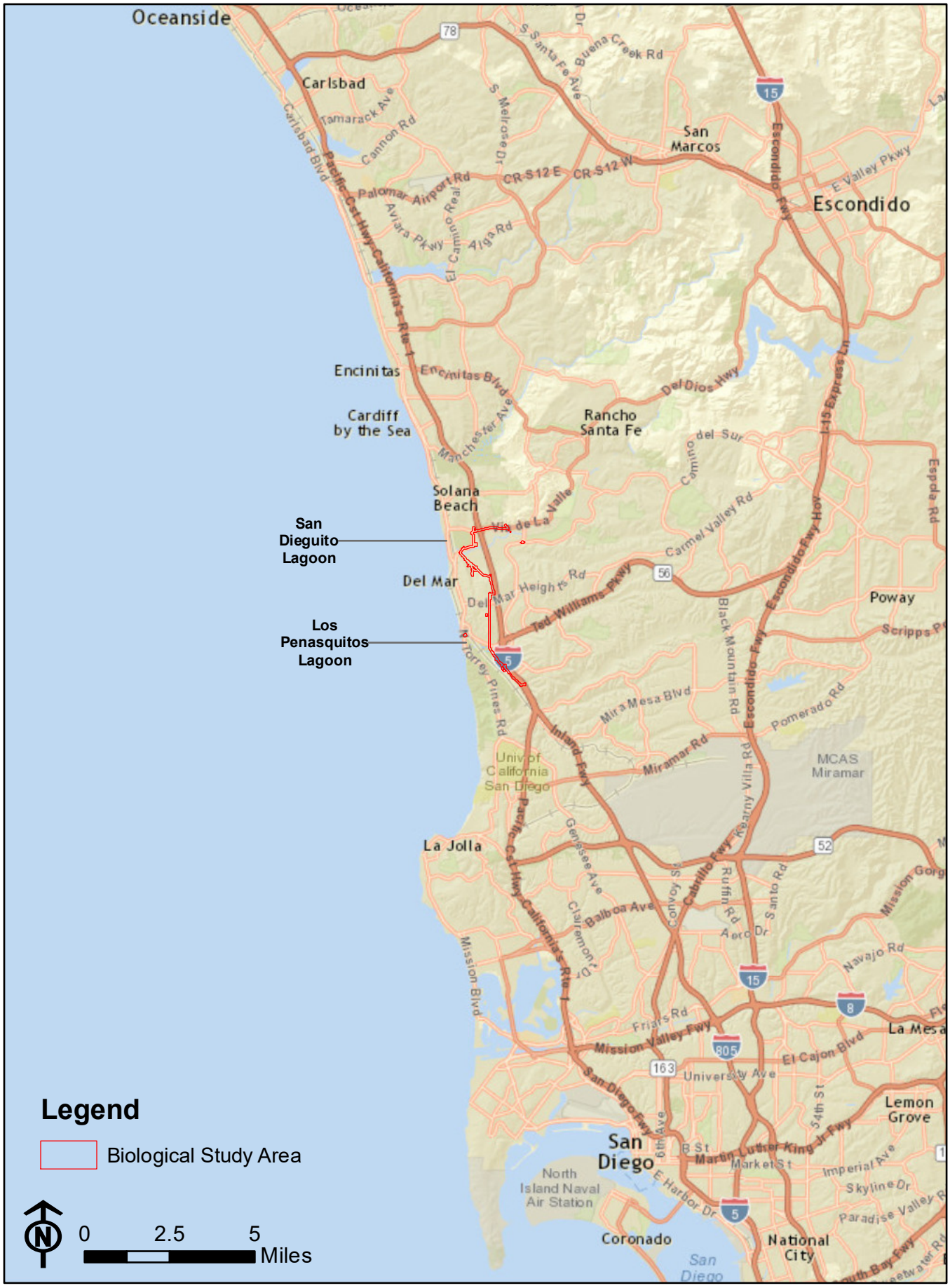


Figure 1 Project Area

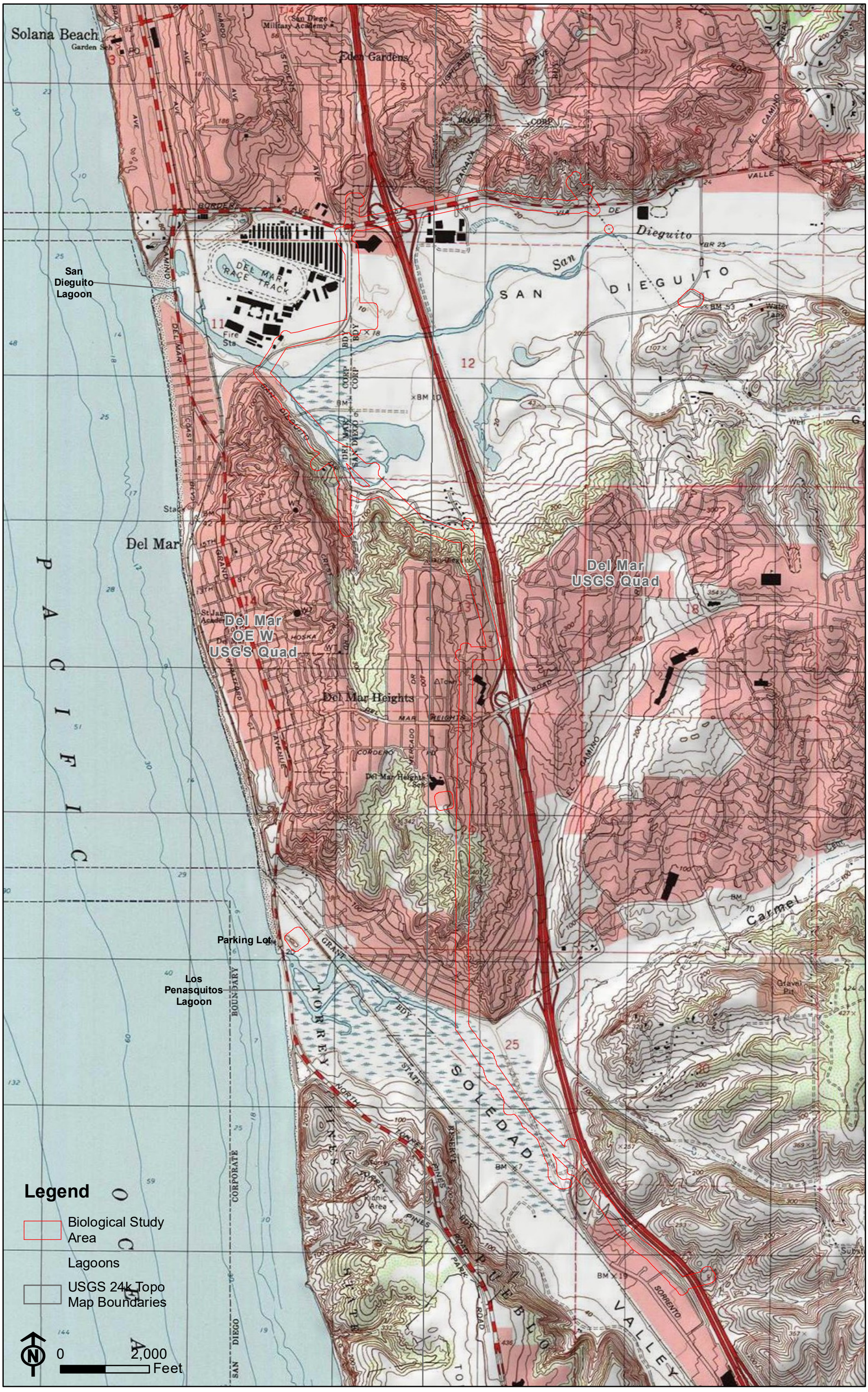


Figure 2 Project Location

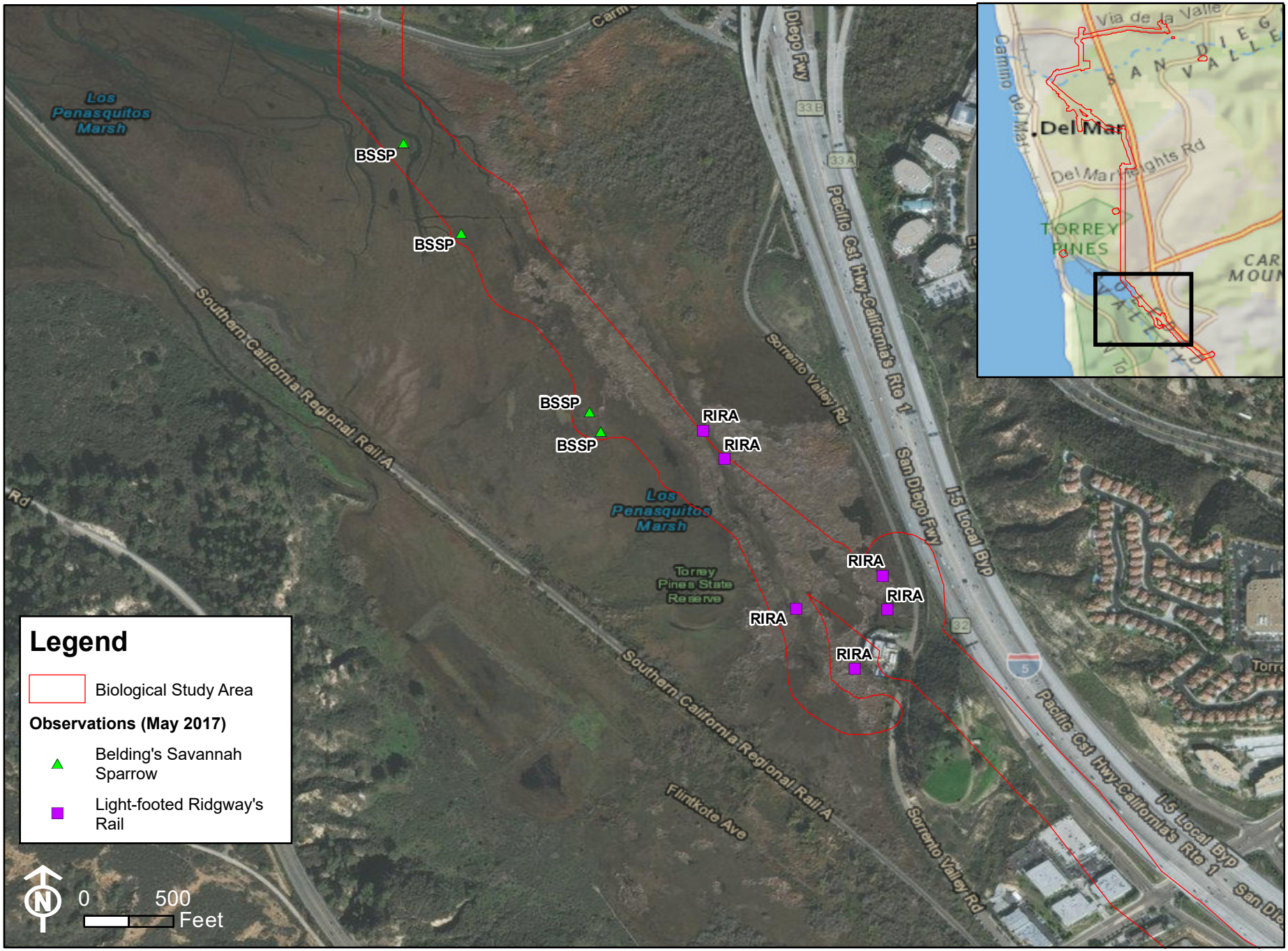


Figure 3
Light-footed Ridgway's Rail and Belding's Savannah Sparrow
Los Penasquitos Lagoon

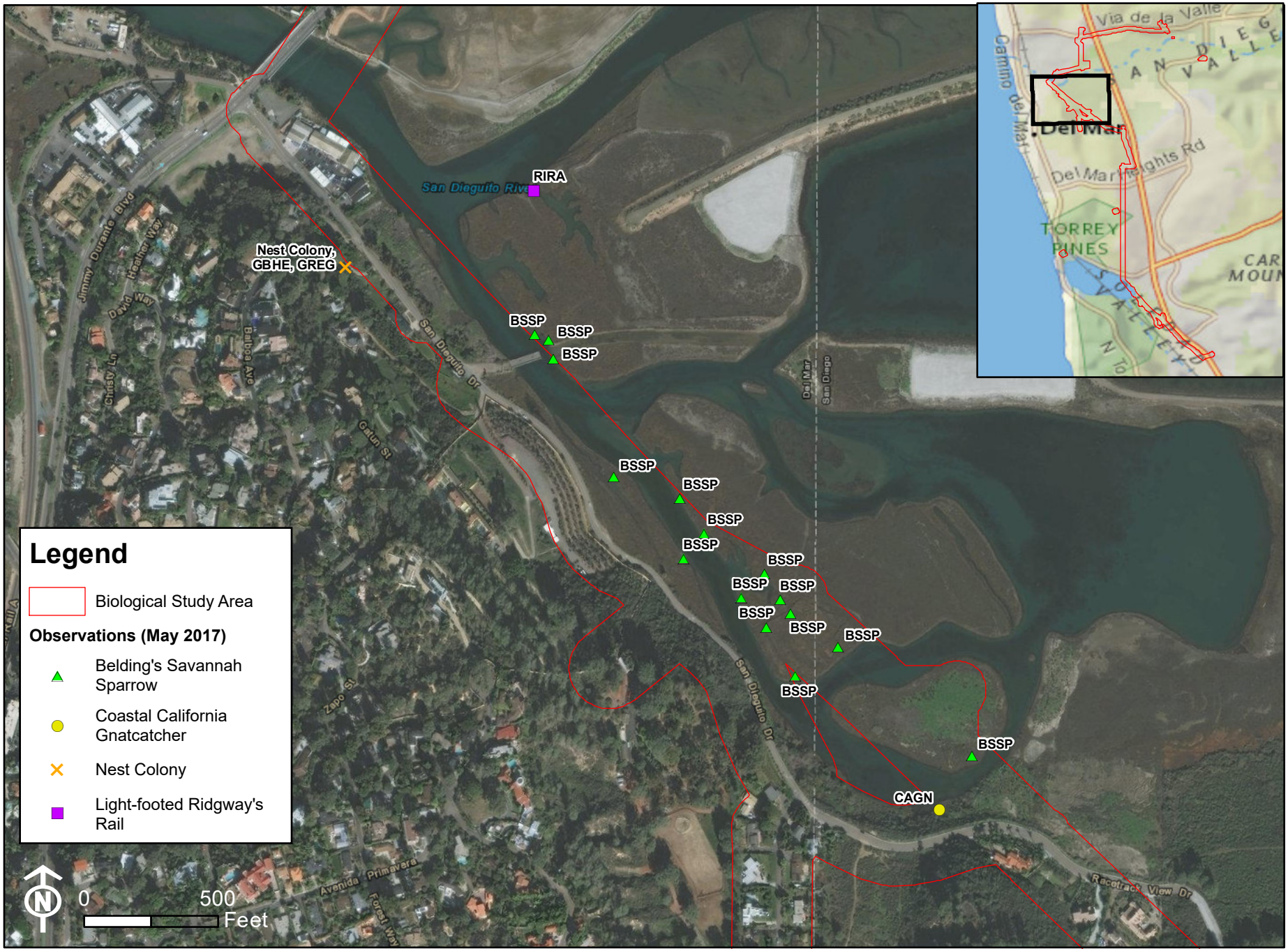


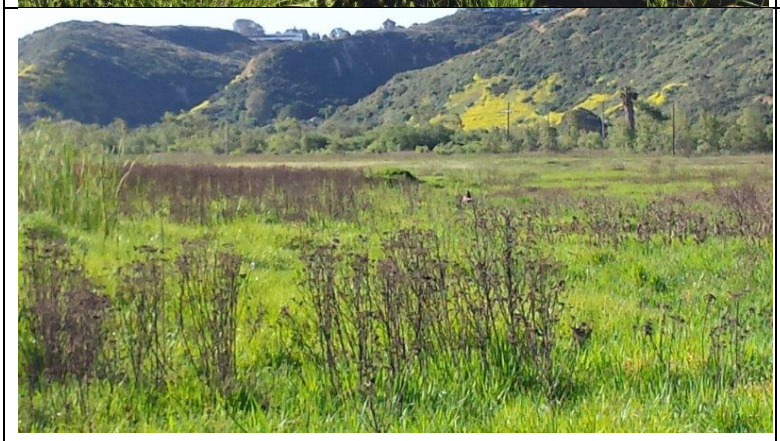
Figure 4
Light-footed Ridgway's Rail and Belding's Savannah Sparrow
San Dieguito Lagoon

ATTACHMENT B

Photo Pages

Blackhawk Environmental

Light-footed Ridgway's Rail and Belding's Savannah Sparrow for the San Diego Gas & Electric Tie Line 674A Reconfiguration and Tie Line 666D Removal Project Photos

	**Photograph 1.** Los Peñasquitos site. Coastal salt marsh in flooded conditions (taken April 11, 2017; facing northwest).
	**Photograph 2.** Los Peñasquitos site. BSSP perched and singing at the edge of disturbed coastal salt marsh habitat at the edge of the BSA (taken April 30, 2017; facing east).
	**Photograph 3.** San Dieguito site. One isolated patch of marsh emerging (taken April 27, 2017; facing east).

	**Photograph 4.** San Dieguito site. A second isolated patch of marsh emerging (taken April 27, 2017; facing east).
	**Photograph 5.** San Dieguito site. SNEG and GREG nesting colony (taken April 29, 2017; facing west).

ATTACHMENT C

Observed/Detected Wildlife Species List

Blackhawk Environmental

Light-footed Ridgway's Rail and Belding's Savannah Sparrow Surveys
Del Mar Reconfiguration Project
Observed/Detected Wildlife Species List

AVES	BIRDS
ACCIPITRIDAE	**Hawks & eagles**
Buteo jamaicensis	red-tailed hawk
AEGITHALIDAE	**Long-tailed tits**
Psaltriparus minimus	bushtit
ANATIDAE	**Swans, Geese, and Ducks**
Anas americana	American wigeon
Anas cyanoptera	cinnamon teal
Anas discors	blue-winged teal
Anas platyrhynchos	mallard
ARDEIDAE	***Herons and Bitterns***
Ardea herodias	great blue heron
Ardea alba	great egret
Butorides virescens	green heron
Egretta refescens	reddish egret
Egretta thula	snowy egret
Ixobrychus exilis hesperis	western least bittern
Nycticorax nycticorax	black-crowned night heron
CARDINALIDAE	**Cardinals & allies**
Pheucticus melanocephalus	black-headed grosbeak
CHARADRIIDAE	**Plovers and Relatives**
Charadrius vociferous	killdeer
COLUMBIDAE	**Pigeons & doves**
* *Columba livia*	rock pigeon
Zenaida macroura	mourning dove
ALCEDINIDAE	**Kingfishers**
Megaceryl alcyon	belted kingfisher
CORVIDAE	**Crows & jays**
Aphelocoma californica	California scrub jay
Corvus brachyrhynchos	American crow
Corvus corax	common raven
EMBERIZIDAE	**Sparrows & allies**
Melospiza melodia	song sparrow
Melozone crissalis	California towhee
Passerculus sandwichensis beldingi	Belding's savannah sparrow
Pipilo maculatus	spotted towhee
Zonotrichia leucophrys	white-crowned sparrow
FALCONIDAE	**Falcons**
Falco sparverius	American kestrel
FRINGILLIDAE	**Finches & allies**
Haemorhous mexicanus	house finch
Spinus psaltria	lesser goldfinch

HIRUNDINIDAE	**Swallows**
Petrochelidon pyrrhonota	cliff swallow
Stelgidopteryx serripennis	northern rough-winged swallow
ICTERIDAE	**New World blackbirds, orioles & allies**
Agelaius phoeniceus	red-winged blackbird
Icterus cucullatus	hooded oriole
Quiscalus mexicanus	great-tailed grackle
Molothrus ater	brown-headed cowbird
Sturnella neglecta	western meadowlark
LARIDAE	**Gulls and Terns**
Larus occidentalis	western gull
LARIDAE	**Gulls, terns & skimmers**
Hydroprogne caspia	Caspian tern
MIMIDAE	**Mockingbirds & thrashers**
Mimus polyglottos	northern mockingbird
Toxostoma redivivum	California thrasher
ODONTOPHORIDAE	**New World quails**
Callipepla californica	California quail
PANDIONIDAE	**Osprey**
Pandion haliaetus	osprey
PARULIDAE	**Wood warblers & relatives**
Geothlypis trichas	common yellowthroat
Oreothlypis celata	orange-crowned warbler
Setophaga petechia	yellow warbler
PELECANIDAE	**Pelicans**
Pelecanus erythrorhynchos	American white pelican
PICIDAE	**Woodpeckers & allies**
Picoides nuttallii	Nuttall's woodpecker
PHALACROCORACIDAE	**Cormorants**
Phalacrocorax auritus	double-crested cormorant
PHASIANIDAE	***Quails, Pheasants, and Relatives***
Callipepla californica	California quail
PODICIPEDIDAE	**Grebes**
Podilymbus podiceps	pied-billed grebe
Podiceps auritus	horned grebe
RALLIDAE	**Rails, Gallinules, and Coots**
Porzana carolina	sora
Fulica americana	American coot
Rallus limicola	Virginia rail
Rallus obsoletes levipes	light-footed Ridgway's rail
SCOLOPACIDAE	**Sandpipers and Relatives**
Actitis macularius	spotted sandpiper
Limnodromus scolopaceus	long-billed dowitcher
Numenius phaeopus	whimbrel
Numenius americanus	long billed curlew
Tringa melanoleuca	greater yellowlegs
Tringa semipalmata	willet

STURNIDAE	**Starlings & allies**
* *Sturnus vulgaris*	European starling
SYLVIIDAE	**True warblers & parrotbills**
Chamaea fasciata	wrentit
Polioptila californica californica	coastal California gnatcatcher
THRESKIORNITHIDAE	**Ibises and Spoonbills**
Plegadis chihi	white-faced ibis
TROCHILIDAE	**Hummingbirds**
Calypte anna	Anna's hummingbird
Selasphorus sasin	Allen's hummingbird
TROGLODYTIDAE	**Wrens**
Cistothorus palustris	marsh wren
Thryomanes bewickii	Bewick's wren
TURDIDAE	**Thrushes & allies**
Catharus ustulatus	Swainson's thrush
TYRANNIDAE	**Tyrant flycatchers**
Sayornis nigricans	black phoebe
Sayornis saya	Say's phoebe
Tyrannus verticalis	western kingbird
Tyrannus vociferans	Cassin's kingbird

REPTILIA	**REPTILES**
COLUBRIDAE	**Colubrids**
Masticophis lateralis	striped racer
PHRYNOSOMATIDAE	**Zebra-tailed, earless, fringe-toed, spiny, tree, side-blotched & horned lizards**
Sceloporus occidentalis longipes	Great Basin fence lizard
Uta stansburiana elegans	western side-blotched lizard

MAMMALIA	**MAMMALS**
CANIDAE	**Foxes, wolves & allies**
Canis latrans	coyote
CERVIDAE	**Deer, elk & allies**
Odocoileus hemionus	mule deer
CRICETIDAE	**New World rats and mice & allies**
Neotoma fuscipes	dusky-footed woodrat
GEOMYIDAE	**Gophers**
Thomomys bottae	Botta's pocket gopher
LEPORIDAE	**Rabbits & hares**
Sylvilagus audobonii	desert cottontail
PROCYONIDAE	**Raccoons & allies**
Procyon lotor	raccoon
SCIURIDAE	**Squirrels**
Otospermophilus beecheyi	California ground squirrel

** Non-native species*

Attachment VII

Focused Surveys for Least Bell's Vireo and Coastal California Gnatcatcher

Conducted 2014

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San Diego, CA 92101
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F 619.308.9334

2033 East Grant Road
Tucson, AZ 85719
P 520.325.9977
F 520.293.3051

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Santa Maria, CA 93454
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F 619.308.9334

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RECON

An Employee-Owned Company

October 14, 2014

Mr. Robert Fletcher
Environmental Specialist-Biologist
San Diego Gas & Electric
8315 Century Park Court
San Diego, CA 92123

Reference: Results of the 2014 Coastal California Gnatcatcher and Least Bell's Vireo Protocol Surveys for the Reconfigure of Tie Line (TL) 674A at Del Mar and Removal from Service of TL 666D Project (RECON Number 7203-1)

Dear Mr. Fletcher:

This letter is to notify the U.S. Fish and Wildlife Service (USFWS) of the results of protocol surveys for the federally threatened coastal California gnatcatcher (*Polioptila californica californica*; gnatcatcher) and the federally and state endangered least Bell's vireo (*Vireo bellii pusillus*; vireo) conducted for the Reconfigure of Tie Line (TL) 674A at Del Mar and Removal from Service of TL 666D Project. Both of these species are also covered by San Diego Gas & Electric's (SDG&E) Natural Community Conservation Plan (NCCP). The project survey area is located primarily in the communities of Torrey Pines, Del Mar Heights, and Via de la Valle in the city of San Diego and the city of Del Mar, within coastal San Diego County, California. Small portions of the project area also extend into the city of Solana Beach and the community of Torrey Hills in the city of San Diego (Figure 1). The project survey area crosses several areas of intact open space in San Dieguito Lagoon and Torrey Pines State Natural Reserve, including a portion of the Los Peñasquitos marsh.

The survey area is roughly defined as the 300-foot-wide transmission corridor along an approximately 7-mile stretch of TL 674A and TL 666D, with a minimum 300-foot buffer around each project site. Project sites include transmission poles, vaults, hand holes, guard structures, stringing sites, staging areas, and helicopter fly yards. The survey area is generally linear in shape, roughly paralleling an east–west portion of Via de la Valle and extending south and west along the eastern and southern sides of the Del Mar Fairgrounds, southeast through the San Dieguito Lagoon, south through the community of Del Mar Heights, southeast through the Los Peñasquitos marsh, and southeast along a portion of Interstate 5. The stringing sites are scattered along TL 674A and TL 666D throughout the project. Potential staging areas are located adjacent to TL 674A along Via del la Valle, near Los Peñasquitos marsh adjacent to Interstate 5, and near the intersection of San Dieguito Road and El Camino Real. Potential helicopter fly yards are located along Jimmy Durante Boulevard across from the entrance to the Del Mar Fairgrounds and within a parking lot near Torrey Pines State Beach on McGonigle Road. The survey area is shown on the U.S. Geological Survey (USGS) Del Mar quadrangle at Township 14 South, Range 3 West, Sections 6, 7, 30, and 31, and Range 4 West, Sections 1, 2, 11, 12, 13, 14, 24, and 25, and unsectioned lands within the Pueblo Lands of San Diego land grant (USGS 1975; Figure 2). An aerial view of the survey area is shown on Figure 3. The survey area includes portions of the Assessor's Parcel Numbers (APN) listed in Table 1 below.

TABLE 1
APN WITHIN SURVEY AREA

APN Number	APN Number	APN Number
3001606400	2985802100	2990710200
2990710300	3001604300	3100203400
3013410400	3022610300	3004900800
3023102100	3004900300	3100203300
2985714000	3011610300	2985901100
2985714100	2991003900	3001606300
3004900400	2992005400	2992005100
3004900500	3040202500	3021707600
2992010700	3001605500	2990710500
3011134100	3004900700	2985802300
3010506500	3101301400	3011210500
2992005800	2990725300	2984903800
3011300700	3004902500	3004900200
3011400700	2990302700	3004900900
3023100700	3010703600	7601450700
3001604400	3011401200	2992007200
3001605300	3021704600	2985901200
3001605700	2991003700	2992010700
3004900600	2991003800	3011610500
3011401400	3001604000	3011610300
3041130600	3001605600	3001605500
2990420600	3001606000	3011401300
2990722500	3001606100	2992005100
3013410500	3004900100	2992007200
2985801700	3012213200	

Methods

RECON Environmental, Inc. biologists Beth Procsal, Brenna Ogg, Alex Fromer, and Mandy Weston; Busby Biological Services, Inc. biologist Laurie Gorman; and Konecny Biological Services biologist John Konecny conducted three gnatcatcher survey visits to all suitable areas of Diegan coastal sage scrub, maritime succulent scrub, and southern maritime chaparral vegetation (60.4 acres) within the survey area, and eight vireo survey visits to all suitable areas of riparian vegetation (1.6 acres) within the survey area according to USFWS survey guidelines for these species (USFWS 1997 and 2001, respectively). The survey visit dates, personnel, times, and weather conditions are provided in Tables 2 and 3. Ms. Procsal is authorized to conduct gnatcatcher surveys through USFWS 10(a)(1)(A) permit TE-797665; Ms. Gorman is authorized to conduct gnatcatcher surveys through USFWS 10(a)(1)(A) permit TE-233367. Presence/absence vireo surveys do not require a permit. The minimum number of three survey visits was conducted for gnatcatcher, as SDG&E is enrolled in the state NCCP program. Taped gnatcatcher vocalizations were used only until an individual was initially located. A total of 52.75 hours of field effort was devoted to the gnatcatcher survey, and 5.75 hours were devoted to the vireo survey.

As a result of project design changes, additional areas for both gnatcatcher and vireo were added to the scope of the survey after the first round of surveys had been initiated. Surveys within the original survey area are denoted as #-a, and surveys within the updated survey area are denoted as #-b, as shown below in Tables 2 and 3. The acreage for the original gnatcatcher survey area was 55.6 acres, and the update included 4.8 additional acres, totaling 60.4 acres. The acreage for the original vireo survey area was 0.2 acre, and the update included 1.1 additional acres, totaling 1.3 acres.

TABLE 2
SURVEY DATES, PERSONNEL, TIMES, AND WEATHER CONDITIONS FOR GNATCATCHER SURVEYS

Date	Survey Number‡	Surveyor(s)	Times*[1]	Total Hours Spent Surveying	Acres Surveyed Per Hour	Weather
4/24/14	CAGN #1a	B. Procsal, B. Ogg	06:00–12:00	5.75	3.4	48–67° F, 1-5% cloud cover, wind 0–6 mph
4/25/14		L. Gorman, B. Ogg	06:00–12:00	6		51-70° F, 40-100% marine layer, wind 0–4 mph, gusts to 8 mph
4/29/14		L. Gorman, B. Ogg	06:15-11:00	4.75		65-89° F, 1-30% cloud cover, wind 0-8 mph
5/5/14	CAGN #2a/#1b	B. Procsal, B. Ogg	06:00–12:00	5.75	3.6	56-65° F, 70-100% marine layer, wind 0–6 mph
5/12/14		L. Gorman, B. Ogg	06:00–12:00	6		50–76° F, sunny, wind 0–5 mph
5/13/14		L. Gorman, B. Ogg	06:00–11:00	5		53–90° F, 100% marine layer clearing to 10 percent cloud cover, wind 0–8 mph
6/4/14	CAGN #3a/#2b	L. Gorman, B. Ogg	06:05-11:55	6	3.8	58-85° F, 25–70% cloud cover, wind 0–5 mph
6/5/14		L. Gorman, B. Ogg	06:00-12:00	5.75		61-68° F, 1-100% marine layer, wind 0-6 mph
6/6/14		L. Gorman, M. Weston	06:00-10:30	4.25		66-72° F, 100% marine layer, wind 0-5 mph
6/26/14	CAGN #3b	L. Gorman	06:15-09:45	3.5	1.4	65–76° F, 100% marine layer clearing to 45% cloud cover, wind 0–2 mph

CAGN = coastal California gnatcatcher; *Pacific Time; [1]The survey times presented include time devoted to CAGN and time devoted to additional wildlife surveys; ‡ #-a = 55.6 acres, #-b = 4.8 acres; °F = degrees Fahrenheit; mph = miles per hour; % = percent.

TABLE 3
SURVEY DATES, PERSONNEL, TIMES, AND WEATHER CONDITIONS FOR VIREO SURVEYS

Date	Survey Number‡	Surveyor(s)	Times*[1]	Total Hours Spent Surveying	Acres Surveyed Per Hour	Weather
4/12/14	LBVI #1a	J. Konecny	06:20–11:30	0.5	2.5	57–63° F, 75% cloud cover, wind 7–10 mph
4/13/14		J. Konecny	06:25–11:30			57–67° F, 80% marine layer, wind 1–3 mph
4/24/14	LBVI #2a	B. Procsal, B. Ogg	06:00–12:00	0.25	1.25	48–67° F, 1-5% cloud cover, wind 0–6 mph
5/5/14	LBVI #3a	B. Procsal, B. Ogg	06:00–12:00	0.25	1.25	56-65° F, 70-100% marine layer, wind 0–6 mph
5/14/14	LBVI #4a	J. Konecny	06:30-11:30	0.5	2.5	71–93° F, clear and sunny, wind 7–10 mph
5/15/14	LBVI #1b	J. Konecny	06:15–11:20	0.5	0.5	63–92° F, clear and sunny, wind 5–7 mph
5/25/14	LBVI #5a	J. Konecny	06:10-11:15	0.5	2.5	62–66° F, 100% marine layer, wind 5–7 mph
5/26/14	LBVI #2b	J. Konecny	06:20-11:10	0.5	0.5	62–73° F, 100% marine layer, wind 5–7 mph
6/5/14	LBVI #6a	L. Gorman, B. Ogg	06:00-12:00	0.25	1.25	61-68° F, 1-100% marine layer, wind 0-6 mph
6/6/14	LBVI #3b	L. Gorman, M. Weston	06:00-10:30	0.25	0.2	66-72° F, 100% marine layer, wind 0-5 mph
6/16/14	LBVI #7a/#4b	J. Konecny	05:50-12:00	0.5	0.4	63–69° F, 100% marine layer, wind 1–5 mph
6/26/14	LBVI #8a/#5b	L. Gorman	06:15-09:45	0.5	0.4	65–76° F, 100% marine layer clearing to 45% cloud cover, wind 0–2 mph
7/7/14	LBVI #6b	J. Konecny	05:40-12:00	0.5	0.5	66–74° F, 100% marine layer, wind 1–3 mph
7/17/14	LBVI #7b	A. Fromer	09:15-10:15	1	0.9	70–72° F, 5-10% cloud cover, wind 1–2 mph
7/28/14	LBVI #8b	A. Fromer	08:20-09:20	1	0.9	75° F, 15% cloud cover, wind 0–3 mph

LBVI = least Bell's vireo; *Pacific Time; [1]The survey times presented include time devoted to LBVI, and time devoted to additional wildlife surveys; ‡ #-a = 0.2 acre, #-b = 1.1 acres;°F = degrees Fahrenheit; mph = miles per hour; % = percent.

Survey Area

A total of 60.4 acres of suitable gnatcatcher habitat was surveyed, and a total of 1.3 acres of suitable vireo habitat was surveyed. Vegetation communities and land cover types within the survey area include Diegan coastal sage scrub, maritime succulent scrub, Torrey pine forest, southern maritime chaparral, saltpan, non-native grassland, southern coastal salt marsh, southern willow scrub, disturbed habitat, urban/developed, and urban/developed (landscaped). Vegetation communities and land cover types are characterized in accordance with Oberbauer (2008). Protocol survey efforts for gnatcatcher were focused on Diegan coastal sage scrub, maritime succulent scrub, and southern maritime chaparral; and protocol survey efforts for vireo were focused on southern willow scrub. These vegetation communities are presented collectively as "suitable habitat" for gnatcatcher and vireo on Figures 4a through 4o, and are described below.

Large areas of Diegan coastal sage scrub within the survey area occur along Via de la Valle, on the periphery of the San Dieguito Lagoon and Los Peñasquitos marsh, and upland areas in Crest Canyon Park and near Carmel Valley Road. The Diegan coastal sage scrub is dominated by California sagebrush (*Artemisia californica*), chaparral broom (*Baccharis pilularis*), lemonade berry (*Rhus integrifolia*), and bush monkey-flower (*Mimulus aurantiacus*). Cover within the Diegan coastal sage scrub ranges from approximately 20 to 70 percent. The Diegan coastal sage scrub

ranges from moderate-quality to high-quality habitat for gnatcatchers, depending on patch size, percent cover, and dominance of native species. Maritime succulent scrub dominated by California sagebrush, San Diego County viguiera (*Bahiopsis* [=*Viguiera*] *laciniata*), black sage (*Salvia mellifera*), and coast prickly pear (*Opuntia littoralis*) occurs throughout the northern portion of the survey area, and is considered high-quality habitat due to its occurrence within a large expanse of undeveloped land, dominance of native species, and high species diversity. Southern maritime chaparral is found in patches throughout the southern half of the survey area, and is dominated by chamise (*Adenostoma fasciculatum*), wart-stemmed ceanothus (*Ceanothus verrucosus*), spiny redberry (*Rhamnus crocea*), lemonade berry, and Nuttall's scrub oak (*Quercus dumosa*). Although the southern maritime chaparral consists of native species and exhibits high species diversity, it is considered moderate-quality habitat for gnatcatcher due to its occurrence as small patches through the survey area and the dominance of large shrub species not suitable for nesting gnatcatchers.

Southern willow scrub dominated by arroyo willow (*Salix lasiolepis*), Goodding's black willow (*Salix gooddingii*), and mule fat (*Baccharis salicifolia*) occurs on a slope adjacent to San Dieguito Lagoon and northwest of the potential staging area near Los Peñasquitos marsh. The southern willow scrub that occurs within the survey area is considered moderate-quality habitat for least Bell's vireo, because it occurs in small patches and is primarily isolated within southern coastal salt marsh and development. However, it does have a dense understory preferred by this species.

Survey Results

Coastal California Gnatcatcher Survey Results

Please refer to Figures 4a through 4o for survey results and incidental sightings. Based on the following 2014 survey results, the survey area supports a minimum of six gnatcatcher use areas. An additional two gnatcatcher use areas were observed within 100 feet of the survey area boundary. Five of the gnatcatcher use areas were located within the northernmost portion of the survey area within maritime succulent scrub habitat occurring along slopes and drainages adjacent to Via de la Valle, north of San Dieguito Lagoon (see Figures 4a and 4b). The sixth gnatcatcher use area was located immediately east of Los Peñasquitos marsh in the southern portion of the survey area (see Figure 4l). Each of these use areas contained one pair of gnatcatchers. Later in the season, fledglings were observed within several of the use areas, indicating that breeding was successful. The gnatcatcher observations are discussed in more detail below.

In the northeastern portion of the survey area, one pair of gnatcatchers was detected during the first survey, a second pair was detected during the second survey, and a third pair was detected during the third survey (see Figure 4a). In addition, individual gnatcatchers not part of these pairs were observed during the first and the third surveys. Although pairs were detected on different surveys, these pairs were located spatially far enough away from one another to suggest that they were distinct pairs. Observed interactions between individuals, such as a territorial dispute during the third survey, further suggest that these are three separate pairs within the northeastern use areas. Fledglings were observed with two of the pairs during the third survey.

Two pairs of gnatcatchers were observed within the northwestern use areas during the first survey (see Figures 4a and 4b). During the second survey, only one individual from each pair was observed, and during the third survey only one adult was observed feeding one fledgling approximately half way between the two northwestern use areas. Vegetation within the use areas in the northern portion of the survey area consisted of maritime succulent scrub dominated by California sagebrush, San Diego County viguiera, lemonade berry, coast prickly pear, and four-wing saltbush (*Atriplex canescens*). Other plant species within the use areas include black sage, coast cholla (*Cylindropuntia* [=*Opuntia*] *prolifera*), and fish-hook cactus (*Mammillaria dioica*).

One gnatcatcher use area was recorded within the southern portion of the survey area east of Los Peñasquitos marsh, within a proposed staging area (see Figure 4l). A pair of gnatcatchers and a

fledgling were detected during the first survey at this location. During the second survey, only a single male was observed foraging within the survey area. The pair and a nest with nestlings, likely the same pair making a second nesting attempt, were observed during the third survey. An incidental sighting of a pair of gnatcatchers (likely the same as previously observed) was recorded within the gnatcatcher use area during a vireo survey conducted approximately 150 feet west of the use area. Vegetation within this use area consists of Diegan coastal sage scrub dominated by California sagebrush.

In addition to gnatcatcher use areas observed within the survey area, a minimum of two gnatcatcher use areas were observed immediately adjacent to, but outside, the survey area boundary of a proposed staging area and a proposed helicopter fly yard (see Figures 4n and 4o). Each of these two gnatcatcher use areas is approximately 250 feet from the center of the survey area, respectively. The pair of gnatcatchers within the use area adjacent to one of the proposed staging areas shown on Figure 4n was observed during the second survey when they responded to recorded vocalizations. The vegetation in this use area consisted of mixed Diegan coastal sage scrub and southern maritime chaparral dominated by California sagebrush, chamise, and black sage. The other gnatcatcher use area was located immediately adjacent to a proposed helicopter fly yard, west of the survey area, and immediately east of North Torrey Pines Road (see Figure 4o). A pair of gnatcatchers and its nest was observed during the first survey at this location. The nest was located in a coastal goldenbush (*Isocoma menziesii*) approximately 100 feet northwest of the survey area. During the second survey, the female and male gnatcatchers were both observed visiting the nest, although the stage of the nest was undetermined. During the third survey, the pair of gnatcatchers was observed feeding one fledgling. General vegetation in this area consisted of Diegan coastal sage scrub dominated by California sagebrush, coastal goldenbush, San Diego County viguiera, and laurel sumac (*Malosma laurina*).

Several individual observations of gnatcatchers outside the use areas shown on Figures 4a–4o were recorded during the constraints survey conducted on September 27 and October 1, 2013, as well as during protocol gnatcatcher surveys. As a solitary adult gnatcatcher was heard calling in an area north of the three gnatcatcher use areas within the northeast portion of the survey area during multiple gnatcatcher protocol survey visits (see Figure 4a), it is possible that this gnatcatcher was part of another pair located outside the survey area. Additionally, a single gnatcatcher and fledgling observation was recorded during the protocol surveys between use areas on Figure 4b. This adult and fledgling were likely part of one of the pairs represented by the mapped use areas, but their affiliation with either use area could not be confirmed. A solitary gnatcatcher was also observed within the southern portion of San Dieguito Lagoon during the constraints survey on October 1, 2013 (see Figure 4g). Two gnatcatchers were observed during the same October 1 constraints survey within a patch of mixed Diegan coastal sage scrub and southern maritime chaparral southeast of Los Peñasquitos marsh, with no interactions observed between these two individuals (see Figure 4m). These three gnatcatchers may have been wintering adults, or dispersing juveniles from the previous breeding season. During the third protocol survey, a single gnatcatcher of unknown age was observed on the west-facing slope immediately southeast of Los Peñasquitos marsh (see Figure 4m). Finally, a single gnatcatcher was heard vocalizing during the first gnatcatcher protocol survey south of the eastern survey area shown on Figure 4n.

Protocol survey areas that yielded negative results for gnatcatcher included small patches of Diegan coastal sage scrub, restored Diegan coastal sage scrub, and southern maritime chaparral. Diegan coastal sage scrub and restored Diegan coastal sage scrub were typically dominated by California sagebrush, California buckwheat (*Eriogonum fasciculatum*), laurel sumac, coastal goldenbush, and chaparral broom. Percent cover ranged from approximately 20 percent to approximately 70 percent. Southern maritime chaparral was typically dominated by chamise, wart-stemmed ceanothus, spiny redberry, lemonade berry, and Nuttall's scrub oak, and consisted of approximately 50 to 70 percent cover. The presence of large shrubs such as laurel sumac within coastal sage scrub and chamise, wart-stemmed ceanothus, lemonade berry, and Nuttall's scrub

oak within southern maritime chaparral is likely a limiting factor in the suitability of these areas for nesting gnatcatcher.

Least Bell's Vireo Survey Results

No vireos were detected within the survey area during the 2014 survey effort. The negative survey results are likely due to the small size and isolation of the southern willow scrub patches.

Other Sensitive Species Observations

Additional species of interest observed include Belding's orange-throated whiptail (*Aspidoscelis hyperythra beldingi;* California Department of Fish and Wildlife [CDFW] Species of Special Concern), southern California rufous-crowned sparrow (*Aimophila ruficeps canescens;* CDFW WatchList species), Belding's savannah sparrow (*Passerculus sandwichensis beldingi*; State Endangered species), Cooper's hawk (*Accipiter cooperii;* CDFW WatchList species), American peregrine falcon (*Falco peregrinus anatum;* Federal and State Delisted species and State of California Fully Protected species), white-tailed kite (*Elanus leucurus*; State of California Fully Protected species), osprey (*Pandion haliaetus*; State of California WatchList species), and southern mule deer (*Odocoileus hemionus*). Of these species, Belding's orange-throated whiptail, southern California rufous-crowned sparrow, Belding's savannah sparrow, Cooper's hawk, American peregrine falcon, and southern mule deer are covered under SDG&E's NCCP. Cooper's hawk, peregrine falcon, white-tailed kite and osprey were detected flying over the survey area, and may forage within the survey area. Southern California rufous-crowned sparrow and Belding's savannah sparrow have a high potential to nest within Diegan coastal sage scrub and southern coastal salt marsh, respectively. Additionally, both white-tailed kite and osprey have a moderate potential to nest within the native and non-native trees that occur within Los Peñasquitos marsh in the survey area, and one active osprey nest was observed on a man-made platform immediately adjacent to a driveway on the south side of Jimmy Durante Boulevard (see Figure 4e).

Please feel free to contact me or Brenna Ogg with any questions or comments regarding this survey.

Sincerely,

Mandy Weston
Biologist

MEW:jg

References Cited

Oberbauer, T.
2005 Terrestrial Vegetation Communities in San Diego County Based on Holland's Descriptions. San Diego Association of Governments, San Diego, CA. March.

U.S. Fish and Wildlife Service (USFWS)
1997 Coastal California Gnatcatcher (*Polioptila californica californica*) Presence/Absence Survey Protocol. July 28.

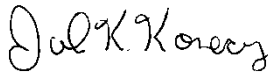
2001 Least Bell's Vireo Survey Guidelines (*Vireo bellii pusillus*). January 19.

U.S. Geological Survey (USGS)
1975 Del Mar, California 7.5-minute topographic map. Original Print 1967. Photo revised 1975.

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

10/14/2014
Beth Procsal Date
Permit Number TE-797665

10/14/2014
Laurie Gorman Date
Permit Number TE-233367-1



10/14/2014
John Konecny Date
Permit Number TE-837308-6

FIGURE 1

Regional Location of Reconfigure of TL 674A at Del Mar and Removal from Service of TL 666D Project Survey Area

RECON

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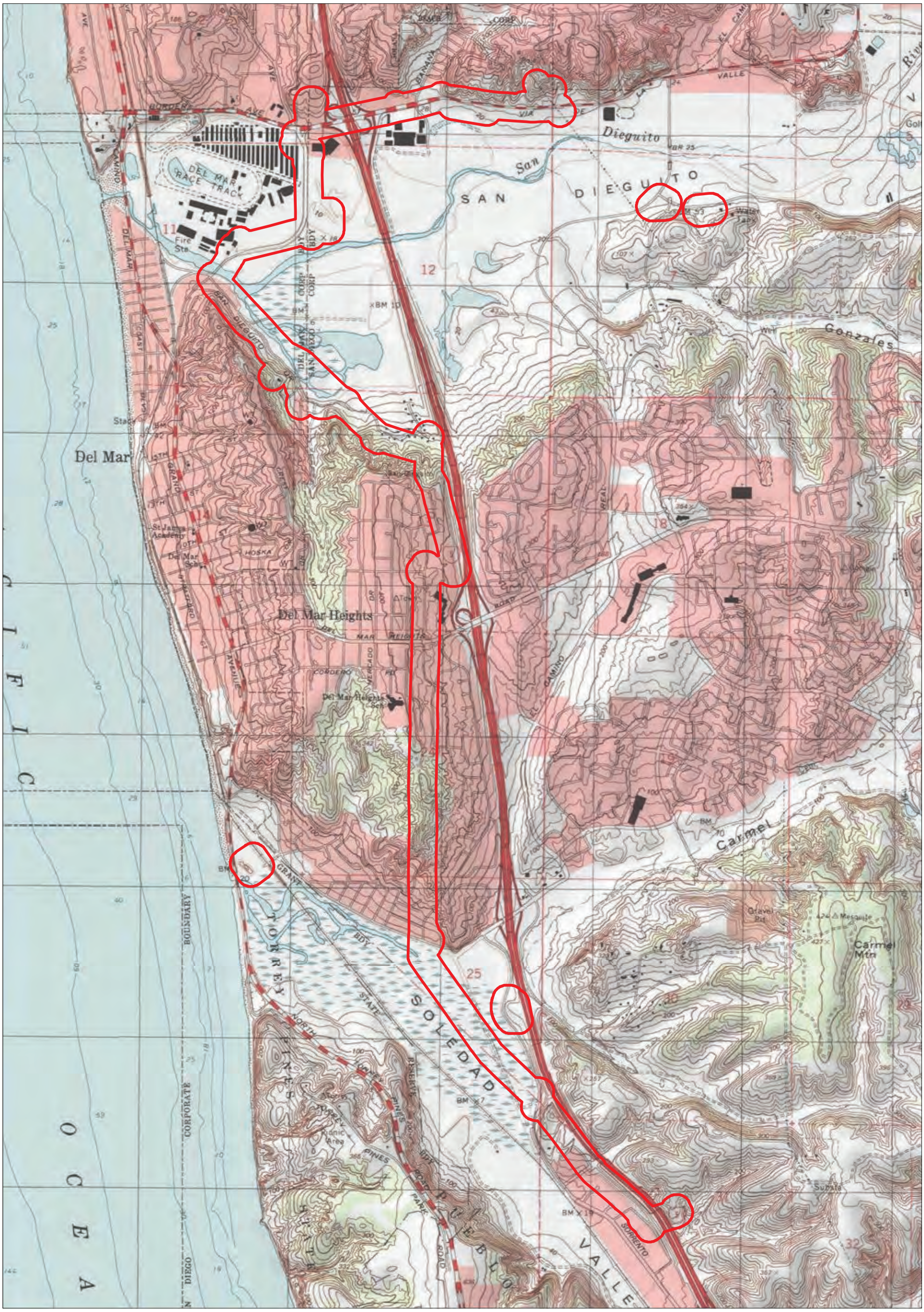
Map Source: USGS 7.5 minute topographic map series, DEL MAR quadrangle, T14S R03W, T14S R04W & PUEBLO LANDS OF SAN DIEGO Landgrant



Survey Area

FIGURE 2

Reconfigure of TL 674A at Del Mar and Removal from Service of TL 666D Project Survey Area Location on USGS Map

RECON

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Image Source: SanGIS (flown May 2012)

FIGURE 3

Reconfigure of TL 674A at Del Mar and Removal from Service of TL 666D Project Survey Area on Aerial Photograph

RECON

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Image source: SanGIS (flown May 2012)

Coastal California Gnatcatcher Survey Area

Coastal California Gnatcatcher Observations

Suitable Coastal California Gnatcatcher Habitat

Coastal California Gnatcatcher Use Area

0 Feet 250

FIGURE 4a

Coastal California Gnatcatcher and Least Bell's Vireo 2014 Survey Areas and Results for the Reconfigure of TL 674A at Del Mar and Removal from Service of TL 666D Project

RECON

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Image source: SanGIS (flown May 2012)

Coastal California Gnatcatcher Survey Area

Coastal California Gnatcatcher Observations

Suitable Coastal California Gnatcatcher Habitat

Coastal California Gnatcatcher Use Area

0 Feet 250

FIGURE 4b

Coastal California Gnatcatcher and
Least Bell's Vireo 2014 Survey Areas and
Results for the Reconfigure of TL 674A at
Del Mar and Removal from Service of TL 666D Project

RECON

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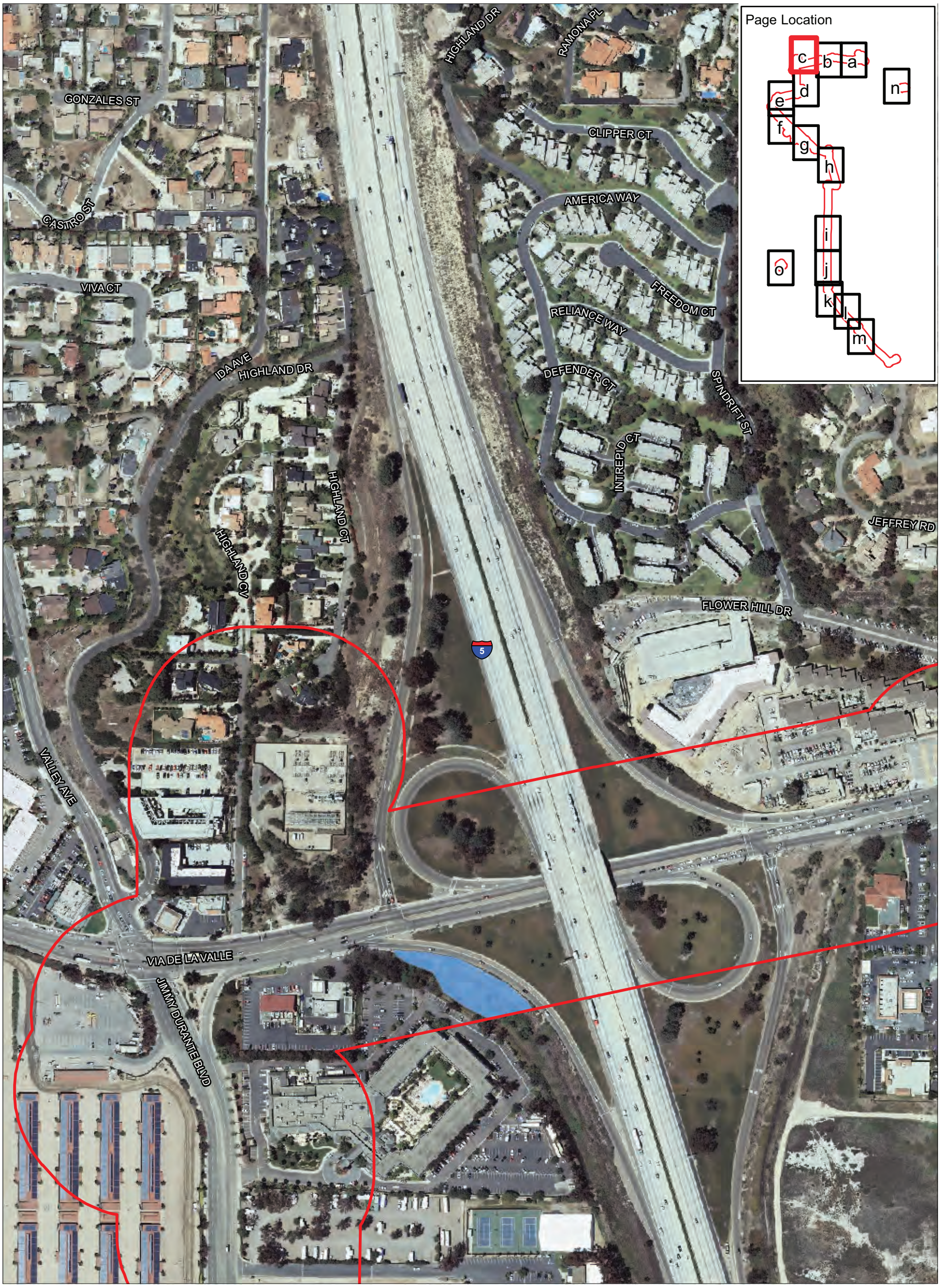
Image source: SanGIS (flown May 2012)



Coastal California Gnatcatcher Survey Area

Suitable Coastal California Gnatcatcher Habitat

0 Feet 250

FIGURE 4c

Coastal California Gnatcatcher and
Least Bell's Vireo 2014 Survey Areas and
Results for the Reconfigure of TL 674A at
Del Mar and Removal from Service of TL 666D Project

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Image source: SanGIS (flown May 2012)

Coastal California Gnatcatcher Survey Area

Suitable Coastal California Gnatcatcher Habitat

0 Feet 250

FIGURE 4d

Coastal California Gnatcatcher and
Least Bell's Vireo 2014 Survey Areas and
Results for the Reconfigure of TL 674A at
Del Mar and Removal from Service of TL 666D Project

RECON

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Image source: SanGIS (flown May 2012)

Coastal California Gnatcatcher Survey Area

Osprey Nest

Suitable Coastal California Gnatcatcher Habitat

0 Feet 250

FIGURE 4e

Coastal California Gnatcatcher and
Least Bell's Vireo 2014 Survey Areas and
Results for the Reconfigure of TL 674A at
Del Mar and Removal from Service of TL 666D Project

RECON

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Image source: SanGIS (flown May 2012)

FIGURE 4f

Coastal California Gnatcatcher and
Least Bell's Vireo 2014 Survey Areas and
Results for the Reconfigure of TL 674A at
Del Mar and Removal from Service of TL 666D Project

RECON

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Image source: SanGIS (flown May 2012)

Coastal California Gnatcatcher Survey Area

Coastal California Gnatcatcher Observations

Suitable Coastal California Gnatcatcher Habitat

Least Bell's Vireo Suitable Habitat

0 Feet 250

FIGURE 4g

Coastal California Gnatcatcher and
Least Bell's Vireo 2014 Survey Areas and
Results for the Reconfigure of TL 674A at
Del Mar and Removal from Service of TL 666D Project

RECON

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Image source: SanGIS (flown May 2012)

Coastal California Gnatcatcher Survey Area

Suitable Coastal California Gnatcatcher Habitat

0 Feet 250

FIGURE 4h

Coastal California Gnatcatcher and
Least Bell's Vireo 2014 Survey Areas and
Results for the Reconfigure of TL 674A at
Del Mar and Removal from Service of TL 666D Project

RECON

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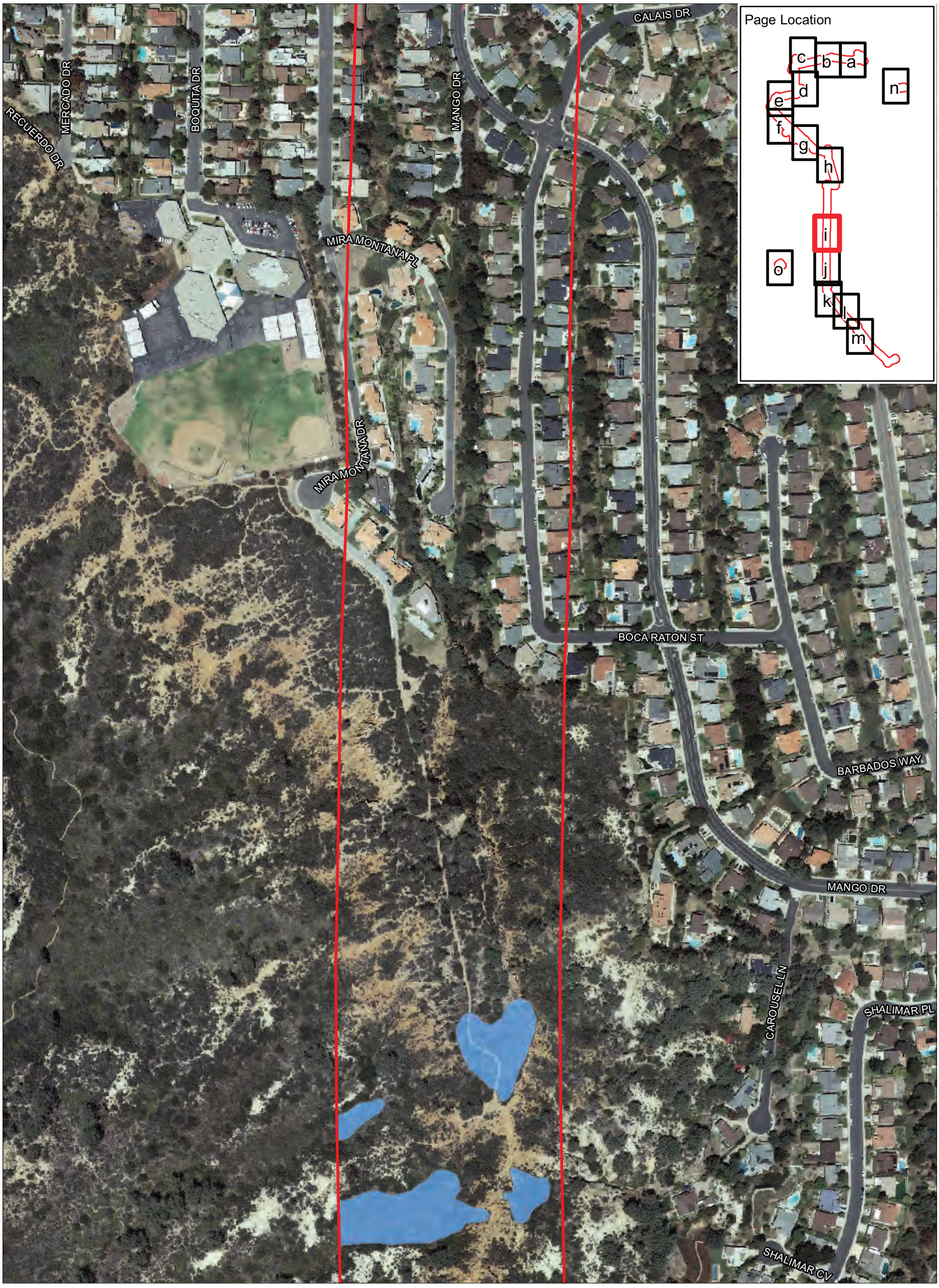
Image source: SanGIS (flown May 2012)



Coastal California Gnatcatcher Survey Area

Suitable Coastal California Gnatcatcher Habitat

0 Feet 250

FIGURE 4i

Coastal California Gnatcatcher and
Least Bell's Vireo 2014 Survey Areas and
Results for the Reconfigure of TL 674A at
Del Mar and Removal from Service of TL 666D Project

RECON

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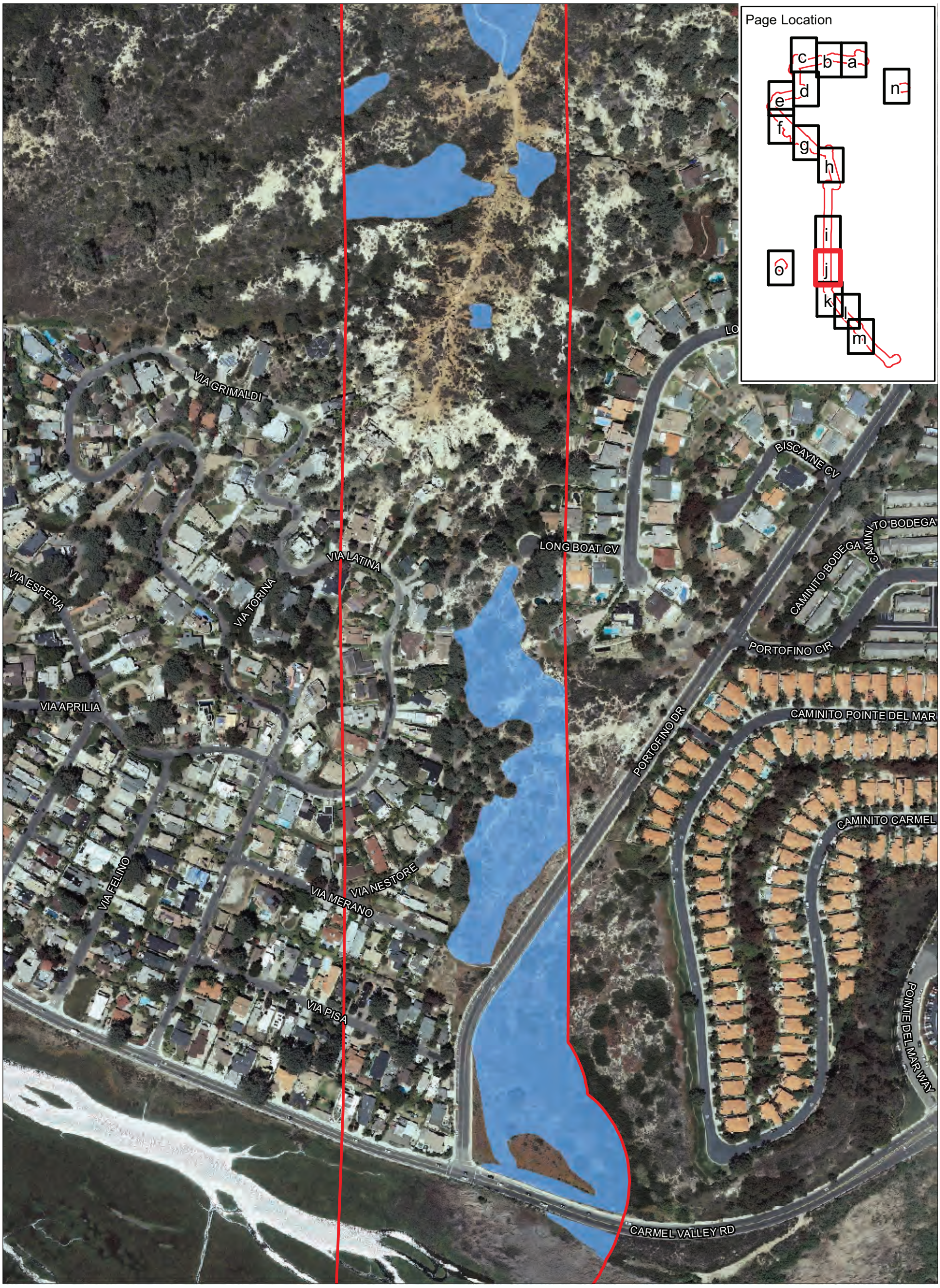
Image source: SanGIS (flown May 2012)



Coastal California Gnatcatcher Survey Area

Suitable Coastal California Gnatcatcher Habitat

0 Feet 250

FIGURE 4j

Coastal California Gnatcatcher and
Least Bell's Vireo 2014 Survey Areas and
Results for the Reconfigure of TL 674A at
Del Mar and Removal from Service of TL 666D Project

RECON

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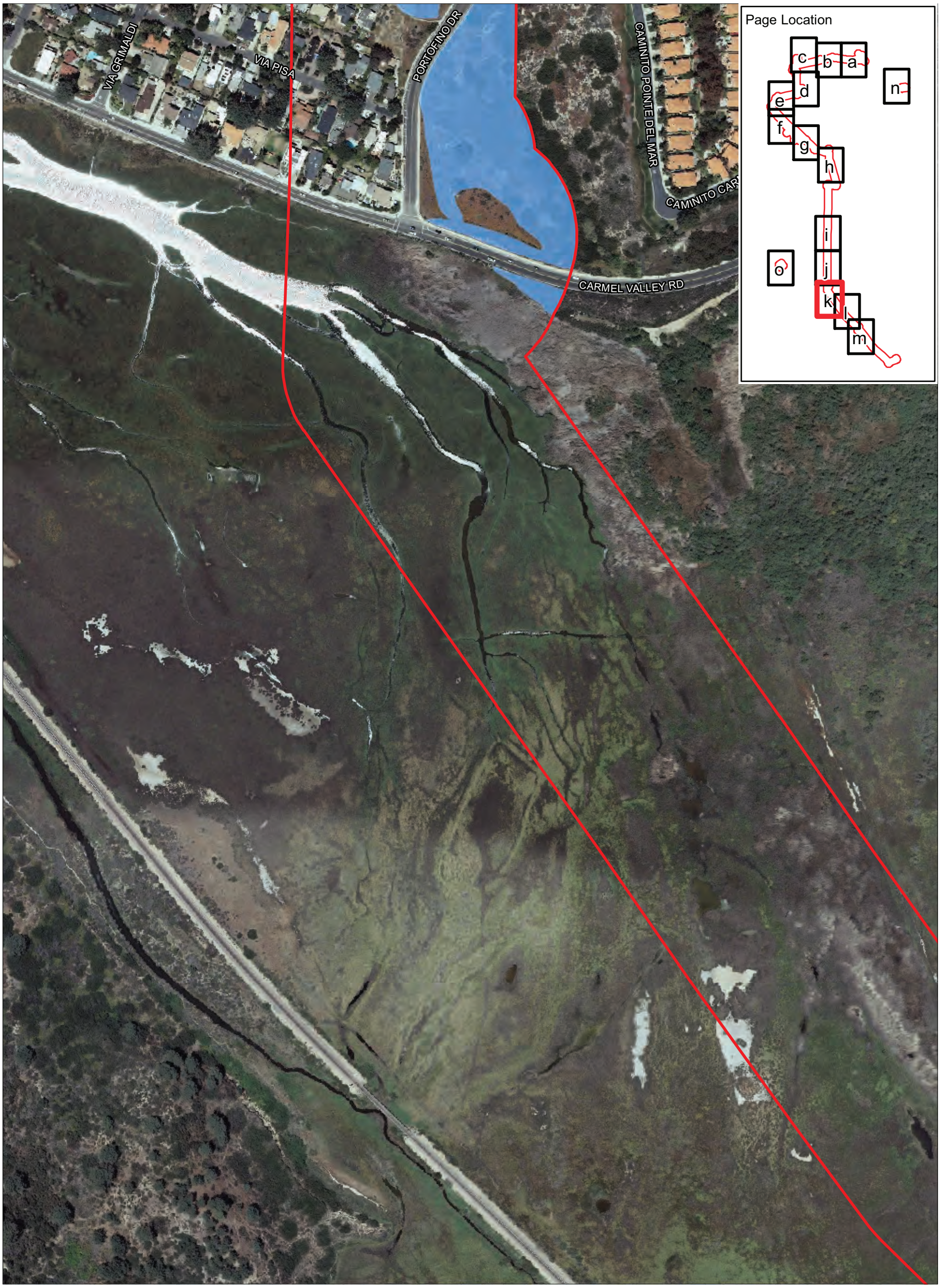

Coastal California Gnatcatcher Survey Area

Suitable Coastal California Gnatcatcher Habitat

0 Feet 250

FIGURE 4k

Coastal California Gnatcatcher and
Least Bell's Vireo 2014 Survey Areas and
Results for the Reconfigure of TL 674A at
Del Mar and Removal from Service of TL 666D Project

RECON

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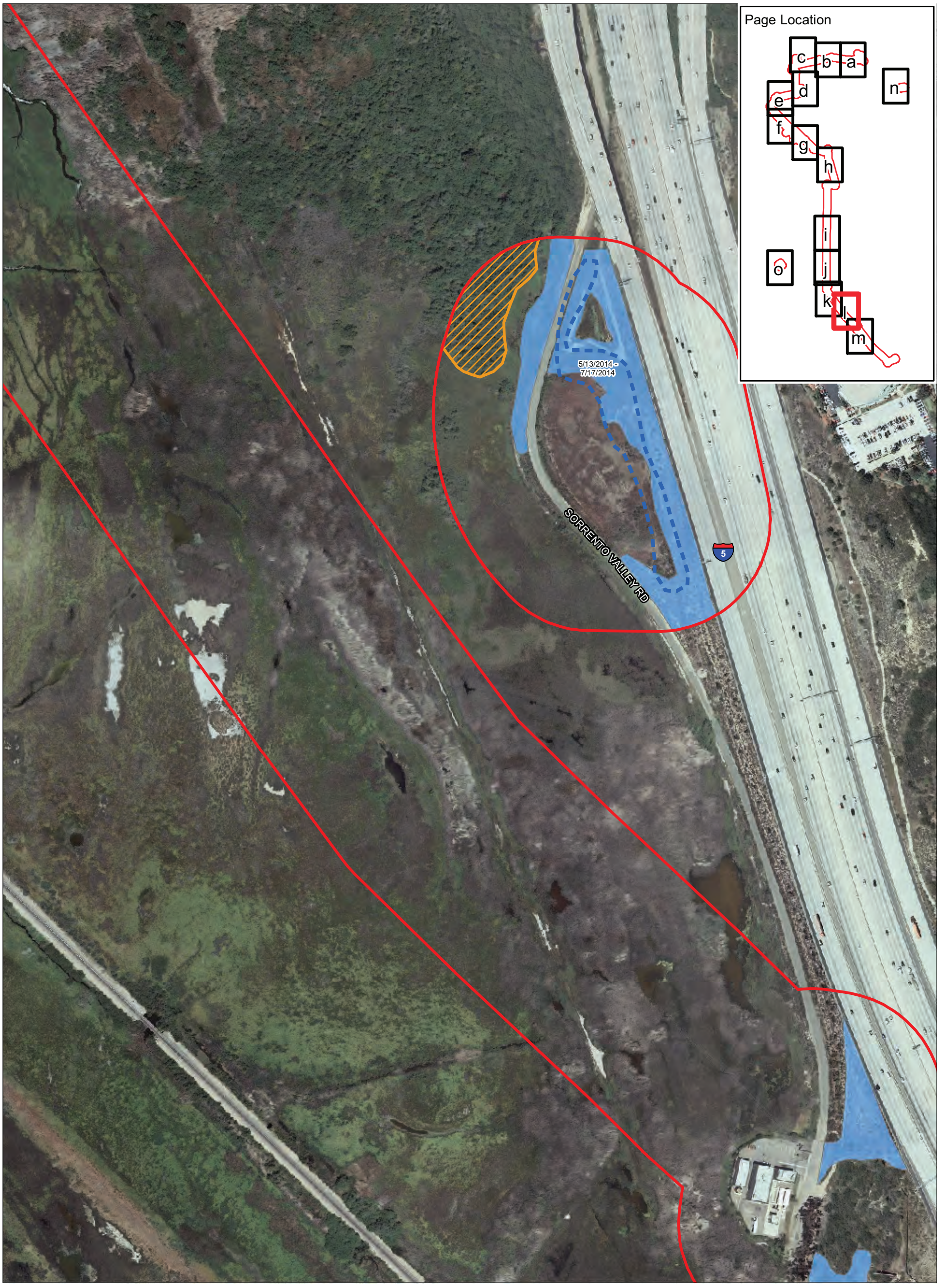

FIGURE 4I

Coastal California Gnatcatcher and
Least Bell's Vireo 2014 Survey Areas and
Results for the Reconfigure of TL 674A at
Del Mar and Removal from Service of TL 666D Project

RECON

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Image source: SanGIS (flown May 2012)

Coastal California Gnatcatcher Survey Area

Coastal California Gnatcatcher Observations

Suitable Coastal California Gnatcatcher Habitat

0 Feet 250

FIGURE 4m

Coastal California Gnatcatcher and
Least Bell's Vireo 2014 Survey Areas and
Results for the Reconfigure of TL 674A at
Del Mar and Removal from Service of TL 666D Project

RECON

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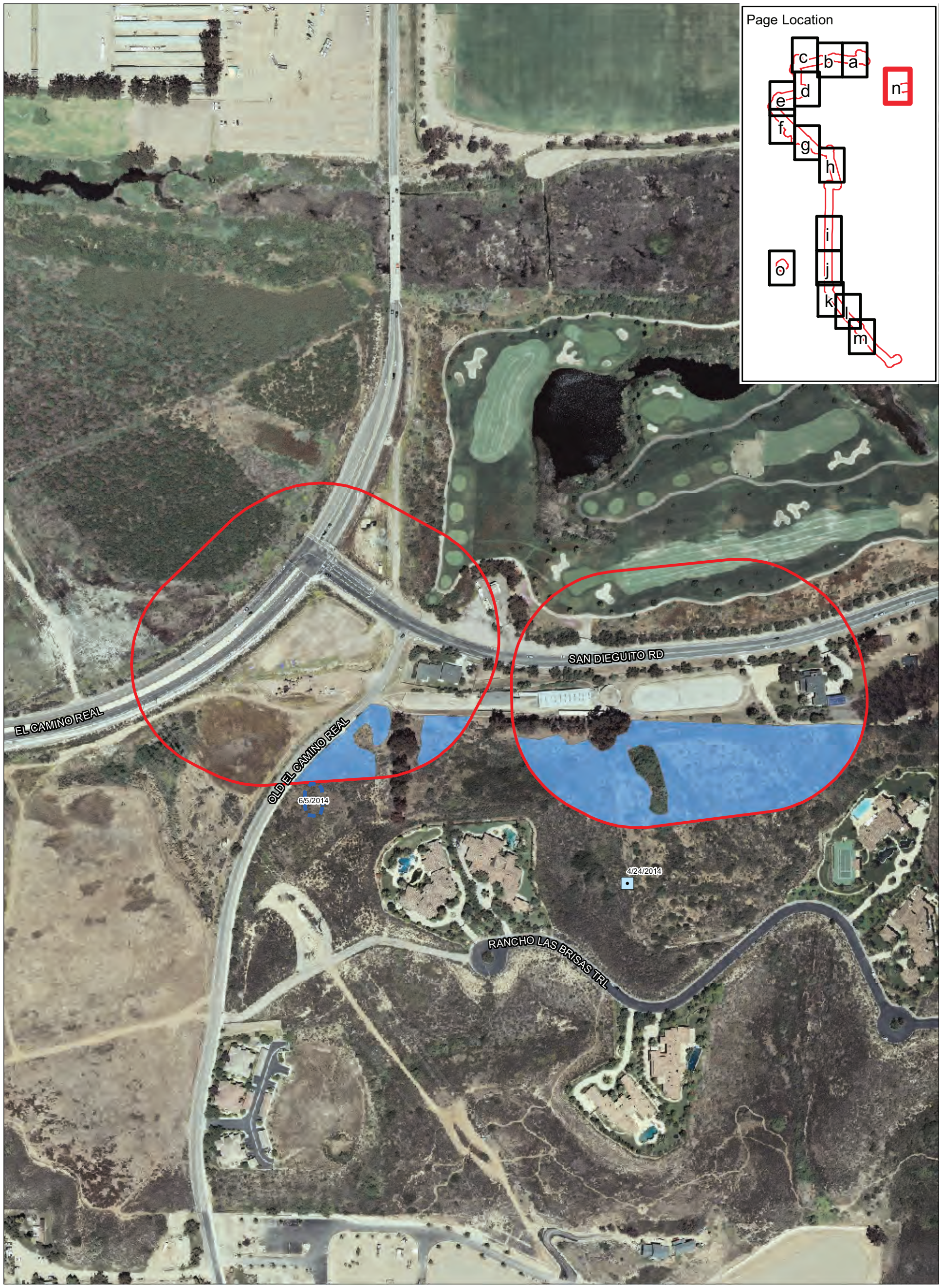
Image source: SanGIS (flown May 2012)



Coastal California Gnatcatcher Survey Area

Coastal California Gnatcatcher Observations

Suitable Coastal California Gnatcatcher Habitat

Coastal California Gnatcatcher Use Area

0 Feet 250

FIGURE 4n

Coastal California Gnatcatcher and
Least Bell's Vireo 2014 Survey Areas and
Results for the Reconfigure of TL 674A at
Del Mar and Removal from Service of TL 666D Project

RECON

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Image source: SanGIS (flown May 2012)

Coastal California Gnatcatcher Survey Area

Suitable Coastal California Gnatcatcher Habitat

Coastal California Gnatcatcher Use Area

0 Feet 250

FIGURE 4o

Coastal California Gnatcatcher and
Least Bell's Vireo 2014 Survey Areas and
Results for the Reconfigure of TL 674A at
Del Mar and Removal from Service of TL 666D Project

RECON

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Attachment VIII

Focused Surveys for Coastal California Gnatcatcher

Conducted 2017

BLACKHAWK Environmental

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San Diego, CA, 92105
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Phone: 619.972.8714
www.blackhawkenv.com

May 24, 2017

Ms. Stacey Love
Recovery Permit Coordinator
U.S. Fish and Wildlife Service – Carlsbad Fish and Wildlife Office
2177 Salk Ave, Suite 250
Carlsbad, CA 92008
Email: stacey_love@fws.gov
Office: (760) 431-9440 x 263

Re: 2017 Coastal California Gnatcatcher USFWS Protocol Survey Results for the SDG&E Del Mar Reconfiguration Project (Transmission Line (TL) 674A at Del Mar and Removal from Service of TL 666D), Cities of San Diego and Del Mar, San Diego County, California

Dear Ms. Love:

Blackhawk Environmental Inc. (Blackhawk) was contracted through AECOM to complete U.S. Fish & Wildlife Service (USFWS) protocol presence/absence surveys for the federally threatened coastal California gnatcatcher (*Polioptila californica californica*; CAGN) during the 2017 CAGN breeding season (February 15 to August 30) along the biological study area (BSA) of the proposed San Diego Gas & Electric (SDG&E) Del Mar Reconfiguration Project to remove from service Transmission Lines (TL) 666D and 674A (Project). The CAGN is a covered species of SDG&E's Natural Community Conservation Plan (NCCP). A total of three protocol CAGN surveys occurred within the BSA by Blackhawk Biologists Kris Alberts (USFWS permit TE039640-4) and Seth Reimers (USFWS permit TE80703A-0), with assistance from Blackhawk Staff Biologist Andy Steyers.

The Project BSA is located primarily in the communities of Torrey Pines, Del Mar Heights and Via de la Valle in the City of San Diego and the City of Del Mar, within coastal San Diego County, California. Small portions also extend into the city of Solana Beach and the community of Torrey Hills in the City of San Diego (Figure 1). The BSA crosses several areas of intact open space in San Dieguito Lagoon and Torrey Pines State Natural Reserve, including a portion of the Los Peñasquitos marsh.

The BSA is roughly defined as the 300-foot-wide transmission corridor along an approximately 7-mile stretch of TL 674A and TL 666D, with a minimum 100-foot buffer around each project feature. Project sites include transmission poles, vaults, hand holes, guard structures, stringing sites, staging areas and helicopter fly yards. The BSA is generally linear in shape, roughly paralleling an east–west portion of Via de la Valle and extending south and west along the eastern and southern sides of the Del Mar Fairgrounds, southeast through the San Dieguito Lagoon, south through the community of Del Mar Heights, southeast through the Los Peñasquitos marsh, and southeast along a portion of Interstate 5. The BSA is on the U.S. Geological Survey (USGS) *Del Mar* 7.5-minute quadrangle at Township 14 South, Range 3 West, Sections 6, 7, 30, and 31, and Range 4 West, Sections 1, 2, 11, 12, 13, 14, 24, and 25,

and unsectioned lands within the Pueblo Lands of San Diego land grant. An aerial view of the BSA is shown on Figure 1.

This report includes survey methods, survey results, references and surveyor certification sections. Attachments include: A) Project figures, B) Photo pages and C) Observed vertebrate wildlife species list.

METHODS

Blackhawk Biologists Kris Alberts and Seth Reimers conducted all CAGN habitat assessments and CAGN presence/absence surveys for this Project (Table 1). Survey methods followed the latest accepted protocols of the USFWS (USFWS 1997). The methodology, as modified by the NCCP, stipulates that three surveys are to occur between February 15 and August 30 in CAGN-suitable habitats at least one week apart. To adequately cover three surveys of the entire BSA, the Project was divided into northern and southern segments, with Mr. Alberts surveying the southern segment and Mr. Reimers surveying the northern segment.

Surveys were conducted using recorded CAGN vocalization playbacks to elicit initial responses. The surveys were done by walking slowly through and adjacent to CAGN-suitable habitats and utilizing stationary vantage points, while looking and listening for CAGN presence, using binoculars and/or the naked eye, as appropriate. The biologists were familiar with the songs, calls and scolds of adult and juvenile CAGN, as well as plumage characteristics in relation to similar species. The biologists listened for any and all CAGN calls, as well as all other bird species. All CAGN-relevant data and wildlife species were recorded in the field notes of the biologists for inclusion in this report (Attachment C). The first survey included a habitat assessment to locate and define CAGN-suitable habitats within the BSA; CAGN-suitable areas were ground-truthed for current CAGN suitability from the previous survey done for this Project (RECON 2014), with additional CAGN-suitable areas mapped directly onto high-resolution aerial photographs for Global Positioning System (GPS) interpolation in this report. If, where and when CAGN were detected, detailed notation was collected that included: the number of individuals; specific locations using GPS coordinates; observed territory usage; sex; age; pairing status; nesting status; presence/absence of leg bands and if present, color combinations; the presence of other sensitive and common bird species; and BHCO presence.

Representative photographs were collected along the Project route to document current CAGN site conditions (Attachment B). In addition, vertebrate wildlife species lists were compiled during each survey pass for compilation into a comprehensive list for all the surveys (Attachment C).

CAGN surveys were conducted during favorable weather conditions in the morning hours of March 14 (northern segment), March 15 (southern segment), April 20 (southern and northern segments), May 3 (southern segment) and May 4 (northern segment), 2017. All surveys were conducted between 6:00 AM and 12:00 PM, during favorable weather conditions. Survey conditions are presented in Table 1.

Table 1. Survey Conditions

Date	Personnel	Time	Start-End Conditions
3/14/17	SR	0700-1200	55°-71°, winds 0-5 mph, 0% cloud cover, no precipitation
3/15/17	KA	0705-1200	61°-64°, winds 0-4 mph, 90% cloud cover, no precipitation
4/20/17	KA, SR, AS	0603-1150	54°-72°, winds 0-8 mph, 100%-10% cloud cover, no precipitation
5/3/17	KA	0600-1155	62°-72°, winds 0-3 mph, 80%-15% cloud cover, no precipitation
5/4/17	SR, AS	0600-1135	65°-72°, winds 0-6 mph, 100%-0% cloud cover, no precipitation

Conditions: °F = degrees Fahrenheit. mph = miles per hour.
Observers: KA = Kris Alberts, SR = Seth Reimers, AS = Andy Steyers

RESULTS

A total of 26.02 acres of CAGN-suitable habitat were surveyed within the 324.51-acre BSA. Vegetation communities and land cover types within the biological study area include Diegan coastal sage scrub (DCSS), DCSS: coastal form, Torrey pine forest, southern mixed chaparral, southern maritime chaparral, scrub oak chaparral, open water/beach/salt pan/mudflat, southern coastal salt marsh, coastal and valley freshwater marsh, southern arroyo willow riparian forest, general agriculture, disturbed habitat, urban/developed, and landscape/ornamental (AECOM 2017.) CAGN-suitable habitats included DCSS and DCSS: coastal form, plus limited areas of adjacent chaparral.

The BSA includes moderately-sized to large areas of DCSS and DCSS: coastal form along the following areas: north of Via de la Valle, adjacent to San Dieguito Lagoon, adjacent to Los Peñasquitos marsh, in upland areas of Crest Canyon Park, and near Carmel Valley Road and Portofino Road. The DCSS is primarily dominated by California sagebrush (*Artemisia californica*), chaparral broom (*Baccharis pilularis*), lemonade berry (*Rhus integrifolia*) and bush monkey-flower (*Mimulus aurantiacus*), though other species dominate in local environments as indicated in the following CAGN summaries. Shrub cover within the DCSS/DCSS: coastal form ranges from approximately 20 to 70 percent. The surveyed DCSS/DCSS: coastal form ranges from low to high-quality for CAGN, depending on patch size, percent shrub cover, dominance of native species, surrounding land uses and vegetative types, and proximity to dispersal zones. DCSS: coastal form dominated by California sagebrush, San Diego County viguiera (*Bahiopsis laciniata*), black sage (*Salvia mellifera*) and coast prickly pear (*Opuntia littoralis*) occurs throughout the northern portion of the survey area, and is considered high-quality CAGN habitat due to its occurrence within a large expanse of undeveloped land, dominance of native species and high species diversity. Southern maritime chaparral is found in patches throughout the southern half of the survey area, and is dominated by chamise (*Adenostoma fasciculatum*), wart-stemmed ceanothus (*Ceanothus verrucosus*), spiny redberry (*Rhamnus crocea*), lemonade berry and Nuttall's scrub oak (*Quercus dumosa*). Although the southern maritime chaparral consists of native species and exhibits high species diversity, it is considered of low to moderate-quality CAGN habitat due to its occurrence as small patches through the BSA and the dominance of large shrub species not suitable for nesting CAGN.

California Gnatcatcher

Six CAGN pairs were detected during the surveys (Figure 2 - Maps 2, 8 and 9). Three of these pairs were found within the BSA and three were found within 100 feet of the BSA. The photo pages contain observed territories and nest photographs (Attachment B). Findings for each CAGN location are summarized as follows:

CAGN 01: This unbanded CAGN pair was first detected by sight and sound on the initial March 15, 2017 survey in the DCSS at the northwest corner of the Carmel Valley Road/Portofino Road intersection (Figure 2 – Map 9). Recorded CAGN call playbacks were not used to locate this pair, as they were vocalizing upon arrival. Also on the March 15 survey, a nest was found under construction about 2.5 feet above ground level in a California sagebrush with less than 10% of the disk completed, at 32.93149°, -117.24667. Both adult birds were observed feeding nestlings at this nest during the 2nd April 20, 2017 survey. The family group was not observed during the final May 3, 2017 survey, but the nest was still intact with the lining slightly pulled up from the bottom and fluffed, consistent with successful fledging. Therefore, the family was assumed to be foraging together during the final May 3 survey on the slopes surrounding the observed territory. The DCSS habitat associated with this pair was co-dominated by California sagebrush, coyote brush (*Baccharis pilularis*) and coast goldenbush (*Isocoma menziesii*). The observed territory was just east of the BSA, and the birds were never observed to utilize the BSA.

CAGN 02: An unbanded male CAGN was first detected by responding to a recorded CAGN call playback on the initial March 15, 2017 in the DCSS west of the Project alignment in Torrey Pines State Reserve (Figure 2 – Map 8). This male was assumed to be paired, as he was not advertising, calling constantly and/or otherwise attracting attention to himself during the March 15 survey; there were no other CAGN detected, and he was observed using a large territory, potentially moving further west unhindered by any adjacent CAGN. No other CAGN detections occurred at or near this location through the rest of the surveys, and no nest was found. The DCSS habitat associated with this assumed pair was co-dominated by California sagebrush, black sage and laurel sumac (*Malosma laurina*). The observed territory was just west of the BSA, and the bird(s) were never observed to utilize the BSA.

CAGN 03: An unbanded CAGN pair with a nest containing three eggs was found during the final May 3, 2017 survey, north of CAGN 01, in the DCSS: coastal form just west of Portofino Road (Figure 2 – Map 9). The male vocally responded to a recorded call playback and continued to vocalize while foraging in a small area. The female was only briefly seen and was never heard to call. The nest was about 4 feet above ground level in a lemonade berry at 32.93389°, -117.24644°. The DCSS: coastal form habitat associated with this pair was co-dominated by California encelia (*Encelia californica*) and lemonade berry, with California sagebrush and California buckwheat (*Eriogonum fasciculatum*) also present. The observed territory was just east of the BSA, and the birds were never observed to utilize the BSA.

CAGN 1A: This unbanded CAGN pair was first detected by sight on March 14, 2017, in the DCSS: coastal form north of Via De La Valle, and east of an existing SDG&E transmission construction and maintenance (TCM) access road (Figure 2 – Map 2). Recorded CAGN call playbacks were not used to locate this pair, as the male was observed preening and foraging in the morning sun upon arrival.

The female was not observed during the March 14, 2017 survey; however, she was observed during the 2nd survey on April 20, 2017 incubating on a nest located about 2.5 feet above ground level in a California sagebrush at 32.98233°, -117.23952°. This nest was found to be disheveled and empty during the final survey on May 4, 2017, presumably from predation. The pair was subsequently located with the use of call playbacks and found to have built a new nest located about two feet above ground level in a California buckwheat at 32.98200°, -117.23969°. The female was observed incubating at the time of discovery while the male foraged and defended their territory from dispersing CAGN juveniles associated with CAGN pair 2A. The DCSS: coastal form habitat associated with this pair was co-dominated by California sagebrush, California buckwheat and laurel sumac, with an abundance of succulent species including coast cholla (*Cylindropuntia prolifera*) and fish-hook cactus (*Mammillaria dioica*). Most of the observed territory was within the BSA, with a smaller portion east of the BSA.

CAGN 2A: This unbanded CAGN pair was first detected by sight and sound on March 14, 2017, in the DCSS: coastal form north of Via De La Valle (Figure 2 – Map 2). Recorded CAGN call playbacks were not used to locate this pair, as the male was vocalizing upon arrival. The male was found to have no tail feathers but was extremely vocal during the initial survey. The female for this pair was not observed until the 2nd survey on April 20, 2017 when the pair was observed feeding three flight-capable fledglings in the northeast portion of their territory. These juveniles were observed being driven from the adjacent CAGN 1A territory during the final survey on May 4, 2017. In addition, the survey on May 4, 2017 yielded a new nest for this pair, located about four feet above ground level in a California sagebrush, at 32.98134°, -117.23914°. The nest was incidentally located when the male was observed taking over incubation duties from the female. The DCSS: coastal form habitat associated with this pair was co-dominated by California sagebrush, San Diego sunflower (*Bahiopsis laciniata*) and California buckwheat, with scattered succulent species including coast cholla and Mojave yucca (*Yucca schidigera*). This territory also exhibited a higher abundance of non-native species such as short-pod mustard (*Hirschfeldia incana*) and crown daisy (*Glebionis coronaria*). Most of the observed territory was within the BSA, with a smaller portion north of the BSA.

CAGN 1B: This unbanded CAGN pair was first detected when the male vocally responded to call playbacks on March 14, 2017, in the DCSS: coastal form north of Via De La Valle (Figure 2 – Map 2). The pair was observed foraging throughout their territory, but a nest was not located during the initial survey. A nest was incidentally observed during the 2nd survey on April 20, 2017 when the male and female CAGN were observed bringing food items to four nestlings in a nest situated about two feet above ground level in a coast cholla, at 32.97316°, -117.23100°. Both adult birds were observed feeding recently fledged young, with limited flight capabilities, near this nest location during the final May 4, 2017 survey. The DCSS: coastal form habitat associated with this pair was co-dominated by California sagebrush and California buckwheat, with scattered succulent species including coast cholla and Mojave yucca. Some of the observed territory was within the BSA, but most of it was north of the BSA.

Other Sensitive Species

Additional sensitive species observed during the surveys included several California Species of Special Concern (SSC), California Fully Protected Species (FPS) and SDG&E NCCP-covered species: northern harrier (*Circus cyaneus*; SSC and SDG&E NCCP-covered species), southern California rufous-

crowned sparrow (*Aimophila ruficeps canescens*; SDG&E NCCP-covered species), white-faced ibis (*Plegadis chihi*; SDG&E NCCP-covered species), California brown pelican (*Pelecanus occidentalis californicus*; FPS and SDG&E NCCP-covered species), Clark's marsh wren (*Cistothorus palustris clarkae*; SSC), San Diegan tiger whiptail (*Aspidoscelis tigris stejnegeri*: SSC) and southern mule deer (*Odocoileus hemionus fuliginata*; SDG&E NCCP-covered species).

Of these species, the northern harrier, southern California rufous-crowned sparrow and Clark's marsh wren have the potential to nest within the BSA, but the white-faced ibis and California brown pelican are presumed absent for nesting purposes. The northern harrier has a moderate potential to nest, and Clark's marsh wren has a high potential to nest, within the marshlands of the BSA. The southern California rufous-crowned sparrow has a moderate potential to nest within open DCSS of the BSA. White-faced ibis were observed foraging within the BSA of Los Penasquitos Lagoon, but are presumed absent for nesting, as this species is not known to nest near the Project alignment. The California brown pelican also is not known to breed near the Project alignment and was observed flying along the coastline over the beach near the proposed yard at Torrey Pines State Beach's North Beach parking lot. The southern mule deer and San Diegan tiger whiptail are permanent residents of the Project area; the whiptail is associated primarily with scrub and chaparral habitats, but the mule deer may be encountered anywhere within the BSA.

Brown-Headed Cowbird

The brown-headed cowbird (*Molothrus ater*), a brood parasite of CAGN and many other passerines, was detected once during the surveys on March 15. One male and one female were seen and heard along the bike trail next to the southern willow scrub immediately southwest of Interstate 5 and Carmel Valley Road. No BHCO eggs or young were observed in CAGN nests, and no BHCO young were detected anywhere within the biological study area.

RECOMMENDATIONS AND CONCLUSION

If construction is to occur within the general bird breeding season, pre-construction nesting bird surveys are recommended to comply with the Migratory Bird Treaty Act (MBTA) and California Fish and Wildlife (CDFW) Codes of the 3500 series; these laws protect the vast majority of nesting birds within California. Surveys should occur for raptors from about January 15th through July 30th, and surveys for non-raptors should occur from about February 15th through August 30th. CAGN surveys should occur during the conditions and timings stated in the USFWS protocol. Surveys should be conducted according to Project work areas and those scheduled within a week look-ahead up to 100 feet from Project work areas for non-listed bird species and up to 500 feet for listed species and raptors. Surveys should be completed within seven days of work activities commencing, and refreshed as necessary to ensure MBTA and CDFW compliance throughout the construction phase. By conducting these surveys, any present CAGN would likely be detected and protected during construction by implementing avoidance and minimization measures.

If the Project is to occur during the bird breeding season, and since many avian species known to nest in this region were documented during these surveys, the Project may affect some nesting birds. To offset Project impacts, Blackhawk recommends the following:

1) Conduct pre-construction nesting bird surveys and refresh as necessary at active and scheduled work areas according to the Project schedule up to seven days ahead of time.

2) Avoid or minimize impacts to natural habitats, especially DCSS and DCSS: coastal form.

3) Implement appropriate no-work buffers and/or adaptive mitigation measures for actively nesting birds that may be affected by Project activities. Established buffers should consider a range of variables, including but not necessarily limited to: the species of bird; nesting stage; time of year; type, duration and intensity of work activity; size of work crew; types of equipment and vehicles to be used; vegetative and/or topographic screening of the nest to the work area; vertical and horizontal distances of the nest to the nearest edge of the work area; and the availability and implementation of adaptive measures to reduce potential impacts, including sound walls, staggered work schedules, sound dampeners, mufflers, etc. An optimal buffer/adaptive measure combination simultaneously allows work to continue as unhindered as possible and allows the nesting bird to naturally progress throughout its nesting cycle.

If you have any questions regarding this report, please feel free to call me at 619-972-8714 or e-mail me at kris@blackhawkenv.com, and I will address all questions and concerns.

Sincerely,

Kris Alberts
Principal Biologist
USFWS Permit TE-039640-4

ATTACHMENTS

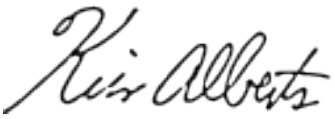
A: Figures

B: Photo Pages

C: Observed Vertebrate Wildlife Species List

SURVEYOR CERTIFICATION

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



Kris Alberts (TE039640-4)

Seth Reimers (TE80703A-0)

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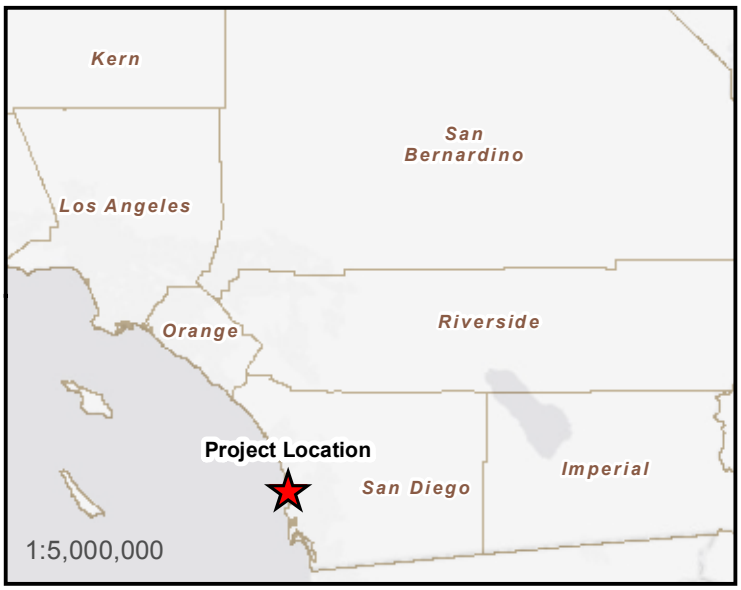
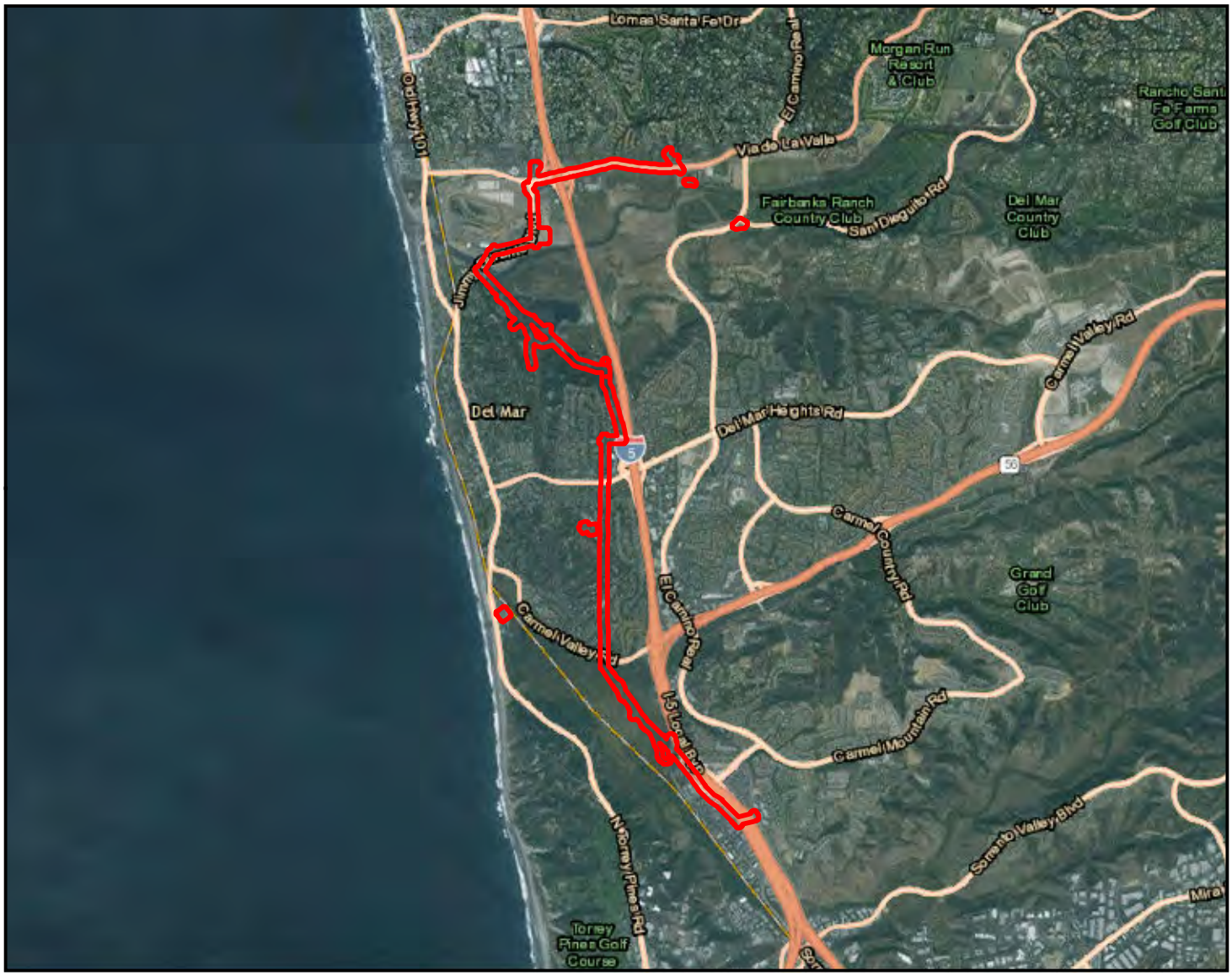
ATTACHMENT A

Figures

Blackhawk Environmental





Legend

Project Location

Figure 1
Project Location & Vicinity Map

N

0 3,000 6,000 12,000

Feet

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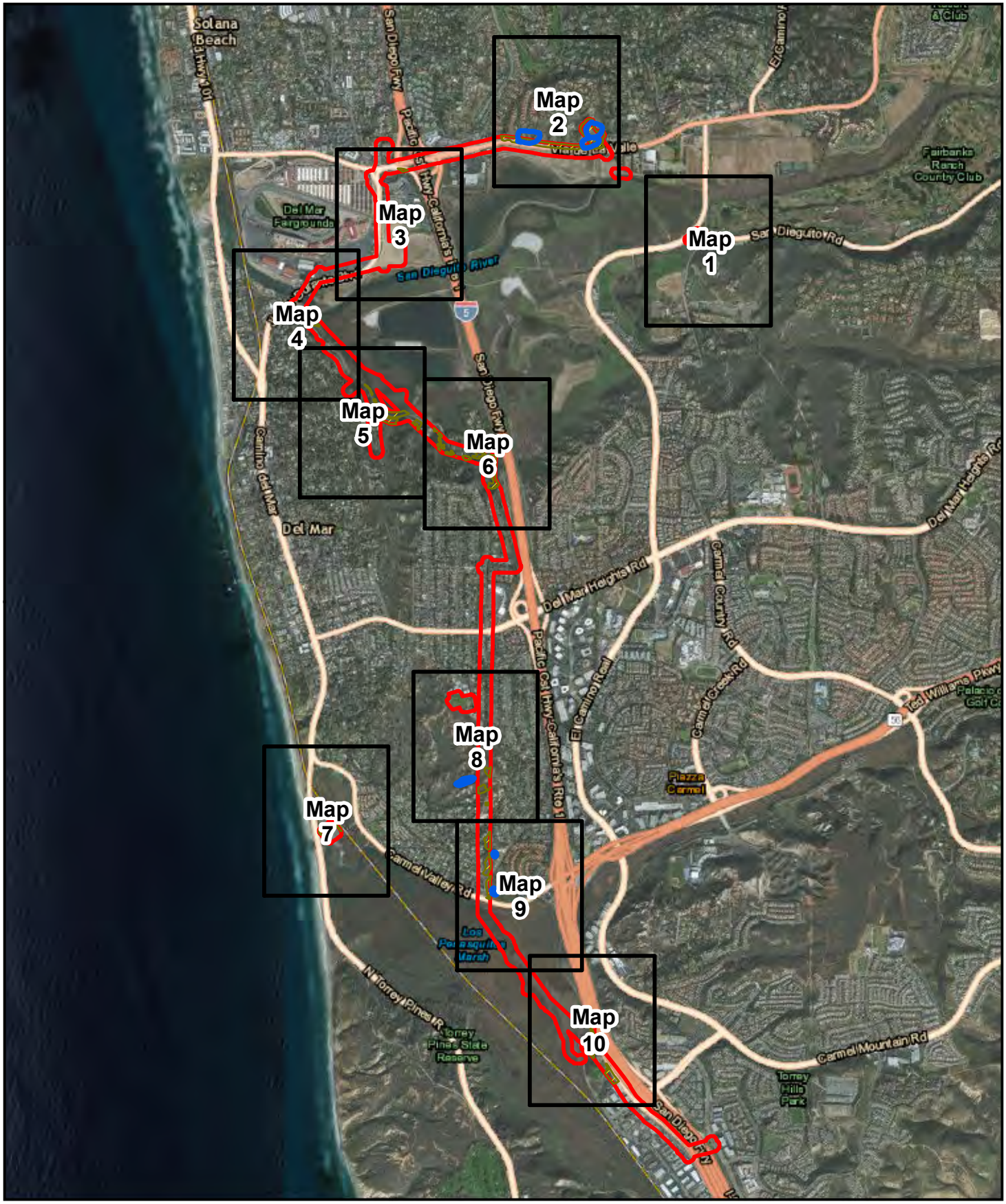

Legend

- Results Grid Index
- Biological Study Area
- CAGN Territory
- CAGN Suitable Habitat

N

0 1,200 2,400 4,800

Feet

Figure 2

California Gnatcather Survey Results

Overview Map

Name: 20733 p129 Fig2 CAGN Results.Mxd
Print Date: 5/23/2017, Author: stondre

Legend

Biological Study Area

N

0 160 320 640

Feet

Figure 2

California Gnatcather Survey Results

Results Map 1 of 10

Name: 20733 p129 Fig2 CAGN Results.Mxd
Print Date: 5/23/2017, Author: stondre

Legend

- Biological Study Area
- CAGN Nest
- CAGN Territory
- CAGN Suitable Habitat

N

0 160 320 640

Feet

Figure 2

California Gnatcather Survey Results

Results Map 2 of 10

Name: 20733 p129 Fig2 CAGN Results.Mxd
Print Date: 5/23/2017, Author: stondre

Legend

- Biological Study Area
- CAGN Suitable Habitat

N

0 160 320 640

Feet

Figure 2

California Gnatcather Survey Results

Results Map 3 of 10

Name: 20733 p129 Fig2 CAGN Results.Mxd
Print Date: 5/23/2017, Author: stondre

Legend

- Biological Study Area
- CAGN Suitable Habitat

N

0 160 320 640

Feet

Figure 2

California Gnatcather Survey Results

Results Map 4 of 10

Name: 20733 p129 Fig2 CAGN Results.Mxd
Print Date: 5/23/2017, Author: stondre

Legend

- Biological Study Area
- CAGN Suitable Habitat

N

0 160 320 640

Feet

Figure 2

California Gnatcather Survey Results

Results Map 5 of 10

Name: 20733 p129 Fig2 CAGN Results.Mxd
Print Date: 5/23/2017, Author: stondre

Legend

- Biological Study Area
- CAGN Suitable Habitat

N

0 160 320 640

Feet

Figure 2

California Gnatcather Survey Results

Results Map 6 of 10

Name: 20733 p129 Fig2 CAGN Results.Mxd
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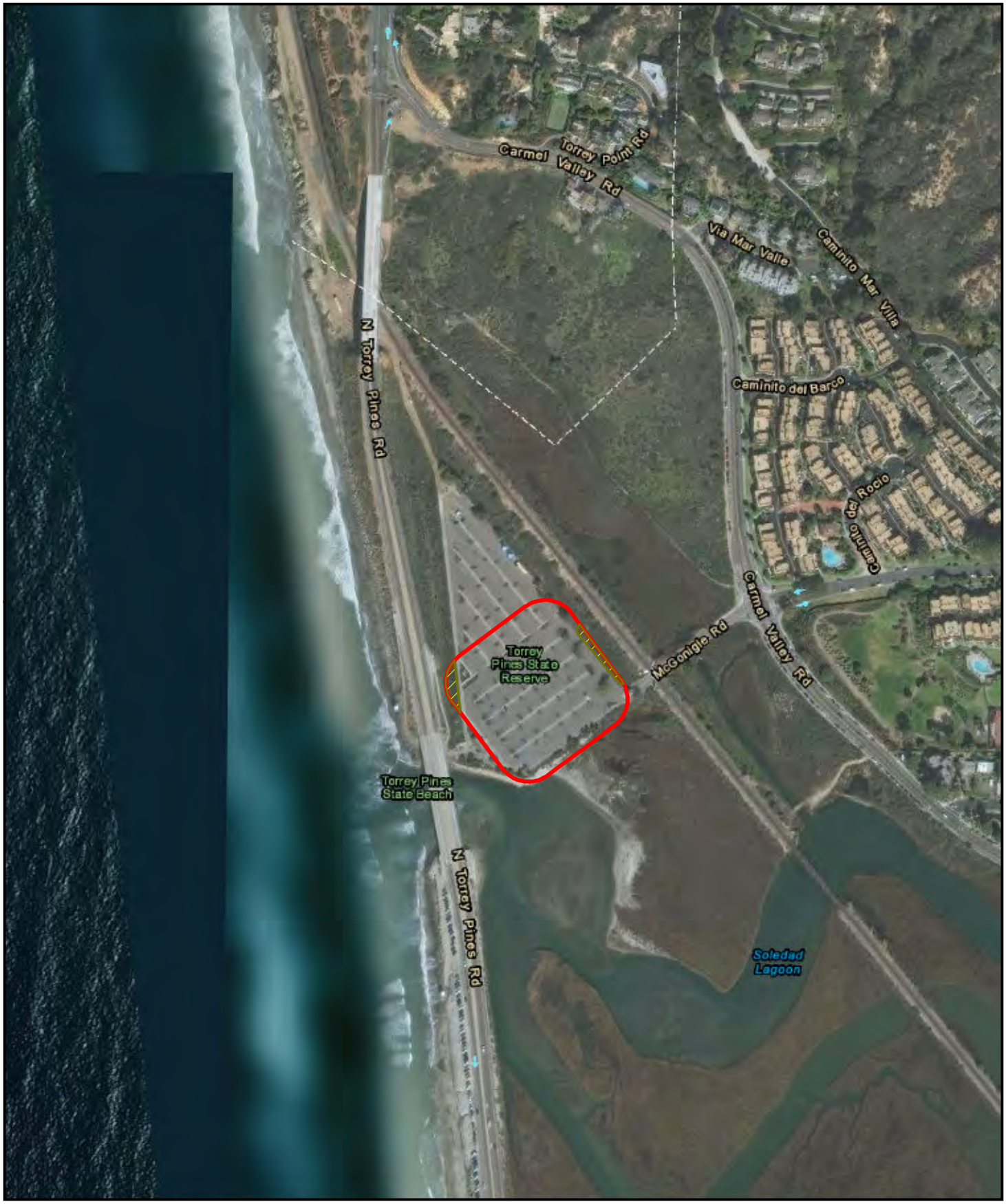

Legend

- Biological Study Area
- CAGN Suitable Habitat

N

0 160 320 640

Feet

Figure 2

California Gnatcather Survey Results

Results Map 7 of 10

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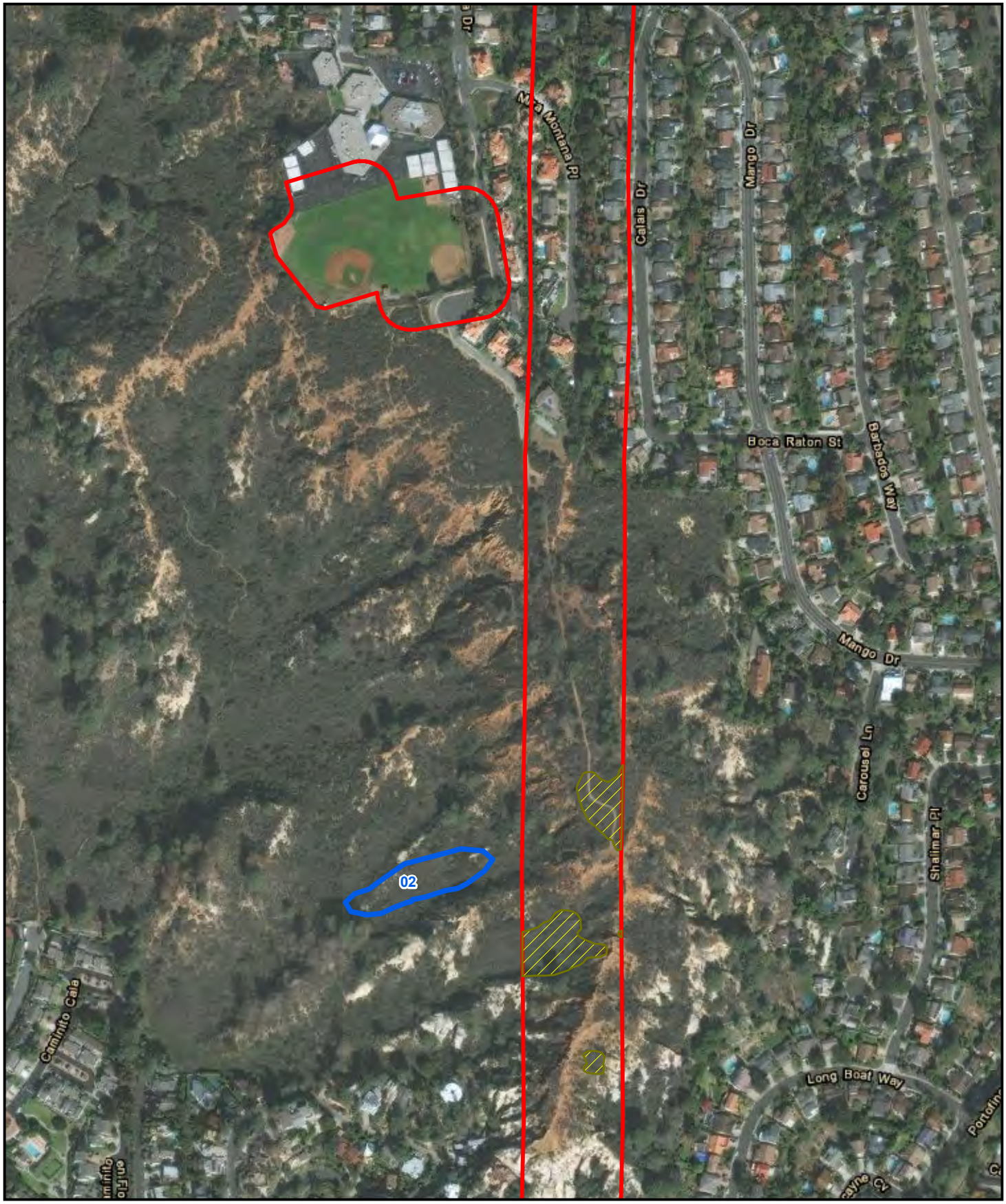

Legend

- Biological Study Area
- CAGN Territory
- CAGN Suitable Habitat

N

0 160 320 640

Feet

Figure 2

California Gnatcather Survey Results

Results Map 8 of 10

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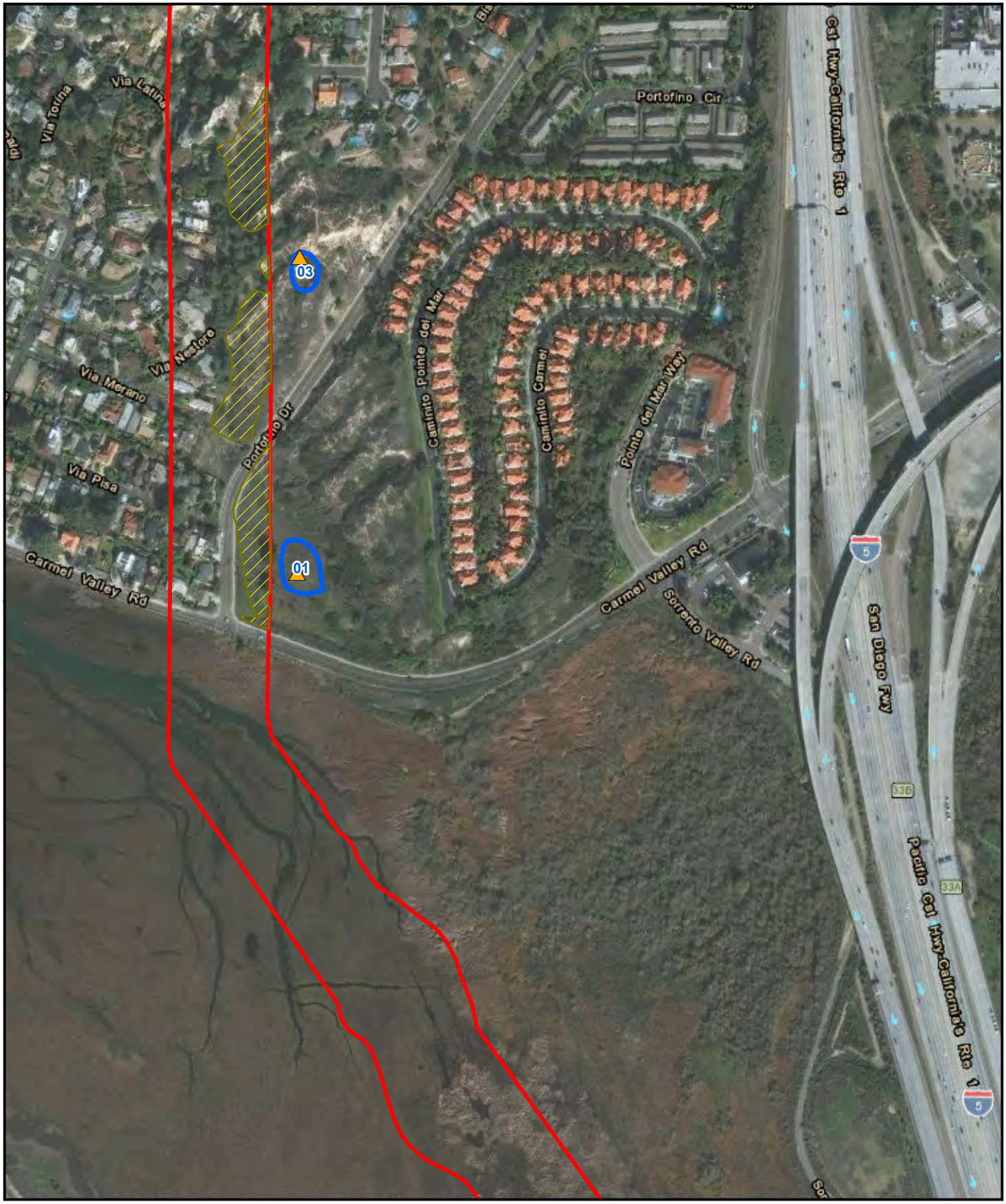

Legend

- Biological Study Area
- CAGN Nest
- CAGN Territory
- CAGN Suitable Habitat

N

0 160 320 640

Feet

Figure 2

California Gnatcather Survey Results

Results Map 9 of 10

Name: 20733 p129 Fig2 CAGN Results.Mxd
Print Date: 5/23/2017, Author: stondre

Legend

- Biological Study Area
- CAGN Suitable Habitat

N

0 160 320 640

Feet

Figure 2

California Gnatcather Survey Results

Results Map 10 of 10

Name: 20733 p129 Fig2 CAGN Results.Mxd
Print Date: 5/23/2017, Author: stondre

ATTACHMENT B

Photo Pages

Blackhawk Environmental

Photo 1. Northwest-facing overview of CAGN 01 territory, in foreground.

Photo 2. West-facing overview of CAGN 01 territory, in middle-left frame.

Photo 3. South-facing overview of CAGN 03 territory, in foreground.

Photo 4. South-facing overview of CAGN 1A territory, in foreground.

Photo 5. East-facing overview of CAGN 1B territory.

Photo 6. South-facing overview of CAGN 2A territory.

Photo 7. North-facing overview of CAGN 1A and 2A territories.

Photo 8. Ruffled lining from CAGN 01 nest indicates successful fledging.

Photo 9. Three CAGN eggs in the CAGN 03 nest, in a lemonadeberry.

ATTACHMENT C

Observed Vertebrate Wildlife Species List

Blackhawk Environmental

AVES	BIRDS
ACCIPITRIDAE	**Hawks & Eagles**
Buteo jamaicensis	red-tailed hawk
Buteo lineatus	red-shouldered hawk
Circus cyaneus	northern harrier
AEGITHALIDAE	**Long-tailed Tits**
Psaltriparus minimus	bushtit
ALCEDINIDAE	**River Kingfishers**
Megaceryle alcyon	belted kingfisher
ANATIDAE	**Ducks, Geese & Swans**
Anas discors	blue-winged teal
Anas platyrhynchos	mallard
Anas strepara	gadwall
APODIDAE	**Swifts**
Aeronautes saxatalis	white-throated swift
ARDEIDAE	**Egrets & Herons**
Ardea alba	great egret
Ardea herodias	great blue heron
Butorides virescens	green heron
Egretta thula	snowy egret
Nycticorax nycticorax	black-crowned night heron
BOMBYCILLIDAE	**Waxwings**
Bombycilla cedrorum	cedar waxwing
CARDINALIDAE	**Cardinals & allies**
Passerina amoena	lazuli bunting
Passerina caerulea	blue grosbeak
Pheucticus melanocephalus	black-headed grosbeak
CHARADRIIDAE	**Plovers, Dotterels & Lapwings**
Charadrius vociferans	killdeer
COLUMBIDAE	**Pigeons & Doves**
* *Columba livia*	rock pigeon
* *Streptopelia decaocto*	Eurasian collared-dove
Zenaida macroura	mourning dove
CORVIDAE	**Crows & Jays**
Aphelocoma californica obscura	Belding's scrub jay
Corvus brachyrhynchos	American crow
Corvus corax	common raven
EMBERIZIDAE	**Sparrows & allies**
Aimophila ruficeps canescens	Southern California rufous-crowned sparrow
Melospiza melodia	song sparrow
Melozone crissalis	California towhee
Pipilo maculatus	spotted towhee
Zonotrichia leucophrys	white-crowned sparrow

FALCONIDAE	**Falcons**
Falco sparverius	American kestrel
HIRUNDINIDAE	**Swallows**
Petrochelidon pyrrhonota	cliff swallow
Stelgidopteryx serripennis	northern rough-winged swallow
Tachycineta thalassina	violet-green swallow
FRINGILLIDAE	**Finches & allies**
Haemorhous mexicanus	house finch
Spinus psaltria	lesser goldfinch
ICTERIDAE	**New World Blackbirds, Orioles & allies**
Agelaius phoeniceus	red-winged blackbird
Icterus cucullatus	hooded oriole
Molothrus ater	brown-headed cowbird
LARIDAE	**Gulls, Terns & Skimmers**
Hydroprogne caspia	Caspian tern
Larus delawarensis	ring-billed gull
Larus occidentalis	western gull
MIMIDAE	**Mockingbirds & Thrashers**
Mimus polyglottos	northern mockingbird
Toxostoma redivivum	California thrasher
ODONTOPHORIDAE	**New World Quails**
Callipepla californica	California quail
PANDIONIDAE	**Ospreys**
Pandion haliaetus	osprey
PARULIDAE	**Wood Warblers & relatives**
Cardellina pusilla	Wilson's warbler
Geothlypis trichas	common yellowthroat
Oreothlypis celata	orange-crowned warbler
Setophaga coronata	yellow-rumped warbler
Setophaga nigrescens	black-throated gray warbler
Setophaga occidentalis	hermit warbler
Setophaga townsendi	Townsend's warbler
PASSERIDAE	**Old World Sparrows**
**Passer domesticus*	house sparrow
PELECANIDAE	**Pelicans**
Pelecanus occidentalis californicus	California brown pelican
PHALACROCORACIDADE	**Cormorants**
Phalacrocorax auritus	double-crested cormorant
PICIDAE	**Woodpeckers & allies**
Colaptes auratus	northern flicker
Picoides nuttallii	Nuttall's woodpecker
PODICIPEDIDAE	**Grebes**
Podilymbus podiceps	pied-billed grebe
POLIOPTILIDAE	**Gnatcatchers**
Polioptila caerulea	blue-gray gnatcatcher
Polioptila californica californica	coastal California gnatcatcher
RALLIDAE	**Rails & allies**
Fulica americana	American coot
SCOLOPACIDAE	**Wading Shorebirds**
Tringa melanoleuca	greater yellowlegs

STURNIDAE	**Starlings & allies**
* *Sturnus vulgaris*	European starling
SYLVIIDAE	**True Warblers & Parrotbills**
Chamaea fasciata	wrentit
THRESKIORNITHIDAE	**Ibises & Spoonbills**
Plegadis chihi	white-faced ibis
TROCHILIDAE	**Hummingbirds**
Calypte anna	Anna's hummingbird
Calypte costae	Costa's hummingbird
Selasphorus sasin	Allen's hummingbird
TROGLODYTIDAE	**Wrens**
Cistothorus palustris clarkae	Clark's marsh wren
Thryomanes bewickii	Bewick's wren
Troglodytes aedon	house wren
TURDIDAE	**Thrushes & allies**
Catharus guttatus	hermit thrush
TYRANNIDAE	**Tyrant Flycatchers**
Empidonax difficilis	Pacific-slope flycatcher
Myiarchus cinerascens	ash-throated flycatcher
Sayornis nigricans	black phoebe
Sayornis saya	Say's phoebe
Tyrannus vociferans	Cassin's kingbird
VIREONIDAE	**Vireos**
Vireo gilvus	warbling vireo

REPTILIA	REPTILES
ANGUIDAE	**Alligator Lizards & allies**
Elgaria multicarinata webbii	San Diego alligator lizard
COLUBRIDAE	**Constrictors**
Coluber lateralis lateralis	California striped racer
Lampropeltis californiae	California kingsnake
PHRYNOSOMATIDAE	**Zebra-tailed, Earless, Fringe-toed, Spiny, Tree, Side-blotched & Horned lizards**
Sceloporus occidentalis longipes	Great Basin fence lizard
Uta stansburiana elegans	western side-blotched lizard
TEIIDAE	**Whiptails & Racerunners**
Aspidoscelis tigris stejnegeri	San Diegan tiger whiptail

MAMMALIA	MAMMALS
CANIDAE	**Foxes, Wolves & allies**
Canis latrans	coyote
** Canis lupus familiaris*	domestic dog
Urocyon cinereoargenteus	gray fox
CERVIDAE	**Deer**
Odocoileus hemionus fuliginatus	southern mule deer
CRICETIDAE	**New World Rats and Mice & allies**
Neotoma fuscipes	dusky-footed woodrat
DIDELPHIDAE	**Opossums**
Didelphis virginiana	Virginia opossum
FELIDAE	**Cats**
Lynx rufus	bobcat
GEOMYIDAE	**Gophers**
Thomomys bottae	Botta's pocket gopher
LEPORIDAE	**Rabbits & Hares**
Sylvilagus audobonii	desert cottontail
PROCYONIDAE	**Raccoons & allies**
Procyon lotor	raccoon
SCIURIDAE	**Squirrels**
Otospermophilus beecheyi	California ground squirrel

** Non-native species*

Attachment IX

Focused Surveys for Pacific Pocket Mouse

Conducted 2014

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RECON

An Employee-Owned Company

October 7, 2014

Mr. Robert Fletcher
Environmental Specialist-Biologist
San Diego Gas & Electric
8315 Century Park Court
San Diego, CA 92123

Reference: Focused Pacific Pocket Mouse Survey Report for the Reconfigure TL 674A at Del Mar and Remove from Service TL 666D Project (RECON Number 7203.1)

Dear Mr. Fletcher:

The following describes the results of a focused survey for Pacific pocket mouse (*Perognathus longimembris pacificus*), a species listed as endangered by the U.S. Fish and Wildlife Service (USFWS) and identified as a narrow endemic species under San Diego Gas & Electric's (SDG&E) Natural Community Conservation Plan (NCCP). The survey was conducted for the Reconfigure Tie Line (TL) 674A at Del Mar and Remove from Service TL 666D SDG&E project to search for the presence of Pacific pocket mouse sign within areas supporting potentially suitable habitat and determine the need for further directed searches for the species.

Project Background

An initial biological constraints study was conducted by RECON in October 2013 (RECON 2013; see "Biological Constraints Study Area" on Figure 1). As part of the constraints study, areas supporting the general vegetation, physical, and geographic characteristics of potential Pacific pocket mouse habitat were mapped. These areas are shown as "Suitable Habitat for Pacific Pocket Mouse" on Figure 1.

Survey Methods

The focused survey for Pacific pocket mouse was conducted by Paul Fromer (RECON USFWS Permit Number TE-797665) on June 17, 2014, between 0900 and 1330. The survey was conducted on foot under a clear sky with light breezes. The survey focused on areas where suitable Pacific pocket mouse habitat overlaps with areas of potential project-related ground disturbance (e.g., stringing sites, staging areas, guard structures, and pole replacement sites). These areas are collectively shown as the "Focused Pacific Pocket Mouse Survey Area" on Figure 1. Due to the addition of potential project sites after completion of the constraints study, some areas outside what was originally identified as potentially suitable habitat were included in this focused survey area. All areas within the "Focused Pacific Pocket Mouse Survey Area" were visited on foot, thoroughly examined for small-mammal sign, and evaluated for the presence of the specific habitat characteristics described for Pacific pocket mouse.

In addition, all areas identified as suitable habitat during the constraints study (see "Suitable Habitat for Pacific Pocket Mouse" on Figure 1) were revisited and assessed for habitat suitability and presence of sign.

Species Background

As described in the final rule listing the species (Federal Register 59 FR 49752, 9/29/1994), this small rodent is an obligate resident of river and marine alluvium and coastal sage scrub plant communities in the immediate vicinity of the coast. The Pacific pocket mouse's preferred habitat is described in the final rule as open coastal sage scrub on fine, sandy soil within two miles of the coast and below 600 feet above mean sea level. Two pocket mouse species that may co-occur with Pacific pocket mouse are San Diego pocket mouse (*Chaetodipus fallax fallax*) and Dulzura pocket mouse (*Chaetodipus californicus femoralis*).

Although the Pacific pocket mouse formerly occurred at a minimum of eight general locales encompassing some 29 sites from Los Angeles County to San Diego County, at the time of listing the only known, confirmed extant population occurred at the Dana Point Headlands in Orange County, California. In San Diego County, the Pacific pocket mouse historically was confirmed at three general locales: the San Onofre area, the Santa Margarita River Estuary, and the lower Tijuana River Valley. There has not been a confirmed Pacific pocket mouse record at these locales or elsewhere in San Diego County south of Camp Pendleton since 1932.

Survey Results

The survey results are presented in Table 1, listed by Figure 1 map number and adjacent project component. Small-mammal activity was noted at many of the sites, and possible pocket mouse burrows were identified at several sites. However, no pocket mouse scat was observed, and none of the burrows were of the small size that would be expected for the small-bodied Pacific pocket mouse. Along with the lack of recent confirmed presence of populations of the species, this would indicate that the probability of occurrence of Pacific pocket mouse in areas potentially affected by activities of the proposed project is very low. Trapping is not recommended.

Please contact Brenna Ogg at (619) 308-9333 or bogg@reconenvironmental.com should you have any questions.

Sincerely,

Paul Fromer
Principal Biologist

Brenna Ogg
Senior Biologist

BAO:jg

Reference

RECON Environmental, Inc. (RECON)
2013 Biological Constraints Study for the Reconfigure TL 674A at Del Mar and Remove from Service TL 666D Project (RECON Number 7203-1). October 24.

TABLE 1
SUMMARY OF FOCUSED PACIFIC POCKET MOUSE SURVEY RESULTS

Figure 1 Map No.	Project Component	Habitat Suitability for PPM in Vicinity	Adjacent to or Within Project Site			Potential for Occurrence of PPM
			Habitat Suitability for PPM	Small Mammal Burrows/ Sign	Potential Pocket Mouse Sign	
1	Z12323	low (1)	very low	no	no	very low
1	Z119809	low (1)	very low	no	no	very low
1	Z12322	low (1)	very low	no	no	very low
1	U108923	low (1)	very low	no	no	very low
4	U108920	very low (1, 2, 3, 5)	very low	yes	no	very low
4	Z12313	very low (1, 2, 3, 5)	very low	yes	no	very low
7	Z12303	very low (1, 2, 3)	very low	yes	no	very low
8	Z90296	low (1, 2, 3)	very low	yes	possible burrow	very low
8	Z90295	low (1, 2, 3)	very low	yes	no	very low
8	Z90710	low (1, 2, 3)	very low	no	no	very low
11	Z90287	low (1, 3, 4)	very low	yes	possible burrow	very low
11	Z90286	low (1, 3, 4)	very low	no	no	very low
11	Z33135	very low (1, 3, 4)	very low	yes	possible burrow	very low
11	SS adjacent to Z33135	very low (1, 3, 4)	very low	yes	no	very low
11	Previous SS adjacent to Z33135	very low (1, 3, 4)	very low	yes	no	very low
11/12	Z90283	low (3, 4)	very low	yes	no	very low
12	Z90282	low (3, 4)	very low	yes	no	very low
12	Z90281	low (3, 4)	very low	yes	no	very low
12	Z90280	low (3, 4)	very low	yes	no	very low
	SS11	low (3, 4)	very low	yes	no	very low
	SS12	low (3, 4)	very low	yes	no	very low
13	Z95792	low (3, 4)	very low	yes	no	very low
14	Z95787	very low (1, 2, 3)	very low	yes	no	very low
16	Z90265	low (1, 4)	very low	yes	no	very low
17	Z90234	low (1, 4, 5)	very low	yes	no	very low
17	Z90263	low (1, 4, 5)	very low	yes	no	very low
17	Z90262	low (1, 4, 5)	very low	yes	no	very low
18	Z90261	low (1, 4)	very low	yes	no	very low
18	Z90260	low (1, 4)	very low	no	no	very low
18	Z90259	very low (1, 2, 3)	very low	no	no	very low
19	Z90257	very low (1, 2, 3)	very low	yes	no	very low
19	Near guard structures adjacent to Carmel Valley Road	very low (1, 2, 3)	very low	no	no	very low

TABLE 1 (continued)
SUMMARY OF FOCUSED PACIFIC POCKET MOUSE SURVEY RESULTS

Figure 1 Map No.	Project Component	Habitat Suitability for PPM in Vicinity	Adjacent to or Within Project Site			Potential for Occurrence of PPM
			Habitat Suitability for PPM	Small Mammal Burrows/ Sign	Potential Pocket Mouse Sign	
19	Z90256	very low (1, 2, 3)	very low	yes	no	very low
21	Staging area adjacent to Sorrento Valley Road	low (1, 3)	very low	yes	no	very low
22, 23	Near SS, adjacent to Sorrento Valley Road	very low (1, 3, 4)	very low	no	no	very low
23	Z191296	very low (1, 2)	very low	no	no	very low
27	Staging area adjacent to El Camino Real	very low (1, 2, 3)	very low	yes	no	very low

PPM = Pacific pocket mouse; SS = Stringing site;
[1]Habitat suitability factors: 1 = disturbance; 2 = small, isolated patch; 3 = thick grass/herbaceous cover; 4 = dense shrub overstory; 5 = tree overstory.

Image Source: Microsoft (flown May 2010)

Biological Constraints Study Area

Suitable Habitat for Pacific Pocket Mouse

Project Components

- Underground Structure
- Cable Pole
- Steel Pole
- Wood Pole
- Overhead
- Underground
- Stringing Site

0 Feet 150

FIGURE 1

Map 1 of 27

Focused Pacific Pocket Mouse Survey Area for the Reconfigure TL 674A at Del Mar and RFS TL 666D

RECON

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Image Source: Microsoft (flown May 2010)

Biological Constraints Study Area

Suitable Habitat for Pacific Pocket Mouse

Project Components

U Underground Structure

Underground

Staging Area

0 Feet 150

FIGURE 1

Map 2 of 27

Focused Pacific Pocket Mouse Survey Area for the Reconfigure TL 674A at Del Mar and RFS TL 666D

RECON

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Image Source: Microsoft (flown May 2010)

Biological Constraints Study Area

Project Components

- Underground Structure
- Underground

0 Feet 150

FIGURE 1

Map 3 of 27

Focused Pacific Pocket Mouse Survey Area for the Reconfigure TL 674A at Del Mar and RFS TL 666D

RECON

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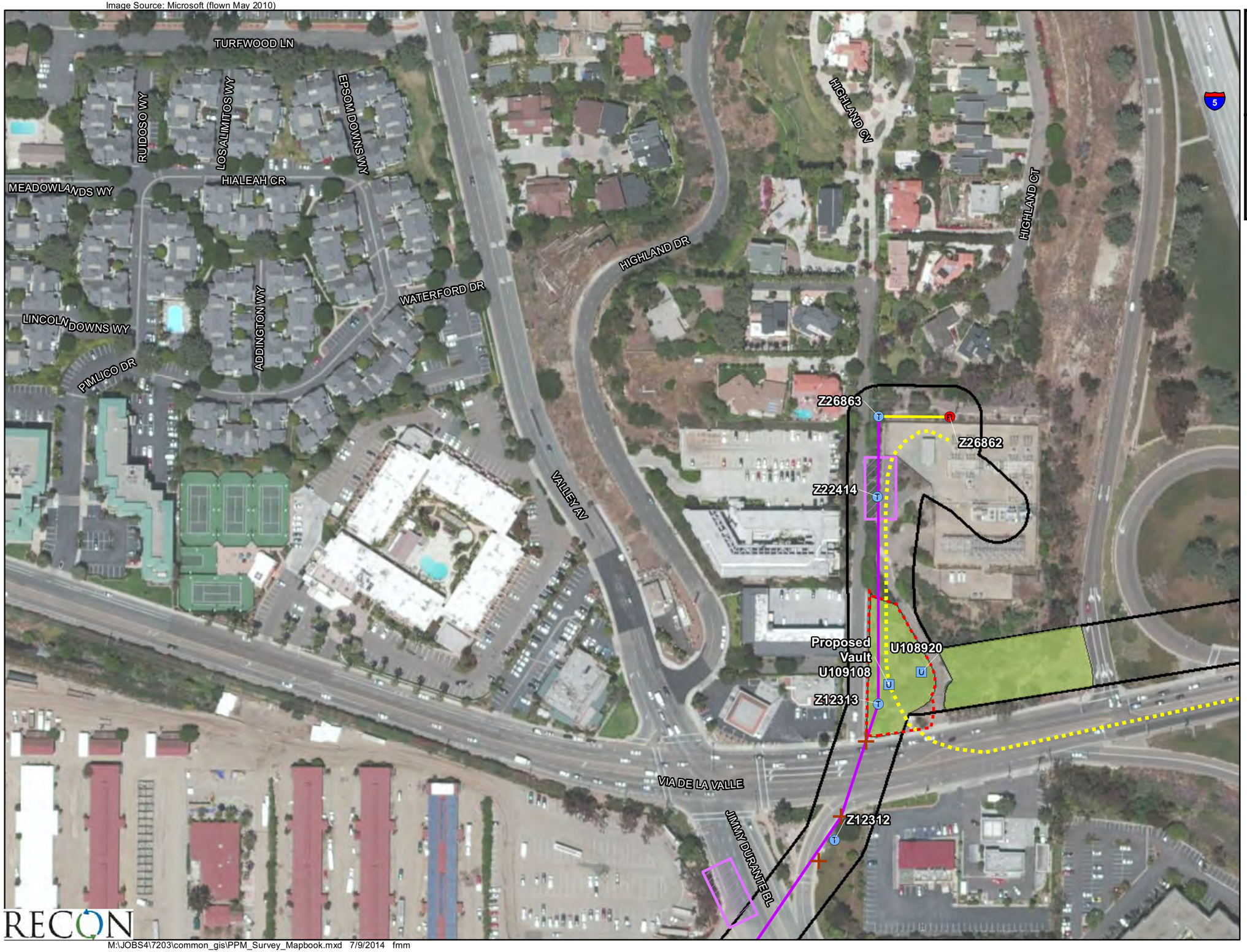
Image Source: Microsoft (flown May 2010)



Biological Constraints Study Area

Suitable Habitat for Pacific Pocket Mouse

Focused Pacific Pocket Mouse Survey Area

Project Components

- Underground Structure
- Top Above 12Kv
- Remove from Service
- Guard Structure
- Overhead
- Underground
- Existing Overhead
- Stringing Site

0 Feet 150

FIGURE 1

Map 4 of 27

Focused Pacific Pocket Mouse Survey Area for the Reconfigure TL 674A at Del Mar and RFS TL 666D

RECON

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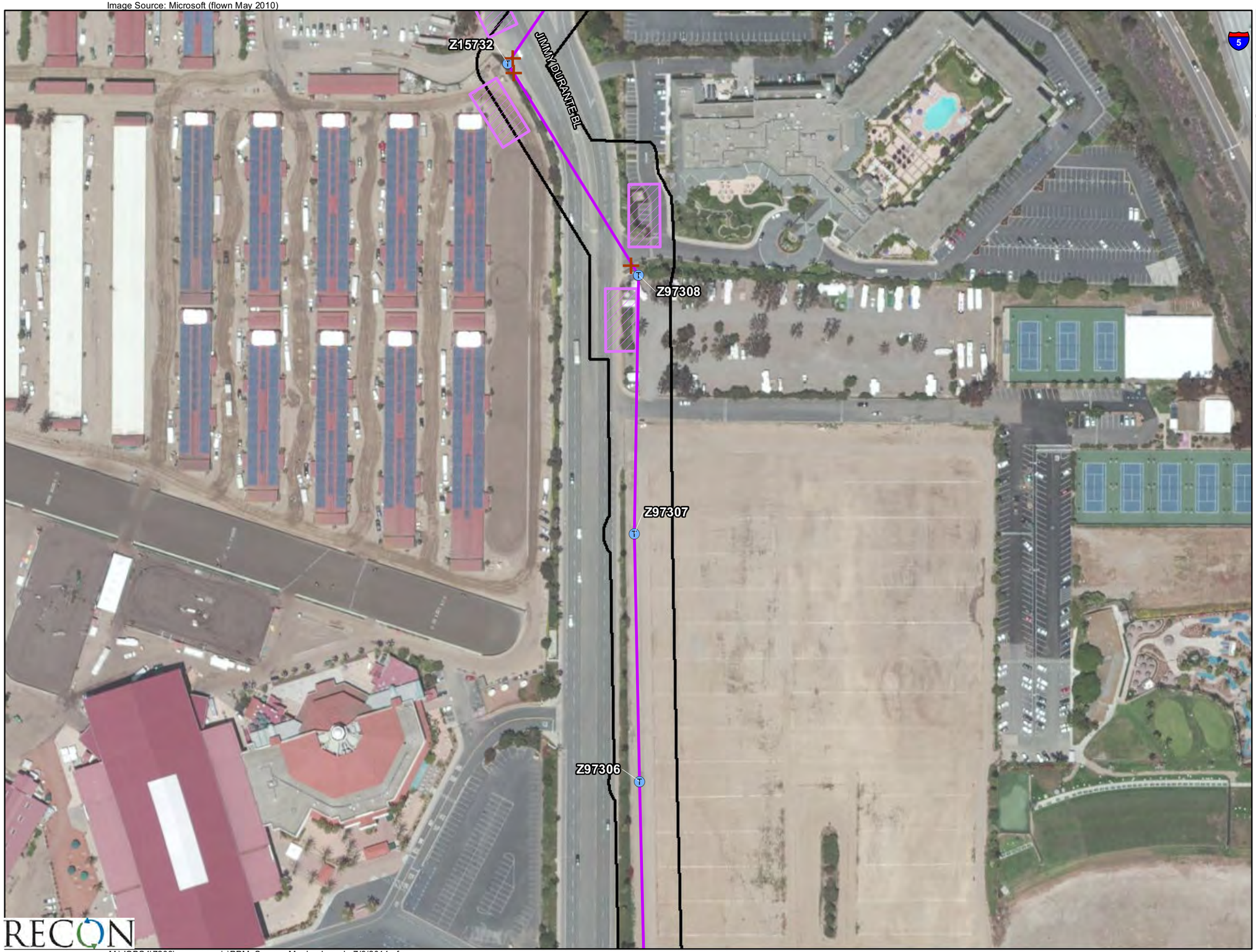
Image Source: Microsoft (flown May 2010)



Biological Constraints Study Area

Project Components

- Top Above 12Kv
- Guard Structure
- Existing Overhead
- Stringing Site

0 Feet 150

FIGURE 1

Map 5 of 27

Focused Pacific Pocket Mouse Survey Area for the Reconfigure TL 674A at Del Mar and RFS TL 666D

RECON

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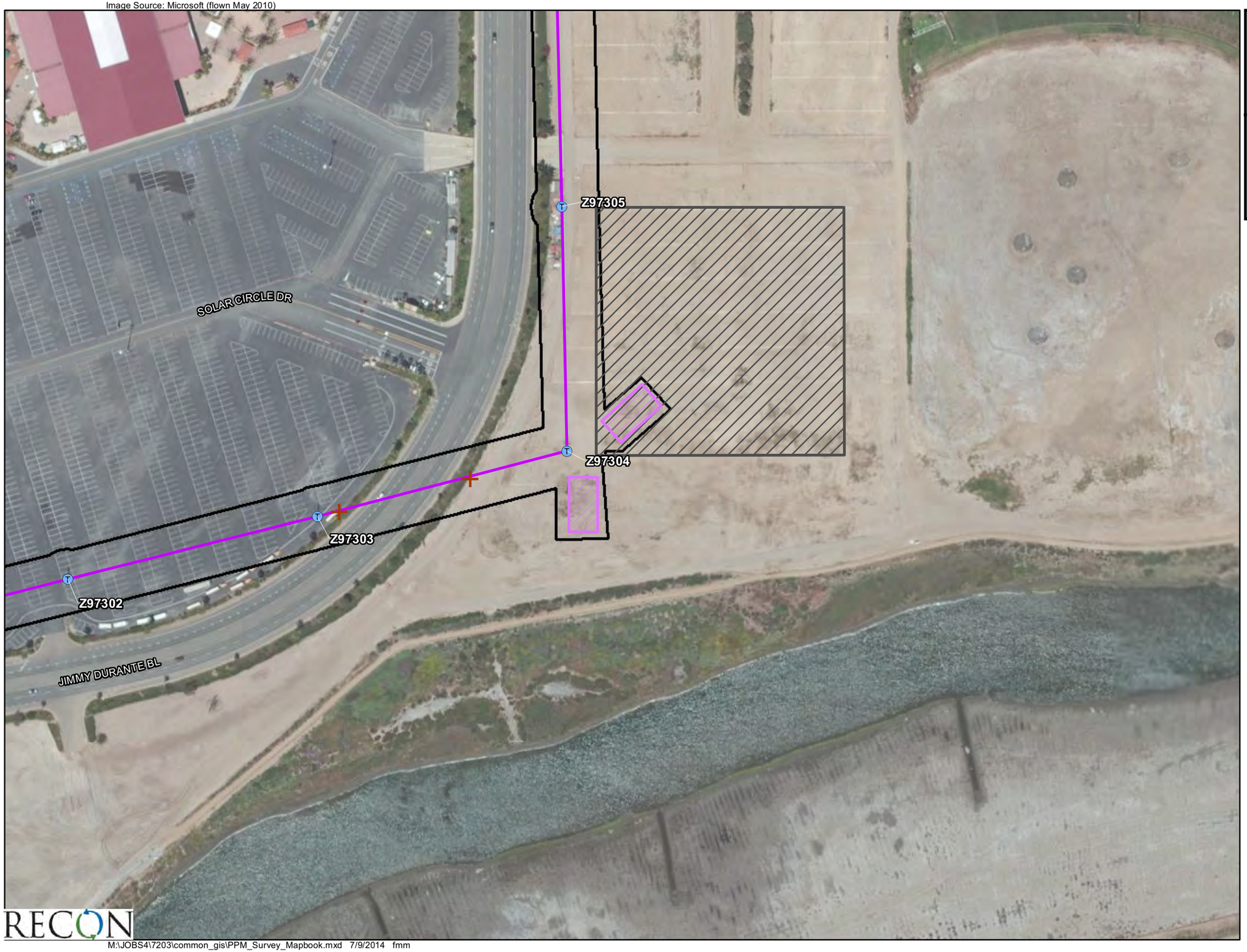
Image Source: Microsoft (flown May 2010)



Biological Constraints Study Area

Project Components

- Top Above 12Kv
- Guard Structure
- Existing Overhead
- Fly Yard for Helicopter
- Stringing Site

0 Feet 150

FIGURE 1

Map 6 of 27

Focused Pacific Pocket Mouse Survey Area for the Reconfigure TL 674A at Del Mar and RFS TL 666D

RECON

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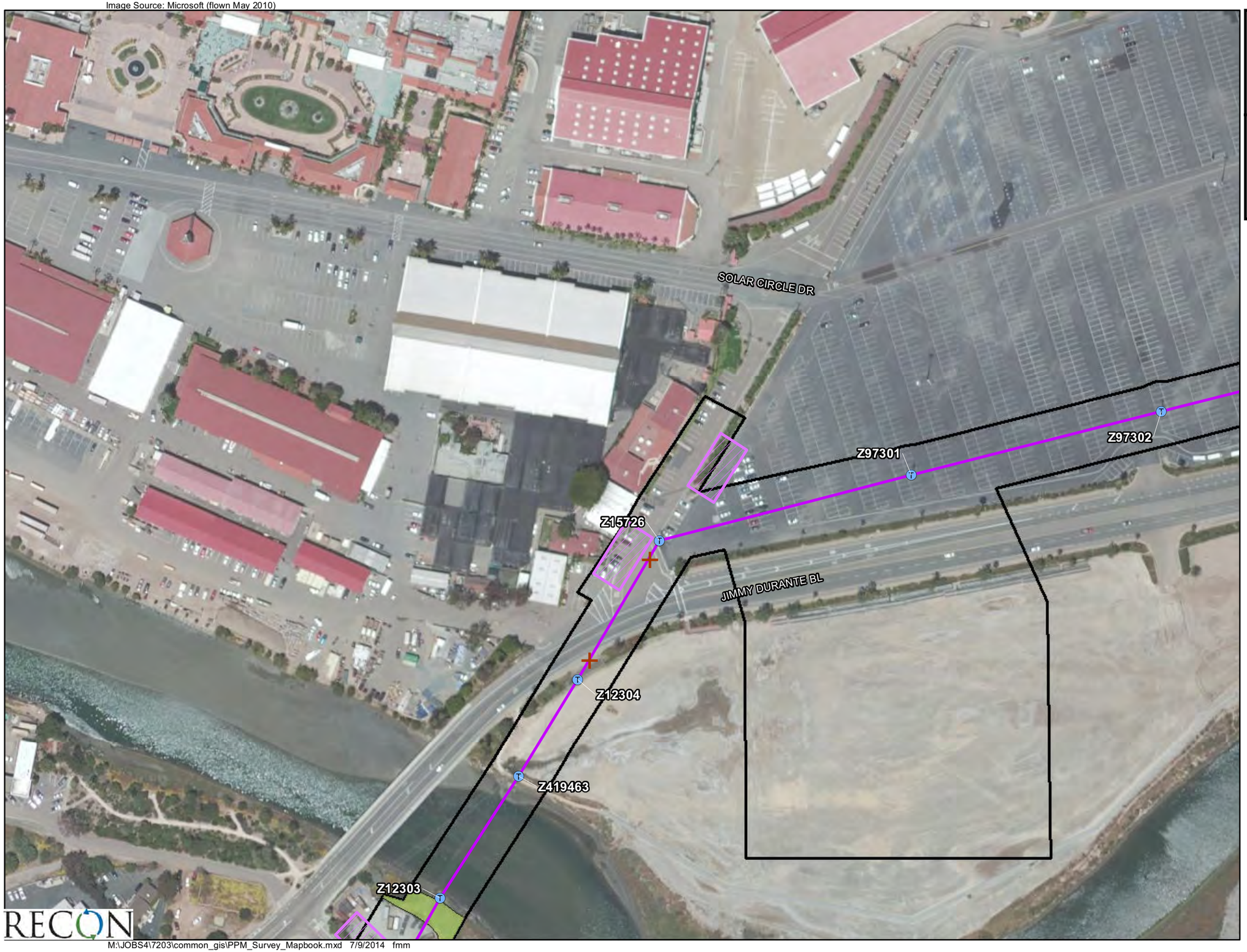
Image Source: Microsoft (flown May 2010)



Biological Constraints Study Area

Suitable Habitat for Pacific Pocket Mouse

Project Components

Top Above 12Kv

Guard Structure

Existing Overhead

Stringing Site

0 Feet 150

FIGURE 1

Map 7 of 27

Focused Pacific Pocket Mouse Survey Area for the Reconfigure TL 674A at Del Mar and RFS TL 666D

RECON

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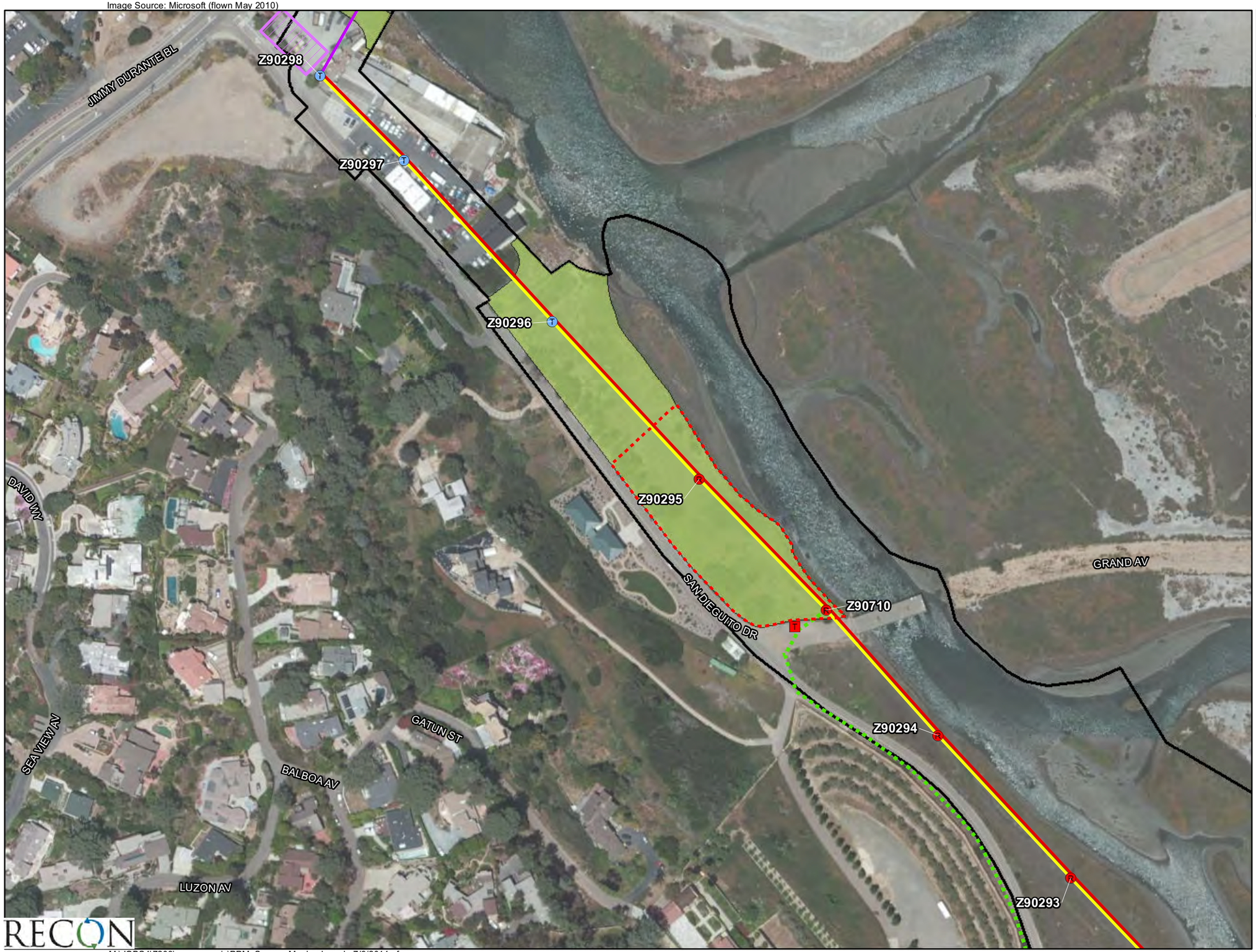
Image Source: Microsoft (flown May 2010)



- Biological Constraints Study Area
- Suitable Habitat for Pacific Pocket Mouse
- Focused Pacific Pocket Mouse Survey Area

Project Components

- Transformer
- Top Above 12Kv
- Remove from Service
- Overhead
- Existing Overhead
- Phase IV RFS OH C510
- Phase IV UG Conv C510
- Stringing Site

0 Feet 150

FIGURE 1

Map 8 of 27

Focused Pacific Pocket Mouse Survey Area for the Reconfigure TL 674A at Del Mar and RFS TL 666D

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Image Source: Microsoft (flown May 2010)

Biological Constraints Study Area

Suitable Habitat for Pacific Pocket Mouse

Project Components

- Fuse Cab
- Hand Hole
- Cable Pole
- Wood Pole
- Remove from Service
- Overhead
- Existing Overhead
- Phase IV RFS OH C510
- Phase IV UG Conv C510
- Stringing Site

0 Feet 150

FIGURE 1

Map 9 of 27

Focused Pacific Pocket Mouse Survey Area for the Reconfigure TL 674A at Del Mar and RFS TL 666D

RECON

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Image Source: Microsoft (flown May 2010)

Biological Constraints Study Area

Suitable Habitat for Pacific Pocket Mouse

Project Components

- Wood Pole
- Top Above 12Kv
- Existing Overhead
- Phase IV RFS OH C510
- Phase IV UG Conv C510
- Stringing Site

0 Feet 150

FIGURE 1

Map 10 of 27

Focused Pacific Pocket Mouse Survey Area for the Reconfigure TL 674A at Del Mar and RFS TL 666D

RECON

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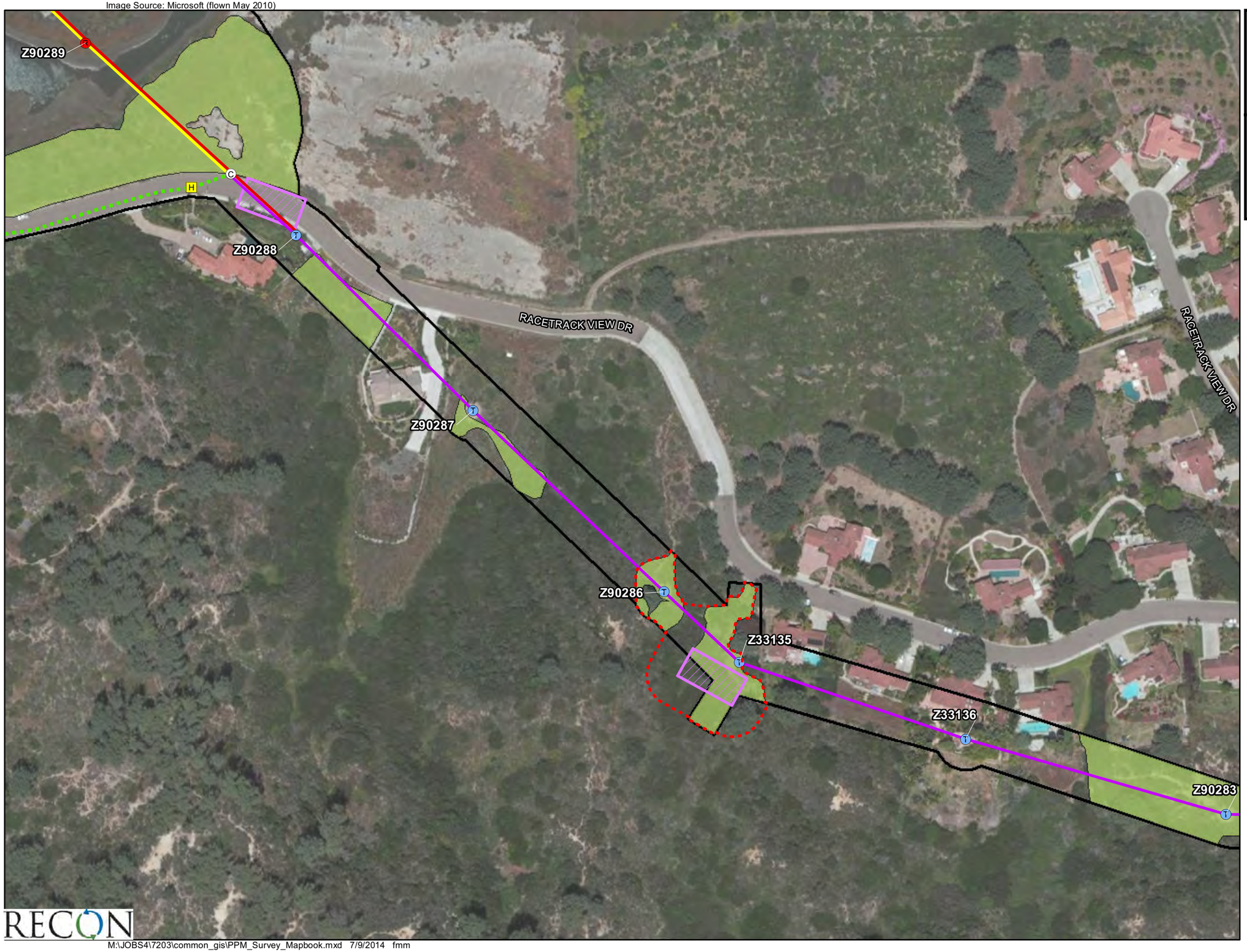
Image Source: Microsoft (flown May 2010)



- Biological Constraints Study Area
- Suitable Habitat for Pacific Pocket Mouse
- Focused Pacific Pocket Mouse Survey Area

Project Components

- Hand Hole
- Cable Pole
- Top Above 12Kv
- Remove from Service
- Overhead
- Existing Overhead
- Phase IV RFS OH C510
- Phase IV UG Conv C510
- Stringing Site

0 Feet 150

FIGURE 1

Map 11 of 27

Focused Pacific Pocket Mouse Survey Area for the Reconfigure TL 674A at Del Mar and RFS TL 666D

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Image Source: Microsoft (flown May 2010)

Biological Constraints Study Area

Suitable Habitat for Pacific Pocket Mouse

Focused Pacific Pocket Mouse Survey Area

Project Components

Top Above 12Kv

Existing Overhead

Stringing Site

0 Feet 150

FIGURE 1

Map 12 of 27

Focused Pacific Pocket Mouse Survey Area for the Reconfigure TL 674A at Del Mar and RFS TL 666D

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Image Source: Microsoft (flown May 2010)

Biological Constraints Study Area

Suitable Habitat for Pacific Pocket Mouse

Project Components

Top Above 12Kv

Existing Overhead

0 Feet 150

FIGURE 1

Map 13 of 27

Focused Pacific Pocket Mouse Survey Area for the Reconfigure TL 674A at Del Mar and RFS TL 666D

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Image Source: Microsoft (flown May 2010)

Biological Constraints Study Area

Suitable Habitat for Pacific Pocket Mouse

Focused Pacific Pocket Mouse Survey Area

Project Components

Top Above 12Kv

Existing Overhead

Stringing Site

0 Feet 150

FIGURE 1

Map 14 of 27

Focused Pacific Pocket Mouse Survey Area for the Reconfigure TL 674A at Del Mar and RFS TL 666D

RECON

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Image Source: Microsoft (flown May 2010)

Biological Constraints Study Area

Project Components

- Top Above 12Kv
- Remove from Service
- Guard Structure
- Overhead
- Existing Overhead

0 Feet 150

FIGURE 1

Map 15 of 27

Focused Pacific Pocket Mouse Survey Area for the Reconfigure TL 674A at Del Mar and RFS TL 666D

RECON

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Image Source: Microsoft (flown May 2010)

Biological Constraints Study Area

Suitable Habitat for Pacific Pocket Mouse

Project Components

Remove from Service

Overhead

0 Feet 150

FIGURE 1

Map 16 of 27

Focused Pacific Pocket Mouse Survey Area for the Reconfigure TL 674A at Del Mar and RFS TL 666D

RECON

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Image Source: Microsoft (flown May 2010)

Biological Constraints Study Area

Suitable Habitat for Pacific Pocket Mouse

Project Components

Remove from Service

Overhead

0 Feet 150

FIGURE 1

Map 17 of 27

Focused Pacific Pocket Mouse Survey Area for the Reconfigure TL 674A at Del Mar and RFS TL 666D

RECON

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Image Source: Microsoft (flown May 2010)

Biological Constraints Study Area

Suitable Habitat for Pacific Pocket Mouse

Project Components

Remove from Service

Overhead

0 Feet 150

FIGURE 1

Map 18 of 27

Focused Pacific Pocket Mouse Survey Area for the Reconfigure TL 674A at Del Mar and RFS TL 666D

RECON

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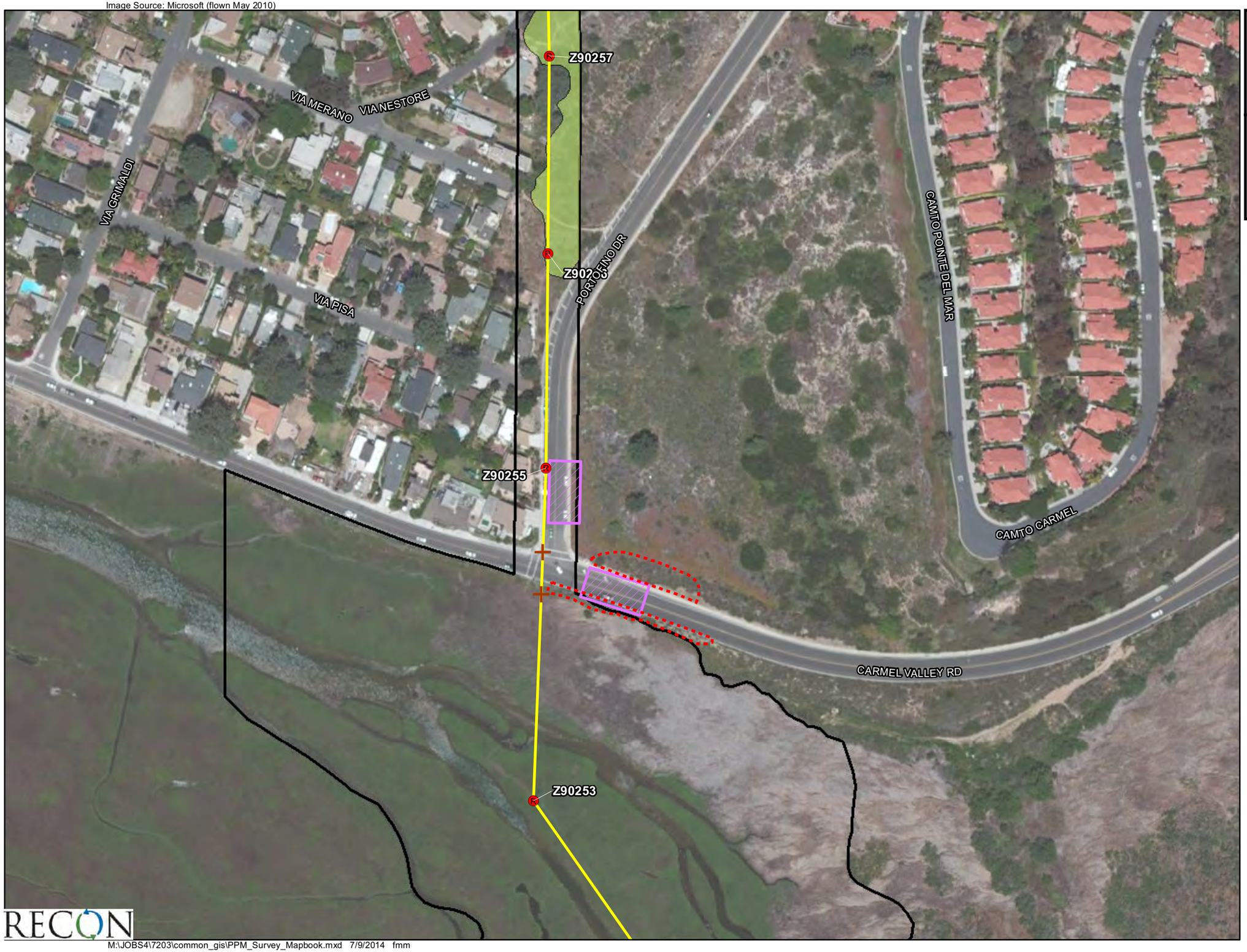
Image Source: Microsoft (flown May 2010)



Biological Constraints Study Area

Suitable Habitat for Pacific Pocket Mouse

Focused Pacific Pocket Mouse Survey Area

Project Components

Remove from Service

Guard Structure

Overhead

Stringing Site

0 Feet 150

FIGURE 1

Map 19 of 27

Focused Pacific Pocket Mouse Survey Area for the Reconfigure TL 674A at Del Mar and RFS TL 666D

RECON

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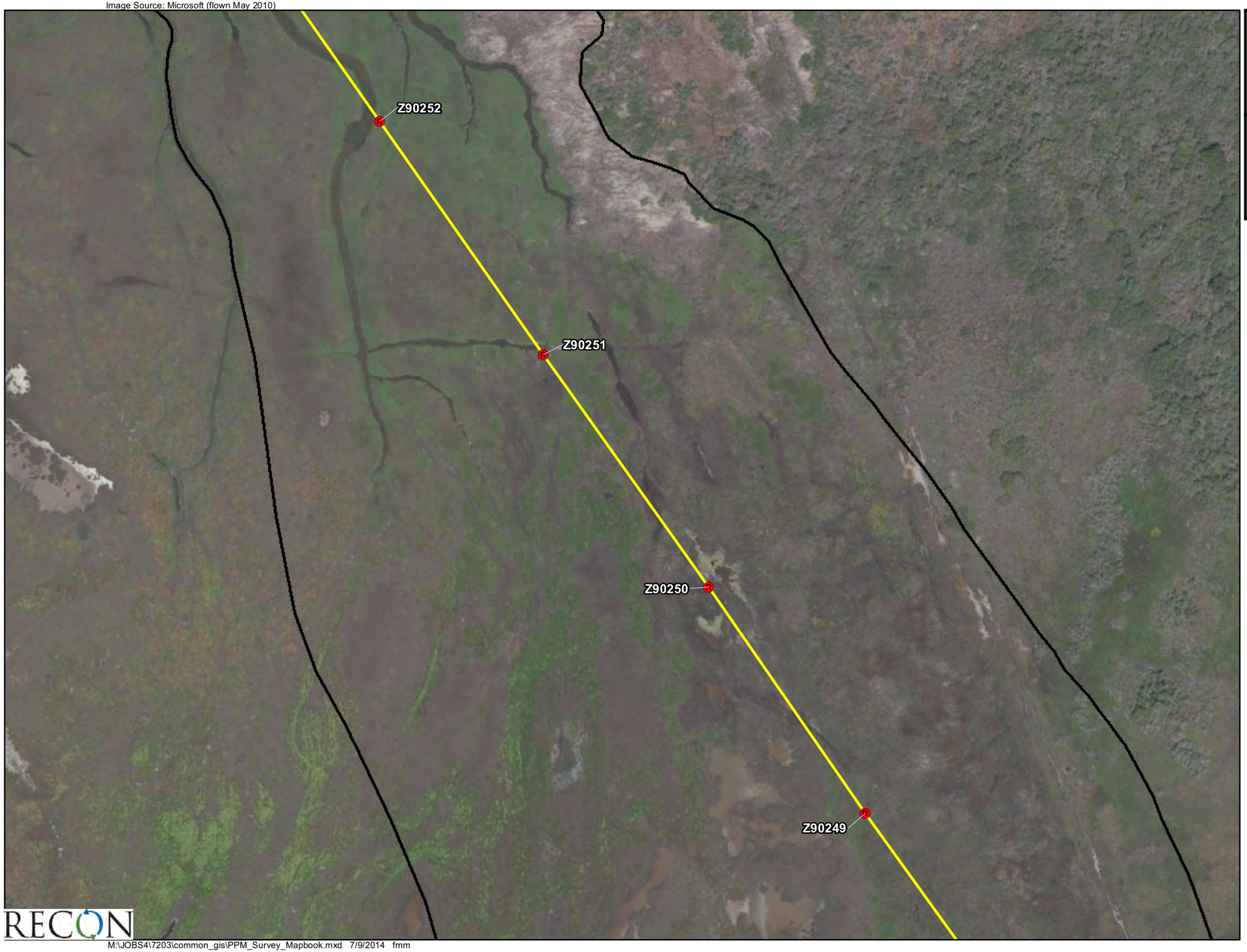
Image Source: Microsoft (flown May 2010)



Biological Constraints Study Area

Project Components

Remove from Service

Overhead

0 Feet 150

FIGURE 1

Map 20 of 27

Focused Pacific Pocket Mouse Survey Area for the Reconfigure TL 674A at Del Mar and RFS TL 666D

RECON

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Image Source: Microsoft (flown May 2010)

Biological Constraints Study Area

Focused Pacific Pocket Mouse Survey Area

Project Components

Remove from Service

Overhead

Staging Area

0 Feet 150

FIGURE 1

Map 21 of 27

Focused Pacific Pocket Mouse Survey Area for the Reconfigure TL 674A at Del Mar and RFS TL 666D

RECON

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Image Source: Microsoft (flown May 2010)

Biological Constraints Study Area

Suitable Habitat for Pacific Pocket Mouse

Focused Pacific Pocket Mouse Survey Area

Project Components

Top Above 12Kv

Remove from Service

Overhead

Existing Overhead

Stringing Site

0 Feet 150

FIGURE 1

Map 22 of 27

Focused Pacific Pocket Mouse Survey Area for the Reconfigure TL 674A at Del Mar and RFS TL 666D

RECON

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Image Source: Microsoft (flown May 2010)

Biological Constraints Study Area

Suitable Habitat for Pacific Pocket Mouse

Focused Pacific Pocket Mouse Survey Area

Project Components

Top Above 12Kv

Existing Overhead

Stringing Site

0 Feet 150

FIGURE 1

Map 23 of 27

Focused Pacific Pocket Mouse Survey Area for the Reconfigure TL 674A at Del Mar and RFS TL 666D

RECON

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Image Source: Microsoft (flown May 2010)

Biological Constraints Study Area

Suitable Habitat for Pacific Pocket Mouse

Project Components

Top Above 12Kv

Guard Structure

Existing Overhead

0 Feet 150

FIGURE 1

Map 24 of 27

Focused Pacific Pocket Mouse Survey Area for the Reconfigure TL 674A at Del Mar and RFS TL 666D

RECON

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Image Source: Microsoft (flown May 2010)

Biological Constraints Study Area

Project Components

- Steel Pole
- Top Above 12Kv
- Existing Overhead
- Stringing Site

0 Feet 150

FIGURE 1

Map 25 of 27

Focused Pacific Pocket Mouse Survey Area for the Reconfigure TL 674A at Del Mar and RFS TL 666D

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Image Source: Microsoft (flown May 2010)

Fly Yard for Helicopter

0 Feet 150

FIGURE 1

Map 26 of 27

Focused Pacific Pocket Mouse Survey Area for the Reconfigure TL 674A at Del Mar and RFS TL 666D

RECON

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Attachment X

Focused Surveys for Wandering Skipper

Conducted 2014

1927 Fifth Avenue
San Diego, CA 92101
P 619.308.9333
F 619.308.9334

2033 East Grant Road
Tucson, AZ 85719
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F 520.293.3051

2027 Preisker Lane, Ste. G
Santa Maria, CA 93454
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www.reconenvironmental.com

RECON

An Employee-Owned Company

November 7, 2014

Mr. Robert Fletcher
Environmental Specialist-Biologist
San Diego Gas & Electric
8315 Century Park Court
San Diego, CA 92123

Reference: Results of the 2014 Wandering Skipper Survey for the Reconfigure of Tie Line (TL) 674A at Del Mar and Removal from Service of TL 666D Project (RECON Number 7203-1)

Dear Mr. Fletcher:

This letter is to notify San Diego Gas & Electric (SDG&E) of the results of surveys for wandering skipper (*Panoquina errans*, skipper), also known as salt marsh skipper, conducted for the Reconfigure of Tie Line (TL) 674A at Del Mar and Removal from Service of TL 666D Project. This species is a Narrow Endemic species and is covered under San Diego Gas & Electric's Natural Community Conservation Plan (NCCP). The project survey area is located primarily in the communities of Torrey Pines, Del Mar Heights, and Via de la Valle in the city of San Diego and the city of Del Mar, within coastal San Diego County, California. Small portions of the project area also extend into the city of Solana Beach and the community of Torrey Hills in the city of San Diego (Figure 1). The project survey area crosses several areas of intact open space in San Dieguito Lagoon and Torrey Pines State Natural Reserve, including a portion of Los Peñasquitos marsh.

The project survey area is roughly defined as the 100-foot-wide transmission corridor along an approximately 7-mile stretch of TL 674A and TL 666D, with a minimum 100-foot buffer around each project site. Project sites include transmission poles, vaults, handholes, guard structures, stringing sites, staging areas, and helicopter fly yards. The survey area is generally linear in shape, roughly paralleling an east–west portion of Via de la Valle and extending south and west along the eastern and southern sides of the Del Mar Fairgrounds, southeast through the San Dieguito Lagoon, south through the community of Del Mar Heights, southeast through the Los Peñasquitos marsh, and southeast along a portion of Interstate 5. The stringing sites are scattered along TL 674A and TL 666D throughout the project. Potential staging areas are located adjacent to TL 674A along Via del la Valle, near Los Peñasquitos marsh adjacent to Interstate 5, and near the intersection of San Dieguito Road and El Camino Real. Potential helicopter fly yards are located along Jimmy Durante Boulevard, across from the entrance to the Del Mar Fairgrounds, and within a parking lot near Torrey Pines State Beach on McGonigle Road. The survey area is shown on the U.S. Geological Survey (USGS) Del Mar quadrangle at Township 14 South, Range 3 West, Sections 6, 7, 30, and 31, and Range 4 West, Sections 1, 2, 11, 12, 13, 14, 24, and 25, and unsectioned lands within the Pueblo Lands of San Diego land grant (USGS 1975; Figure 2). An aerial view of the survey area is shown on Figure 3.

Species Description

The wandering skipper is strictly a coastal species. It is typically found in salt marsh habitat not far from its larval host plant, salt grass (*Distichlis spicata*), and has an apparent preference for marshes with tidal flow. It ranges from Santa Barbara, California to the tip of Baja California Sur, Mexico. Adults are generally light brown in color with white to yellowish spots on the ventral and dorsal forewings, white to yellowish spots on the ventral hindwings, pale yellow veins on the ventral fore- and hindwings, and longitudinal stripes on the abdomen. Eggs are laid on or adjacent to the host plant, with incubation lasting approximately 10 days. Larval growth from the first to fifth instar takes up to 45 days. Larvae are nocturnal feeders, and adults are diurnal nectar feeders on flowers. The peak flight season in San Diego County typically occurs from July to September (Faulkner and Klein 2010).

Project Background

An initial biological constraints study was conducted by RECON Environmental, Inc. (RECON) in October 2013 (RECON 2013). As part of the constraints study, areas supporting potentially suitable habitat for wandering skipper were mapped, and incidental observations of the skipper were recorded. At that time, suitable habitat was generally defined as salt marsh that supported stands of the skipper's host plant, salt grass.

Survey Methods

Prior to the survey, RECON biologist Brenna Ogg and Balk Biological, Inc., biologist Michelle Balk visited the San Diego Natural History Museum invertebrate collection to observe hundreds of specimens of the target species and other similar skipper species such as Eufala skipper (*Lerodea eufala*).

Ms. Ogg and Ms. Balk conducted one focused wandering skipper survey over the course of two days in all potentially suitable habitat within the survey area (see Wandering Skipper Survey Area on Figures 4-1 through 4-7). As the first survey yielded a high count and consistent distribution of the target species, it was decided to visit all suitable habitat areas only once in order to minimize impacts to the skipper's host plant and potentially present larvae and pupae.

Surveys were conducted during the typical peak flight period, during periods with air temperatures greater than 70 degrees Fahrenheit and sustained wind speeds below 10 miles per hour, and when other butterfly or skipper species were observed flying. The biologists slowly walked meandering transects within suitable skipper habitat, pausing occasionally to observe skippers with the aid of binoculars and cameras. Islands within San Dieguito Lagoon were accessed via a small inflatable watercraft. Skipper and host plant locations were recorded using a sub-meter accuracy global positioning system (GPS) unit. Survey visit dates, personnel, times, and weather conditions are provided in Table 1. A total of 36 person-hours of field effort were devoted to the skipper survey.

TABLE 1
SURVEY DATES, PERSONNEL, TIMES, AND WEATHER CONDITIONS FOR SKIPPER SURVEYS

Date	Surveyors	Times*	Total Survey Hours	Acres Surveyed Per Hour	Weather
7/18/14	B. Ogg, M. Balk	08:00–17:35	9.5	8.8	70–78° F, 97% marine layer clearing to 30% cloud cover, wind 0–6 mph
9/4/14	B. Ogg, M. Balk	09:00–17:30	8.5	8.8	72-74° F, 50-100% marine layer, wind 0–4 mph

*Pacific Time; °F = degrees Fahrenheit; mph = miles per hour; % = percent.

Survey Area Description

The focused survey area (Wandering Skipper Survey Area on Figures 4-1 through 4-7) is approximately 158 acres in size. The dominant vegetation communities within this survey area are southern coastal salt marsh and emergent freshwater marsh, with scattered patches of salt pan and southern willow scrub within the marsh and Diegan coastal sage scrub, maritime succulent scrub, non-native grassland, disturbed habitat, urban/developed, and urban/developed (landscaped) along the upland areas adjacent to the marshes. Vegetation communities and land cover types are characterized in accordance with Oberbauer (2008).

Southern coastal salt marsh within San Dieguito Lagoon is dominated by pickleweed (*Salicornia pacifica*) and glasswort (*Arthrocnemum subterminale*) within the lower elevation areas, and alkali heath (*Frankenia salina*) within the upper portions of the salt marsh. Southern coastal salt marsh within Los Peñasquitos marsh is dominated by pickleweed and fleshy Jaumea (*Jaumea carnosa*) within the lower elevation areas, and alkali heath and rye grass (*Festuca perennis*) within the upper portions of the salt marsh. Vegetative cover within the salt marsh is typically very dense. The southern coastal salt marsh within both San Dieguito Lagoon and Los Peñasquitos marsh ranges from low-quality to high-quality habitat for skippers, depending on the presence and density of salt grass and level of disturbance.

Survey Results

A minimum of 40 skippers were observed during the focused survey and through incidental observations during the constraints survey. Two of the observed individuals are shown in Photographs 1 and 2. Figures 4-1 through 4-7 show the observed locations of wandering skipper and its host plant, salt grass.

Areas that yielded positive results for skippers within San Dieguito Lagoon contained sparse to dense salt grass and were typically dominated by alkali heath and alkali weed (*Cressa truxillensis*). Other plant species observed in the immediate vicinity of the skipper occurrences include freeway iceplant (*Carpobrotus edulis*), fleshy Jaumea, seaside heliotrope (*Heliotropium curassavicum* var. *oculatum*), pickleweed, and Salicornia dodder (*Cuscuta pacifica* var. *pacifica*).

Areas that yielded positive results for skippers within Los Peñasquitos marsh contained scattered patches of salt grass and were typically dominated by alkali heath, fleshy Jaumea, and pickleweed. Other plant species present in the immediate vicinity of these skipper occurrences include Mexican rush (*Juncus mexicanus*), fat-hen (*Atriplex prostrata*), sedge (*Carex* sp), coastal goldenbush (*Isocoma menziesii*), cattail (*Typha* sp.), salt marsh fleabane (*Pluchea odorata*), bristly oxtongue (*Helminthotheca echioides*), and cocklebur (*Xanthium strumarium*).

The majority of areas within the focused survey area that contain salt grass yielded positive results for skipper. As each portion of the survey area was only visited once, the results do not provide a complete picture of the local distribution of the species throughout the flight season. However, it is reasonable to assume that the distribution of the on-site population may shift to follow the available nectar sources, which would be affected by seasonal changes and water availability. Therefore, all areas within and immediately adjacent to San Dieguito and Los Peñasquitos marshes that support salt grass are assumed occupied by wandering skipper. The upland area adjacent to Portofino Drive (see Figure 4-4) has potential to support wandering skipper due to its proximity to known occurrences. However, due to the desiccated condition of the salt grass and lack of nectar sources observed during the focused survey, this area would likely only have potential to support the species during years with average or above-average rainfall, when sufficient host and nectar plants would be available during the flight period. Observed nectar plants for skippers include alkali heath, seaside heliotrope, and coastal goldenbush. Invertebrate species that were observed during the survey are listed below in Table 2.

TABLE 2
INVERTEBRATES OBSERVED DURING SKIPPER SURVEY

Scientific Name	Common Name
Panoquina errans	wandering skipper
Hylephila phyleus	fiery skipper
Poanes melane	umber skipper
Pyrgus communis	common checkered-skipper
Papilio cresphontes	giant swallowtail
Brephidium exile	western pygmy blue
Leptotes marina	marine blue
Strymon melinus pudica	grey hairstreak
Danaus plexippus	monarch
Vanessa cardui	painted lady

Please feel free to contact me or Brenna Ogg with any questions or comments regarding this survey.

Sincerely,

Mandy Weston
Biologist

Brenna Ogg
Senior Biologist

MEW:BAO:jg

References Cited

Faulkner, David K. and Michael W. Klein
2010 Sensitive Butterflies of San Diego County, California. December.

Oberbauer, T.
2008 Terrestrial Vegetation Communities in San Diego County Based on Holland's Descriptions. San Diego Association of Governments, San Diego, CA. March.

RECON Environmental, Inc. (RECON)
2013 Biological Constraints Study for the Reconfigure TL 674A at Del Mar and Remove from Service TL 666D Project (RECON Number 7203-1). October 24.

U.S. Geological Survey (USGS)
1975 Del Mar, California 7.5-minute topographic map. Original Print 1967. Photorevised 1975.

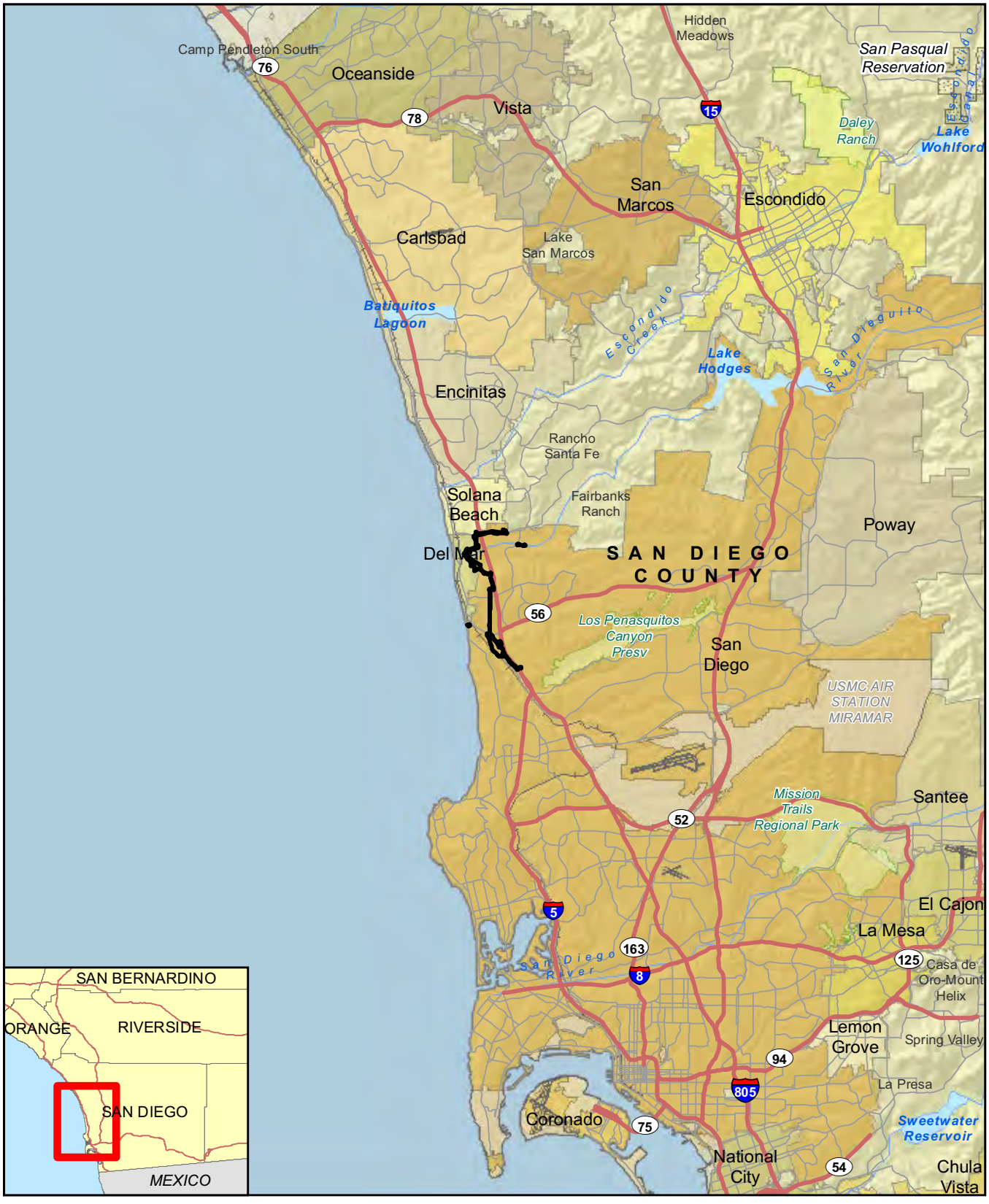

FIGURE 1

Regional Location of Reconfigure of TL 674A at Del Mar and Removal from Service of TL 666D Project Area

RECON

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Map Source: USGS 7.5 minute topographic map series, DEL MAR quadrangle, T14SR03W, T14SR04W & PUEBLO LANDS OF SAN DIEGO Landgrant

Project Survey Area

FIGURE 2

Reconfigure of TL 674A at Del Mar and Removal from Service of TL 666D Project Area Location on USGS Map

RECON

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Image Source: SanGIS (flown May 2012)

Project Survey Area

FIGURE 3

Reconfigure of TL 674A at Del Mar and Removal from
Service of TL 666D Project Area Location on Aerial Photograph

RECON

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Image Source: Microsoft (flown May 2010)

Project Survey Area

Wandering Skipper Survey Area

Wandering Skipper (*Panoquina errans*)

Salt Grass (*Distichlis spicata*)

Salt Grass (*Distichlis spicata*)

0 Feet 180

FIGURE 4-1

Wandering Skipper 2014 Survey Areas and Results for the Reconfigure of TL 674A at Del Mar and Removal from Service of TL 666D Project

RECON

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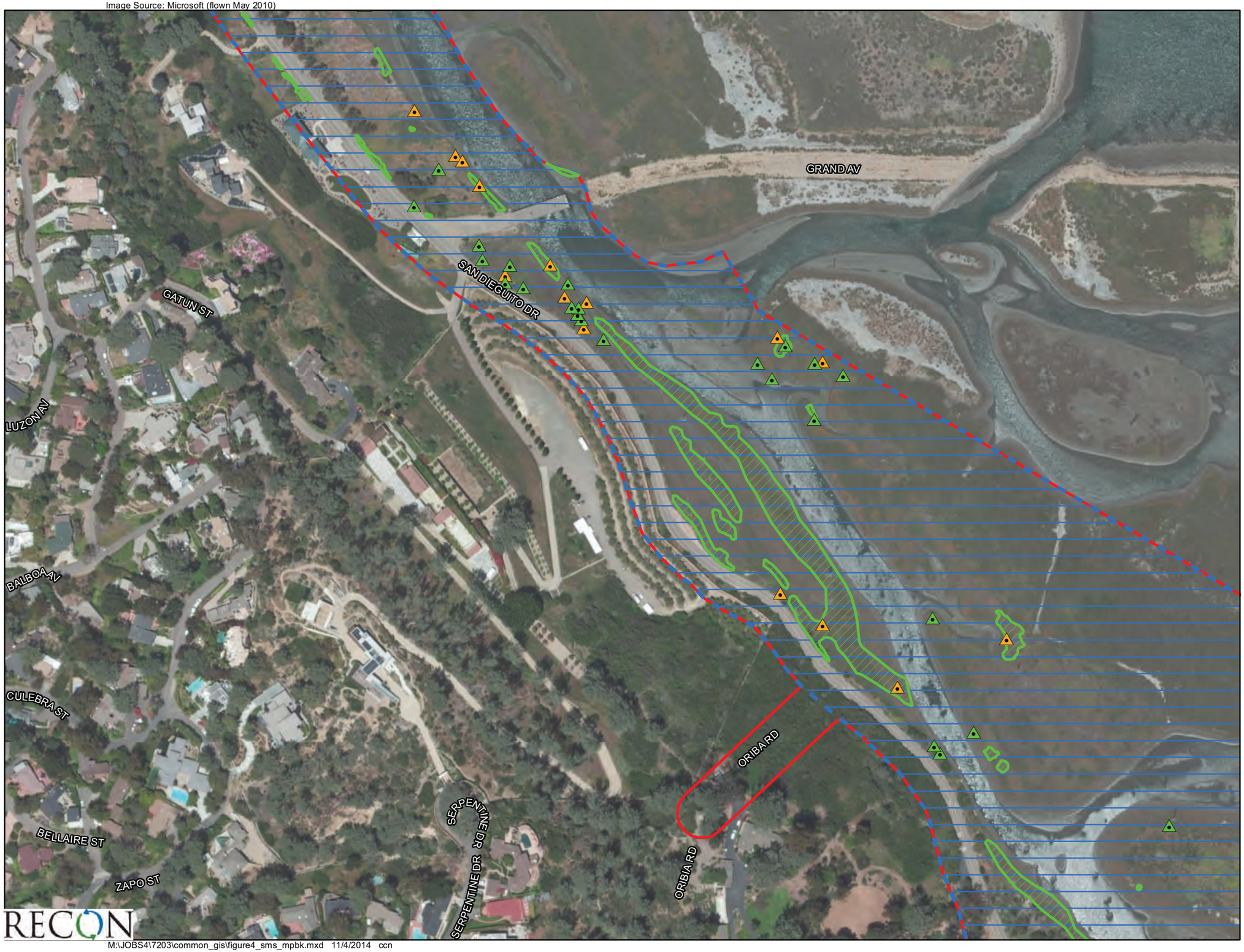
Image Source: Microsoft (flown May 2010)



Project Survey Area

Wandering Skipper Survey Area

Wandering Skipper (*Panoquina errans*)

Salt Grass (*Distichlis spicata*)

Salt Grass (*Distichlis spicata*)

0 Feet 180

FIGURE 4-2

Wandering Skipper 2014 Survey Areas and Results for the Reconfigure of TL 674A at Del Mar and Removal from Service of TL 666D Project

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Image Source: Microsoft (flown May 2010)

Project Survey Area

Wandering Skipper Survey Area

Wandering Skipper (*Panoquina errans*)

Salt Grass (*Distichlis spicata*)

Salt Grass (*Distichlis spicata*)

0 Feet 180

FIGURE 4-3

Wandering Skipper 2014 Survey Areas and Results for the Reconfigure of TL 674A at Del Mar and Removal from Service of TL 666D Project

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Image Source: Microsoft (flown May 2010)

Project Survey Area

Wandering Skipper Survey Area

Wandering Skipper (*Panoquina errans*)

Salt Grass (*Distichlis spicata*)

Salt Grass (*Distichlis spicata*)

0 Feet 180

RECON

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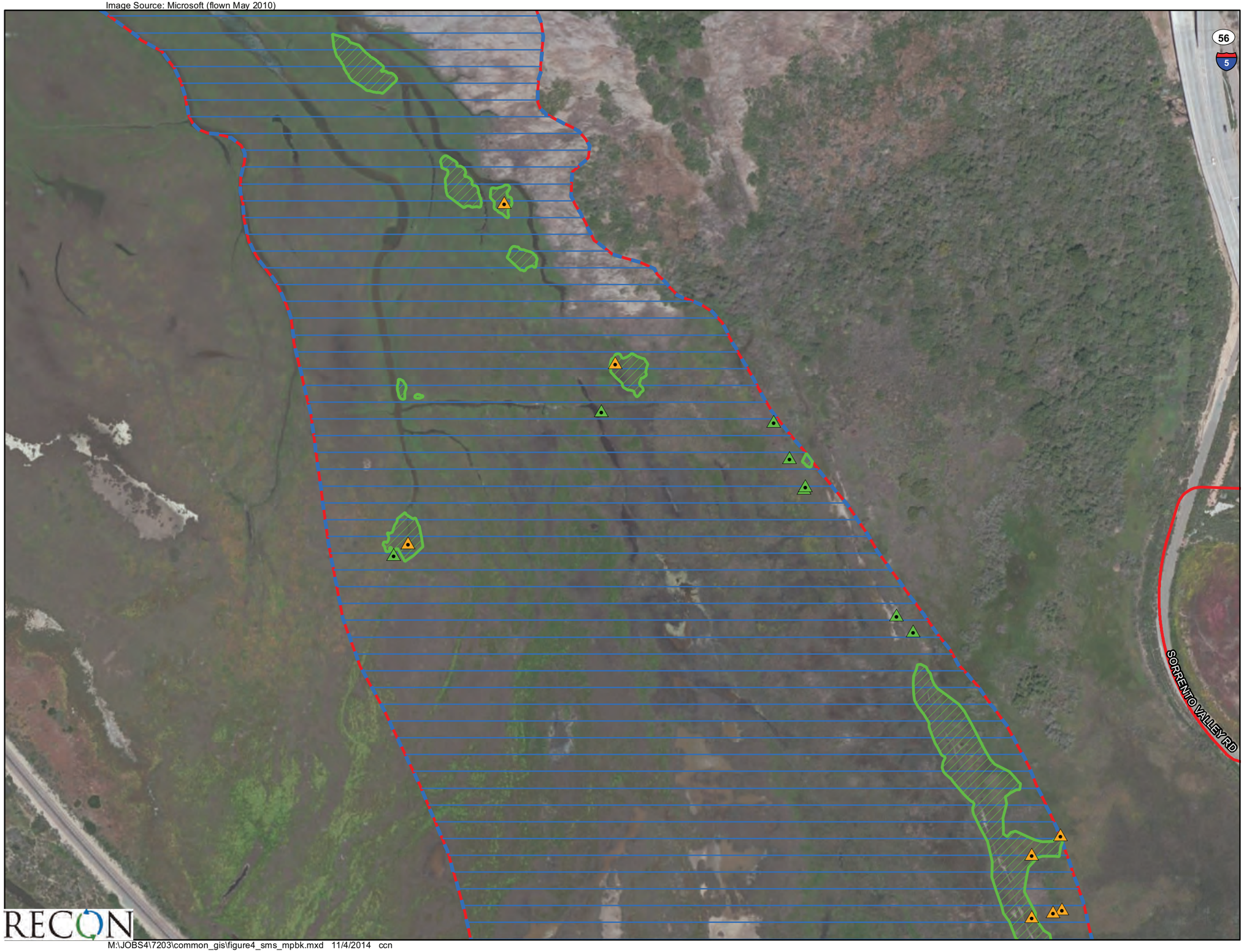
FIGURE 4-4

Wandering Skipper 2014 Survey Areas and Results for the Reconfigure of TL 674A at Del Mar and Removal from Service of TL 666D Project

Image Source: Microsoft (flown May 2010)



Project Survey Area

Wandering Skipper Survey Area

Wandering Skipper (*Panoquina errans*)

Salt Grass (*Distichlis spicata*)

Salt Grass (*Distichlis spicata*)

0 Feet 180

FIGURE 4-5

Wandering Skipper 2014 Survey Areas and Results for the Reconfigure of TL 674A at Del Mar and Removal from Service of TL 666D Project

RECON

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Image Source: Microsoft (flown May 2010)

Project Survey Area

Wandering Skipper Survey Area

Wandering Skipper (*Panoquina errans*)

Salt Grass (*Distichlis spicata*)

Salt Grass (*Distichlis spicata*)

0 Feet 180

FIGURE 4-6

Wandering Skipper 2014 Survey Areas and Results for the Reconfigure of TL 674A at Del Mar and Removal from Service of TL 666D Project

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Image Source: Microsoft (flown May 2010)

Project Survey Area

Wandering Skipper Survey Area

Wandering Skipper (*Panoquina errans*)

Salt Grass (*Distichlis spicata*)

Salt Grass (*Distichlis spicata*)

0 Feet 180

FIGUR E 4-7

Wandering Skipper 2014 Survey Areas and Results for the Reconfigure of TL 674A at Del Mar and Removal from Service of TL 666D Project

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PHOTOGRAPH 1
Wandering Skipper (*Panoquina errans*)
on Alkali Heath (*Frankenia salina*)

PHOTOGRAPH 2
Wandering Skipper (*Panoquina errans*)
on Pickleweed (*Salicornia pacifica*)

Attachment XI

Focused Surveys for Wandering Skipper

Conducted 2017

November 13, 2017

Mr. Kris Alberts
Blackhawk Environmental Inc.
1720 Midvale Drive
San Diego, CA 92105
Email: kris@blackhawkenv.com
Office: 619.972.7932

Re: **2017 Survey Results for Wandering Skipper Butterfly for San Diego Gas & Electric Company TL674A Reconfiguration and TL666D Removal Project, Cities of San Diego and Del Mar, San Diego County, California.**

Dear Mr. Alberts:

Introduction

At the request of Blackhawk Environmental Inc., field surveys were conducted by Bruyea Biological Consulting along the biological study area (BSA) of the above-referenced proposed San Diego Gas & Electric Company (SDG&E TL674A Reconfiguration & TL666D Removal Project (Proposed Project). The specific goal of this survey is to assess the presence or absence and current status of the Proposed Project site as habitat to support the wandering skipper butterfly (*Panoquina errans*, herein referred to as WSB), an SDG&E Subregional Natural Community Conservation Plan (NCCP) Covered Species. A total of five focused WSB surveys occurred within the BSA by Guy Bruyea in June, July, August and September 2017 (Table 1).

Table 1.
Survey Information SDG&E Reconfiguration Site, June – September 2017

Date	Field	Weather	Wind	Biologist	Purpose
6/13/17	1000-1300	Partly Cloudy, 68-72°F	0-2mph	Bruyea	*P. errans* Survey
7/31/17	1030-1530	Cloudy, 75-80°F	0-2mph	Bruyea	*P. errans* Survey
8/07/17	0945-1500	Marine / Clear, 72-80°F	0-3mph	Bruyea	*P. errans* Survey
8/31/17	1000-1400	Marine / Clear, 79-87°F	1-2mph	Bruyea	*P. errans* Survey
9/15/17	1100-1430	Partly Cloudy, 73-76°F	1-2mph	Bruyea	*P. errans* Survey

Site Description

The Proposed Project BSA is generally located in the Cities of San Diego and Del Mar in coastal San Diego County, California. Specifically, the BSA is located along an existing power line route from Villa De La Valle and the Del Mar Fairgrounds area south through San Dieguito Lagoon, Del Mar Heights, Los Peñasquitos Lagoon and Sorrento Valley. Existing power lines and poles are present within intact open space areas of San Deiguito Lagoon and Los Peñasquitos Lagoon.

These include areas along San Dieguito Drive east of Jimmy Durante Boulevard and west of I-5, and south of Carmel Valley Road just west of I-5 south to a water treatment facility (Pump Station 65). At the San Dieguito Lagoon location, SDG&E poles trend south (briefly, along Jimmy Durante Boulevard), and then trend southeast through the Lagoon towards Del Mar Heights. At the Los Peñasquitos Lagoon location, SDG&E poles trend in a south and then southeast direction from Carmel Valley Road towards Pump Stations 65 at the east end of the lagoon near I-5 and the northern terminus of Sorrento Valley Road. Both locations have numerous poles situated within a mixture of disturbed and relatively undisturbed salt marsh, tidal channels, and mud flats. The BSA is on the U.S. Geological Surveys (USGS) Del Mar 7.5-minute quadrangle at Township 14 South, Range 3 West, Sections 6, 7, 30, and 31, and Range 4 West, Sections 1, 2, 11, 12, 13, 14, 24, and 25, and unsectioned lands within the Pueblo Lands of San Diego land grant.

Topographically, elevations on the site range from approximately 0 to 411 feet above mean sea level (AMSL). Marsh areas are primarily flat and lie close to sea level with a combined maximum vertical relief of roughly 10 feet between the highest and lowest elevation points. The highest elevation point on the site is located in Del Mar Heights where power lines cross Del Mar Heights Road. Surrounding topographic features in the immediate vicinity of the Proposed Project include mostly flat areas associated with the San Dieguito Lagoon and Los Peñasquitos Lagoon areas, but ridgelines, bluffs, and hilltops associated with Del Mar Heights and other areas are present near the survey area. Torrey Pines State Natural Reserve Extension Area, containing a mixture of tidal marsh and Diegan coastal sage scrub, is present just southwest of the Los Peñasquitos Lagoon survey area and Santa Fe railroad tracks.

Five basic habitat types have been identified at or immediately adjacent to the SDG&E Proposed Project site. These are: 1) tidal salt marsh, 2) freshwater marsh, 3) salt (alkali) and mud flats, 4) Diegan coastal sage scrub, and 5) disturbed and/or ruderal. Virtually all habitat types within the survey area are insect habitats. However, most are inhabited by insect species that are still considered to be fairly widespread and not sensitive.

Wandering Skipper Butterfly (*Panoquina errans*)

This small (about 14mm in wingspread) dark olive-brown butterfly occurs in localized colonies along the coast of southern California from the Santa Barbara area southward along both coasts of Baja California, Mexico. It is associated only with its larval host plant, saltgrass (*Distichlis spicata*), which grows primarily in sandy or salt marsh habitats along beaches, bluffs and estuaries. In recent decades this butterfly appears to have undergone significant population declines in California due to development within and surrounding many coastal marshes. Other human disturbances, including the introduction of prolonged freshwater flooding from reservoirs, wastewater effluent and interrupted or closed tidal flow has reduced soil salinity and resulted in some saltwater associated plants disappearing from many coastal marshes. This has allowed brackish water plants such as cattails (*Typha* spp.) to invade these areas, which adversely

impacts habitat for saltgrass and other native plants. In recent years aerial mosquito larvicide application to reduce the spread of West Nile virus may have adversely impacted WSB immatures.

In southern California, this butterfly is active as an adult during several generations from March to November, with peak activity during the late summer months from July to September. In the extreme southern part of its range (i.e. Cape region of Baja California Sur, Mexico) WSB flight activity peaks in November and December and adults can be present year-round. Most WSB are observed within marshes on or in close proximity to their saltgrass hostplants, but they can also be found nectaring on suitable flowers within coastal sage scrub areas nearby. WSB is not known to be a hilltopping species, which is a mate-location behavior seen in some butterflies and other insects.

The early stages of this butterfly were described by John A. Comstock in 1930. The egg is white, spherical and has a flattened bottom. The mature larva is green with a dark green mid-dorsal stripe and a lateral band of yellowish-white. The pupae are attached by a silk girdle and cremaster and are oriented head up. The pupa is greenish-brown in color and has a prominent palpal case projecting forward from the head. The caterpillars spend the day in shelters of rolled or tied leaves and feed on leaves at night (Opler, 1995). WSB likely enters diapause and forms a hibernaculum as a full or partially grown caterpillar during the winter months, then resumes feeding and completes its development in the late winter or early spring when temperatures increase and rains stimulate fresh saltgrass growth.

Although WSB is restricted to coastal salt marsh areas inhabited with saltgrass, two other similarly-sized skipper butterflies (family Hesperiidae) can be found in coastal areas and be confused with WSB identificaion in the field. The eufala skipper (*Lerodea eufala*) and umber skipper (*Paones melane*) both have much wider distributions within San Diego County. The eufala skipper is much closer in coloration and size. One way to distinguish the two butterflies is WSB is olive-brown in coloration, whereas the eufala skipper is gray-brown. In addition, the hindwings of WSB have pale yellowish spots and outlined cream-colored veins, giving the outer hindwing a streaked appearance. The eufala skipper has a uniformly colored hindwing with no spots. The umber skipper is much larger, has larger yellowish spots on both the forewing and hindwing upperside, and lacks the veined appearance on the outer hindwings.

Field Surveys

As it relates to SDG&E's NCCP Section 10 (a) 'take' permit for the WSB, a survey to determine the presence or absence and current status of this narrow-endemic butterfly and its larval host plant, saltgrass, was performed within the BSA. Special consideration was given to areas containing native vegetation that may support specific larval host plant habitat requirements for WSB. As a result, surveys were mostly confined to the San Dieguito Lagoon and Los Peñasquitos Lagoon areas. Adjacent locations where potential nectar resources may be found were also surveyed,

especially in less disturbed areas inhabited by Deigan coastal sage scrub. The presence or absence of invasive, non-native plant species was noted in an effort to assess the level of previous anthropogenic disturbance in a given area. Other habitat requirements including the presence of potential nectar resources and the overall quality of the site as it pertains to WSB was assessed. A focused survey (no official protocol is in place) for WSB adults and immature stages (eggs, larvae, and/or pupae) was conducted during this study, but not for any other potentially sensitive insect species known from the region.

A large portion of the BSA and SDG&E existing power lines lie within Del Mar Heights, a high-density residential area located on a coastal bluff away from natural WSB marsh habitat found at lower elevations. In general, the BSA between Racetrack View Road to the north and Carmel Valley Road to the south were largely excluded from WSB surveys due to a lack of WSB natural habitat containing its larval hostplant. Although much of this area is developed, small undeveloped lots and disturbed hillsides along the route were assessed for the presence of saltgrass and WSB, and none was observed. Undisturbed areas within Del Mar Heights containing Diegan coastal sage scrub were assessed for potential WSB nectar resources. Other areas were excluded from surveys due to various anthropogenic activities, including commercial and residential development, railroad tracks, parking lots, paved roads, ornamental landscaping and other disturbances.

Foot access to the San Dieguito Lagoon portion of the BSA was generally from San Dieguito Drive east of Jimmy Durante Boulevard and the Del Mar Fairgrounds. Some San Dieguito Lagoon areas were accessed from a portion of the San Dieguito River Walk trail and Racetrack View Drive. Foot access to the southern portion of the Los Peñasquitos Lagoon BSA was from Sorrento Valley Road near Pump Station 65 and a bike path / multi-use trail. The northern portion of the Los Peñasquitos Lagoon area was accessed from Carmel Valley Road south of Portofino Drive. Some marsh areas within both lagoons were inaccessible during this survey due to areas being isolated by tidal flow or a muddy ground surface. Other locations within Los Peñasquitos Lagoon were difficult to access due to the presence of dense cattail patches invading previously disturbed areas, especially northwest of Pump Station 65.

Focused surveys were performed within the BSA only and included an approximately 150 foot buffer on either side of the existing power poles (300 foot total buffer area). Field surveys were conducted during daylight hours from 0945 to 1500 Pacific Daylight (Savings) Time (PDT). Temperatures recorded during the survey ranged from 68 to 87 ºF (degrees Fahrenheit) and conditions were generally partly cloudy to sunny (a marine layer was present during the early portion of most surveys) with little or light winds (less than 2 mph). GPS coordinates of all WSB observations made during field surveys were noted (Appendix A). All butterfly species observed during surveys were identified in the field by Guy Bruyea (Appendix B). Representative

photographs of WSB habitat within both lagoon areas were collected to document current site conditions (Appendix C).

Literature Review

Documentation pertinent to the insect resources for the survey area was reviewed and included (but are not limited to) Emmel and Emmel (1973), Orsak (1976), Brown (1987), Emmel (1998), and Faulkner & Klein (2012). Additional resources may be found at the end of this report.

Results

Conditions during the 2017 field season were conducive to WSB adult seasonal flight activity. WSB adults were observed during three of the five survey visits on July 31, August 7 and August 31, 2017. WSB observations are displayed on Figure 1a through 1m. All WSB observations occurred at two distinct locations within the BSA: 1) San Dieguito Lagoon, mostly along its margins in close proximity to San Dieguito Drive, the San Dieguito River Walk and marsh areas to the east and northeast; and 2) Los Peñasquitos Lagoon, mostly south of the intersection of Carmel Valley Road and Portofino Drive, and areas adjacent to and north of Pump Station 65 and marsh areas to the northwest. The highest number of WSB adult observations (14) was made during the August 31, 2017 field visit to both lagoon areas. Six adults (4 males, 2 females) were observed at Los Peñasquitos Lagoon and eight adults (4 males, 2 females, and 2 undetermined) were observed at San Dieguito Lagoon. Additional observations at Los Peñasquitos Lagoon include three adults (3 males) on July 31 and three adults (2 males, 1 female) on August 7. Additional observations at San Dieguito Lagoon include one adult (1 male) on July 31 and two adults (1 male, 1 female) on August 7. A survey total of twelve adults (9 males, 3 females) were observed at Los Peñasquitos Lagoon and eleven adults (6 males, 3 females, 2 undetermined) were observed at San Dieguito Lagoon (Table 2). The total number of WSB observed is twenty-three adults (15 males, 6 females, and 2 undetermined).

Table 2.
WSB Survey Results (SDL = San Dieguito Lagoon, LPL = Los Peñasquitos Lagoon)
SDG&E Reconfiguration Site, June – September 2017

Date	SDL	LPL	*P. errans* Total
6/13/17	0	0	0
7/31/17	1 male	3 males	4 males
8/07/17	1 male, 1 female	2 males, 1 female	3 males, 2 females
8/31/17	4 males, 2 females *	4 males, 2 females	8 males, 4 females *
9/15/17	0	0	0
* Gender undetermined for two (2) adult WSB observations at SDL on 8/31			

No WSB adults were observed during the June 13 or September 15 surveys. No WSB adults were observed within the Del Mar Heights residential BSA between the two lagoon sites due to lack of salt marsh habitat. In addition, no WSB were observed north of San Dieguito Lagoon along

Jimmy Durante Boulevard or east along Villa De La Valle, or south of Los Peñasquitos Lagoon and Pump Station 65 along and just west of I-5 to Vista Sorrento Parkway east of I-5. These areas are mostly disturbed and/or developed. An undeveloped area northeast of the Jimmy Durante Boulevard bridge (just north of San Dieguito Drive and southeast of the Del Mar Fairgrounds) is currently undergoing habitat restoration and/or development in association with the San Dieguito River Walk trail. Surveys were limited at this location due to a lack of natural habitat, but this area may serve as WSB habitat in the future.

No WSB immature stages (eggs, larvae or pupae) were observed at any location within the SDG&E survey area during this study.

Saltgrass and other salt marsh associated native plants are present in both lagoon areas where WSB was observed in 2017. Several nectar resources are also available. WSB was observed (infrequently) nectaring on alkali heath (*Frankenia salina*) and wild heliotrope (*Heliotropium curassavicum*), which was observed growing among patches of saltgrass at San Dieguito and Los Peñasquitos Lagoons. Most WSB observations were of perching adults on various plants within both lagoon areas, including saltgrass, glasswort (*Salicornia* spp.), iceplant (*Carpobrotus species*), various non-native grasses and other plants growing within or adjacent to saltgrass patches.

Additional summer and early fall blooming potential native and non-native nectar resources that were observed on the site and in immediately adjacent areas include California buckwheat (*Eriogonum fasciculatum*), sand aster (*Lessingia filaginifolia*), telegraph weed (*Heterotheca grandiflora*), mulefat (*Baccharis salicifolia*), coastal goldenbush (*Isocoma menziesii*), twiggy wreath plant (*Stephanomeria virgata*), mustards (*Hirschfeldia* and *Brassica* spp.), ice plant (*Mesembryanthemum* spp.), and other plants.

Discussion and Recommendations

Portions of the BSA remain relatively undisturbed and support a diverse group of native plant species based on the present survey effort. However, relatively few insects were observed during the present survey and diversity appears low for many insect families. Areas to the north, south, east, and in the Del Mar Heights area of the Proposed Project site are mostly developed for residential or commercial use, making the lagoon areas within the SDG&E site an 'island' of isolated natural habitat, which may be one limiting factor. Other disturbances associated with the installation of the Santa Fe railroad tracks (which divides portions of the Los Peñasquitos Lagoon into two halves), I-5, Pump Station 65, invasive non-native vegetation, and the disruption of natural water movement in the area over time may have an adverse effect on local insect diversity and abundance.

Based on our understanding of the Proposed Project, impacts to vegetation beneath poles and power lines will be minimized by SDG&E personnel to the fullest extent possible. Adult

butterflies (including WSB, if present) that are adjacent to any line or pole conversion operations will likely be able to relocate (fly) to areas that are not being temporarily disturbed. The largest threat to WSB individuals will be from trampling and other impacts to the saltgrass where immature stages may be present. As it relates to suitable habitat and potential WSB 'take,' areas where saltgrass occurs should be avoided where reasonably possible, especially within both lagoons where WSB adults were observed during this 2017 study.

The most conspicuous saltgrass patches found within the BSA are located within San Dieguito Lagoon north of San Dieguito Drive between the San Dieguito River Walk area east of the pier in the vicinity of Pole Z90294 to about Racetrack View Drive and Pole Z90289, and within Los Peñasquitos Lagoon south of Carmel Valley Road to just north of Pump Station 65 and Pole Z90243. Additional saltgrass patches are present within Los Peñasquitos Lagoon away from invasive cattail patches and other disturbances. Activities in both lagoon areas should be conducted in a manner that avoids all large saltgrass patches where possible. To minimize (or avoid) disturbance to saltgrass vegetation under the power lines and in adjacent areas, it is recommended that foot traffic be minimized where possible. If any conductors are reeled in during the conversion process, laying conductors directly on saltgrass vegetation beneath the poles should be avoided where reasonably possible.

Conclusion

This survey was performed between June and September 2017 during five daytime field visits. The entire BSA as described above was evaluated for the presence or absence of WSB and potentially suitable WSB habitat. WSB was observed on portions of the Proposed Project site, primarily within saltgrass inhabited areas of San Dieguito Lagoon and Los Peñasquitos Lagoon.

Additional surveys may be warranted just prior to work on the Proposed Project. Focused surveys for immature WSB (i.e. eggs, larvae, pupae) could be performed in areas where WSB was observed to 'clear' these areas. If any immature WSB were found, it may be possible to relocate them to saltgrass patches away from any temporary disturbances associated with the Proposed Project. A disadvantage of conducting additional surveys would be the increased foot traffic on portions of the site, which increases the potential for trampling saltgrass, other salt marsh vegetation, and WSB immatures, if present. In addition, approval to relocate WSB may be required from the United States Fish & Wildlife Service or other agency.

Mr. Alberts:

If I can be of any further assistance regarding this Proposed Project and report, please do not hesitate to contact me by email at gbruyea@gmail.com or phone at 909.226.9268.

Sincerely,
Bruyea Biological Consulting

Guy P. Bruyea
Principal Biologist

Certification and Signature Page

SDG&E TL674A Reconfiguration & TL666D Removal Project
Cities of San Diego and Del Mar, San Diego County, California

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

November 13, 2017

_____ Date _____

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Source: ESRI; Bing; AECOM; RECON.

350 175 0 350 Feet

1:4,200 1 inch = 350 feet

Figure 1a
Wandering Skipper Survey Results

2017 Survey Results for Wandering Skipper Butterfly for SDGE TL 674A Reconfiguration and TL 666D Removal Project

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Source: ESRI; Bing; AECOM; RECON.

350 175 0 350 Feet

1:4,200 1 inch = 350 feet

Figure 1b
Wandering Skipper Survey Results

2017 Survey Results for Wandering Skipper Butterfly for SDGE TL 674A Reconfiguration and TL 666D Removal Project

Path: P:_6051\60515408_SDGE_Del_Mar\900-CAD-GIS\920-929 GIS-Graphics\922_Maps\Skipper\wandering_skipper_results_mapbook.mxd, 10/23/2017, augellop

Source: ESRI; Bing; AECOM; RECON.

350 175 0 350 Feet

1:4,200 1 inch = 350 feet

Figure 1c
Wandering Skipper Survey Results

2017 Survey Results for Wandering Skipper Butterfly for SDGE TL 674A Reconfiguration and TL 666D Removal Project

Path: P:_6051\60515408_SDGE_Del_Mar\900-CAD-GIS\920-929 GIS-Graphics\922_Maps\Skipper\wandering_skipper_results_mapbook.mxd, 10/23/2017, augellop

Source: ESRI; Bing; AECOM; RECON.

350 175 0 350 Feet

1:4,200 1 inch = 350 feet

Figure 1d
Wandering Skipper Survey Results

2017 Survey Results for Wandering Skipper Butterfly for SDGE TL 674A Reconfiguration and TL 666D Removal Project

Path: P:_6051\60515408_SDGE_Del_Mar\900-CAD-GIS\920-929 GIS-Graphics\922_Maps\Skipper\wandering_skipper_results_mapbook.mxd, 10/23/2017, augellop

Source: ESRI; Bing; AECOM; RECON.

350 175 0 350 Feet

1:4,200 1 inch = 350 feet

Figure 1e
Wandering Skipper Survey Results

2017 Survey Results for Wandering Skipper Butterfly for SDGE TL 674A Reconfiguration and TL 666D Removal Project

Path: P:_6051\60515408_SDGE_Del_Mar\900-CAD-GIS\920-929 GIS-Graphics\922_Maps\Skipper\wandering_skipper_results_mapbook.mxd, 10/23/2017, augellop

Source: ESRI; Bing; AECOM; RECON.

350 175 0 350 Feet

1:4,200 1 inch = 350 feet

Figure 1f
Wandering Skipper Survey Results

2017 Survey Results for Wandering Skipper Butterfly for SDGE TL 674A Reconfiguration and TL 666D Removal Project

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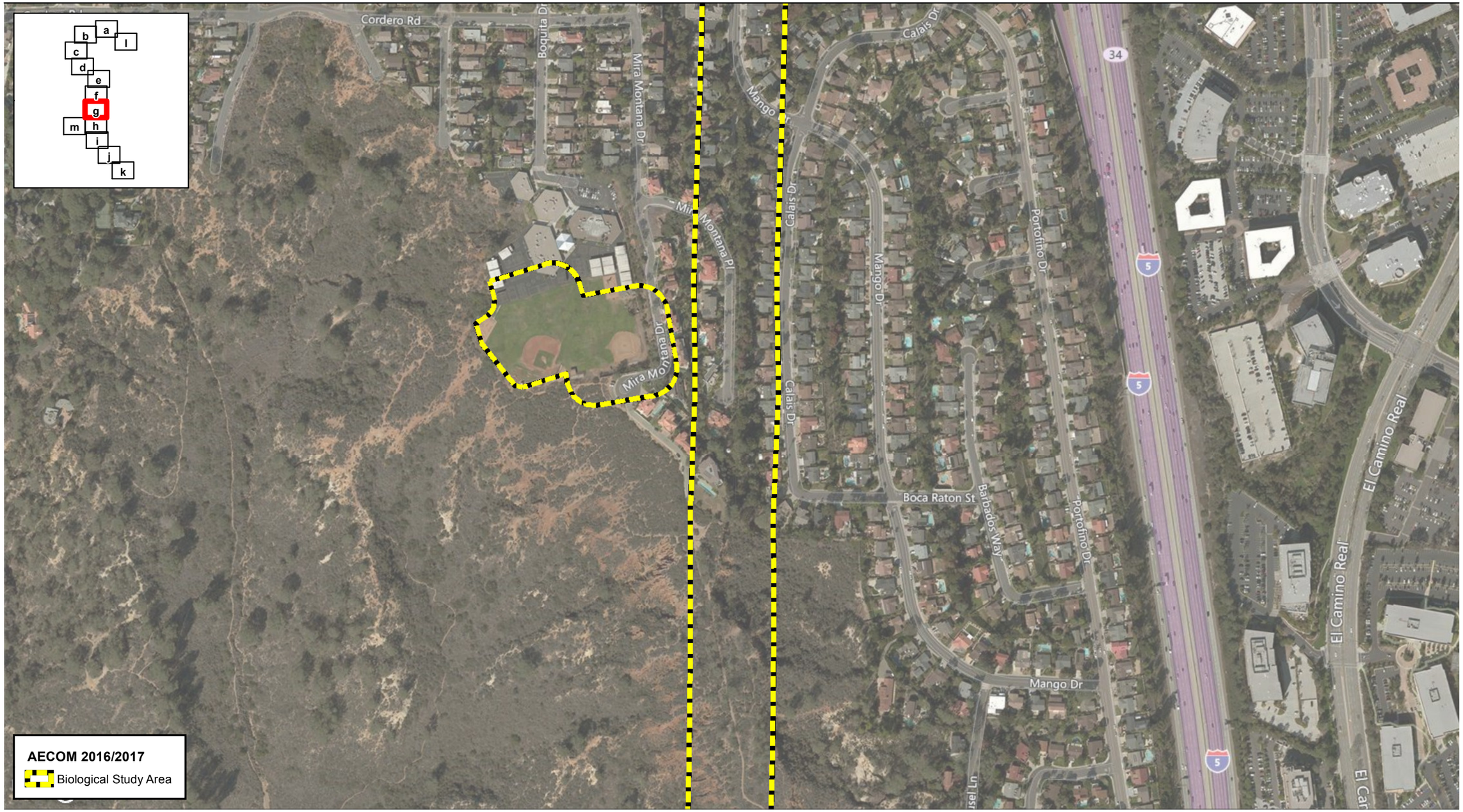

Source: ESRI; Bing; AECOM; RECON.

350 175 0 350 Feet

1:4,200 1 inch = 350 feet

Figure 1g
Wandering Skipper Survey Results

Path: P:_6051\60515408_SDGE_Del_Mar\900-CAD-GIS\920-929 GIS-Graphics\922_Maps\Skipper\wandering_skipper_results_mapbook.mxd, 10/23/2017, augellop

Source: ESRI; Bing; AECOM; RECON.

350 175 0 350 Feet

1:4,200 1 inch = 350 feet

Figure 1h
Wandering Skipper Survey Results

2017 Survey Results for Wandering Skipper Butterfly for SDGE TL 674A Reconfiguration and TL 666D Removal Project

Path: P:_6051\60515408_SDGE_Del_Mar\900-CAD-GIS\920-929 GIS-Graphics\922_Maps\Skipper\wandering_skipper_results_mapbook.mxd, 10/23/2017, augellop

Source: ESRI; Bing; AECOM; RECON.

350 175 0 350 Feet

1:4,200 1 inch = 350 feet

Figure 1i
Wandering Skipper Survey Results

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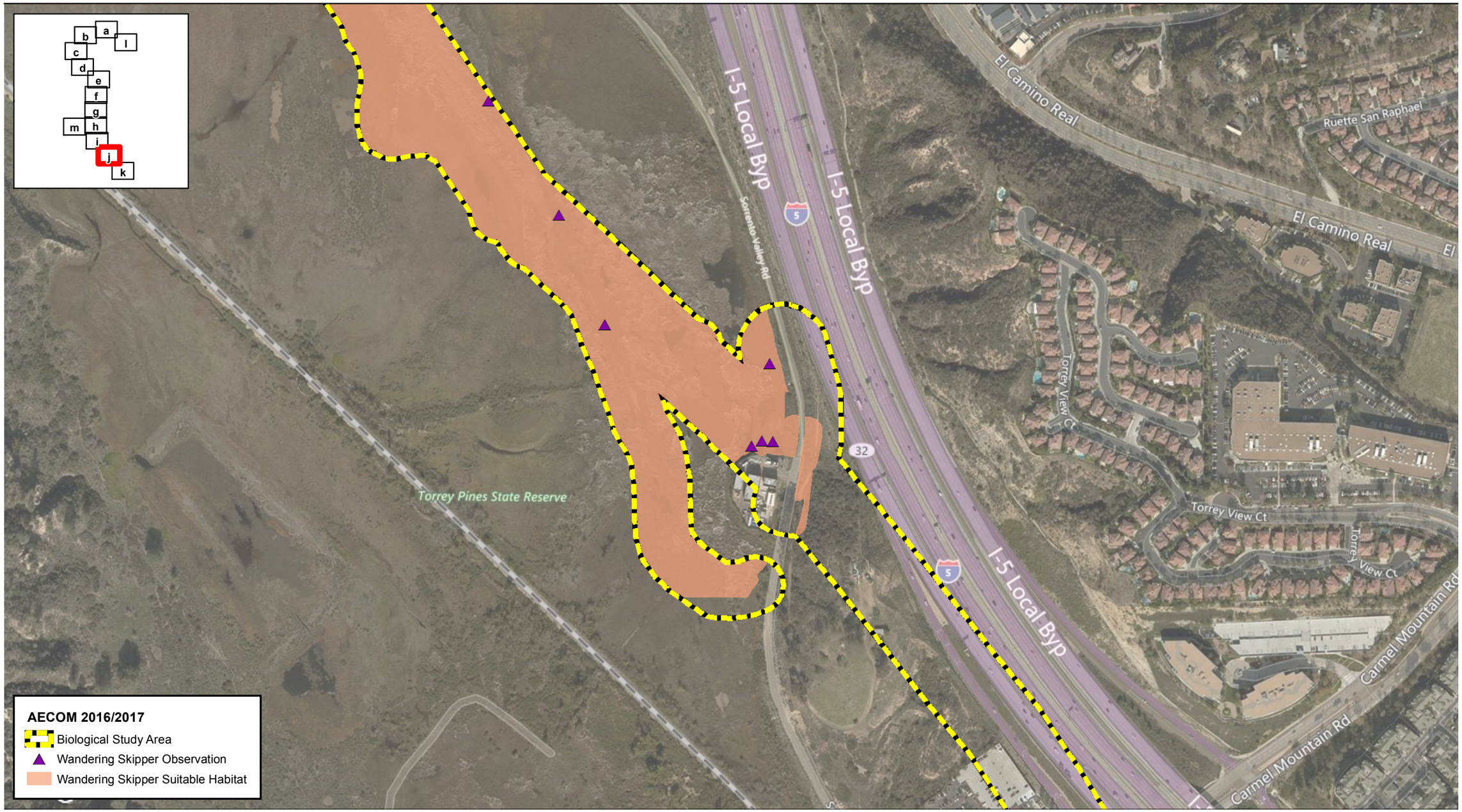


Source: ESRI; Bing; AECOM; RECON.

350 175 0 350 Feet

1:4,200 1 inch = 350 feet

Figure 1j
Wandering Skipper Survey Results

2017 Survey Results for Wandering Skipper Butterfly for SDGE TL 674A Reconfiguration and TL 666D Removal Project

Path: P:_6051\60515408_SDGE_Del_Mar\900-CAD-GIS\920-929 GIS-Graphics\922_Maps\Skipper\wandering_skipper_results_mapbook.mxd, 10/23/2017, augellop

Source: ESRI; Bing; AECOM; RECON.

350 175 0 350 Feet

1:4,200 1 inch = 350 feet

Figure 1k
Wandering Skipper Survey Results

2017 Survey Results for Wandering Skipper Butterfly for SDGE TL 674A Reconfiguration and TL 666D Removal Project

Path: P:_6051\60515408_SDGE_Del_Mar\900-CAD-GIS\920-929 GIS-Graphics\922_Maps\Skipper\wandering_skipper_results_mapbook.mxd, 10/23/2017, augellop

Source: ESRI; Bing; AECOM; RECON.

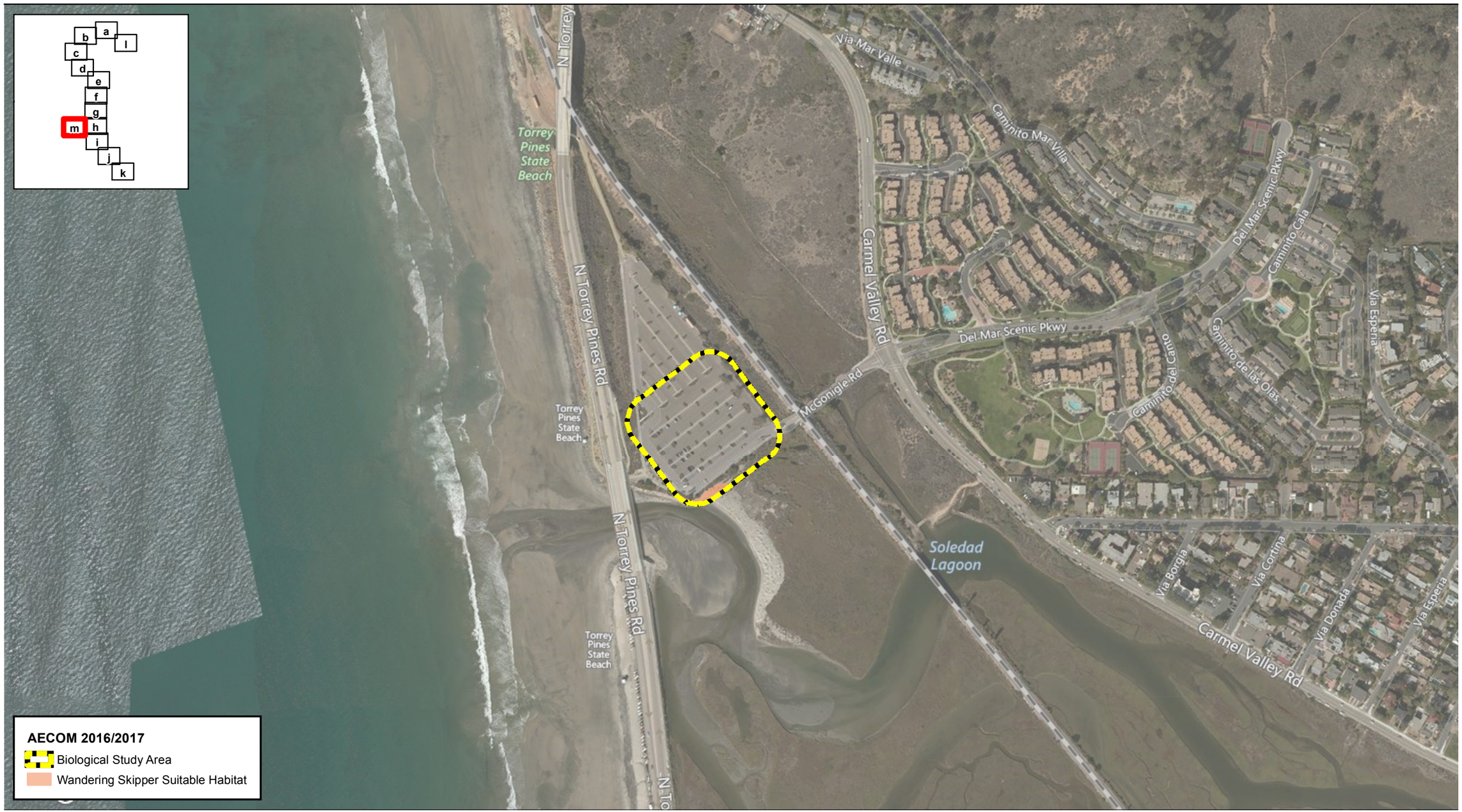
350 175 0 350 Feet

1:4,200 1 inch = 350 feet

Figure 11
Wandering Skipper Survey Results

2017 Survey Results for Wandering Skipper Butterfly for SDGE TL 674A Reconfiguration and TL 666D Removal Project

Path: P:_6051\60515408_SDGE_Del_Mar\900-CAD-GIS\920-929 GIS-Graphics\922_Maps\Skipper\wandering_skipper_results_mapbook.mxd, 10/23/2017, augellop



Source: ESRI; Bing; AECOM; RECON.

350 175 0 350 Feet

1:4,200 1 inch = 350 feet

Figure 1m
Wandering Skipper Survey Results

2017 Survey Results for Wandering Skipper Butterfly for SDGE TL 674A Reconfiguration and TL 666D Removal Project

Path: P:_6051\60515408_SDGE_Del_Mar\900-CAD-GIS\920-929 GIS-Graphics\922_Maps\Skipper\wandering_skipper_results_mapbook.mxd, 10/23/2017, augellop

Appendix A.

Wandering Skipper observations on the SDG&E Reconfiguration Site **(N=23)**
Del Mar area, San Diego County, California
July - August 2017

Date	Observation	Coordinates	Location
7/31/17	*P. errans* (male)	N 32.921755 W 117.239456	LPL; South
7/31/17	*P. errans* (male)	N 32.922516 W 117.239378	LPL; South
7/31/17	*P. errans* (male)	N 32.930565 W 117.247049	LPL; North
7/31/17	*P. errans* (male)	N 32.967713 W 117.259644	SDL; E of River Walk Pier
8/07/17	*P. errans* (female)	N 32.930692 W 117.247782	LPL; S of Carmel Valley Rd.
8/07/17	*P. errans* (male)	N 32.923973 W 117.241869	LPL; South
8/07/17	*P. errans* (male)	N 32.922883 W 117.241317	LPL; South
8/07/17	*P. errans* (male)	N 32.967495 W 117.259466	SDL; E of River Walk Pier
8/07/17	*P. errans* (female)	N 32.966464 W 117.258569	SDL; N of San Dieguito Dr.
8/31/17	*P. errans* (male)	N 32.921745 W 117.239327	LPL; South
8/31/17	*P. errans* (male)	N 32.921702 W 117.239580	LPL; South
8/31/17	*P. errans* (male)	N 32.925098 W 117.242712	LPL; Central
8/31/17	*P. errans* (male)	N 32.930909 W 117.247764	LPL; S of Carmel Valley Rd.
8/31/17	*P. errans* (female)	N 32.930909 W 117.247764	LPL; S of Carmel Valley Rd.
8/31/17	*P. errans* (female)	N 32.930751 W 117.247582	LPL; S of Carmel Valley Rd.
8/31/17	*P. errans* (male)	N 32.968880 W 117.260735	SDL; W of River Walk Pier
8/31/17	*P. errans* (female)	N 32.968229 W 117.260396	SDL; W of River Walk Pier
8/31/17	*P. errans* (male)	N 32.967537 W 117.259606	SDL; E of River Walk Pier
8/31/17	*P. errans* (male)	N 32.967293 W 117.259228	SDL; E of River Walk Pier
8/31/17	*P. errans* (undet.)	N 32.965530 W 117.257452	SDL; N of San Deiguito Dr.
8/31/17	*P. errans* (male)	N 32.966491 W 117.258447	SDL; N of San Dieguito Dr.
8/31/17	*P. errans* (female)	N 32.963446 W 117.254035	SDL; N of Racetrack View Dr
8/31/17	*P. errans* (undet.)	N 32.963576 W 117.253691	SDL; N of Racetrack View Dr

Appendix B.

Butterflies observed on the SDG&E Reconfiguration Site **(N=25)**
Del Mar area, San Diego County, California
June - September 2017

Surveys thoughout the year, especially from March to October, are necessary to achieve a thorough butterfly inventory for any given site. Several butterfly species expected to occur within the SDG&E survey area were not observed due to season and the limited scope of this survey.

Scientific Name	Common Name
Papilionidae	**Swallowtails**
Papilio rutulus	Western Tiger Swallowtail
Papilio zelicaon	Anise Swallowtail*
Nymphalidae	**Brush-footed Butterflies**
Agraulis vanillae	Gulf Fritillary
Basilarchia lorquini	Lorquin's Admiral
Junonia coenia	Buckeye
Nymphalis antiopa	Mourning Cloak
Vanessa cardui	Painted Lady
Vanessa annabella	West Coast Lady
Vanessa atalanta	Red Admiral
Vanessa virginiensis	Virginia Lady
Danaidae	**Milkweed Butterflies**
Danaus plexippus	Monarch
Riodinidae	**Metalmarks**
Apodemia mormo virgulti	Behr's Metalmark
Calephelis wrighti	Wright's Metalmark
Lycaenidae	**Blue, Hairstreaks, Coppers**
Brephidium exilis	Pygmy Blue
Hemiargus isola	Reakirt's Blue
Icaricia acmon	Acmon Blue
Leptotes marina	Marine Blue
Strymon melinus	Common Hairstreak

Appendix B. Butterflies (Continued)

Pieridae	**Whites and Sulfurs**
Colias eurytheme	Alfalfa Sulphur
Phoebis sennae	Cloudless Sulphur
Pontia protodice	Checkered White
Pieris rapae	Cabbage White
Hesperiidae	**Skippers**
Heliopetes ericetorum	Large White Skipper
Hylephila phyleus	Fiery Skipper
Panoquina errans	Wandering Skipper

* *P. zelicaon* larvae (all instars) were observed commonly on sweet fennel (*Foeniculum vulgare*) at the eastern margins of Los Peñasquitos Lagoon during the 8/7/17 field visit.

Appendix C. Site Photos for SDG&E TL674A Reconfiguration & TL666D Removal Site

Image 1: View west of San Dieguito Lagoon east of San Dieguito River Walk pier showing saltgrass habitat for wandering skipper. Wandering skipper was observed in this area.

Image 2: View west of San Dieguito Lagoon showing saltgrass habitat for wandering skipper along margin of San Dieguito River Walk. Wandering skipper was observed in this area.

Image 3: View east of San Dieguito Lagoon showing habitat for wandering skipper. Tidal flow prevented access to some pole sites east of this location.

Image 4: View west of San Dieguito Lagoon from San Dieguito Drive / Racetrack View Road showing habitat for wandering skipper. Foreground area contains Diegan coastal sage scrub.

Image 5: Wandering skipper perched on iceplant in San Dieguito Lagoon near River Walk pier.

Image 6: Wandering skipper saltgrass habitat near Pump Station 65 in Los Peñasquitos Lagoon.

Image 7: View northwest in Los Peñasquitos Lagoon showing invasive cattail (*Typha* spp.).

Image 8: View of Los Peñasquitos Lagoon from Portofino Drive and Carmel Valley Road. Wandering skipper was observed just south of this intersection. An undeveloped lot (left) with Diegan coastal sage scrub and potential nectar resources was included in surveys.

Image 9: Wandering skipper nectaring on alkali heath (*Frankenia salina*) in saltgrass habitat just north of Pump Station 65 at the east end of Los Peñasquitos Lagoon.

Image 10: Wandering skipper larval hostplant, Saltgrass (*Distichlis spicta*).

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