

June 27, 2014

Mr. Joshua D. Taylor Lead Planner TRC Solutions, Inc. 123 Technology Drive Irvine, CA 92618

RE: SPECIAL-STATUS PLANT SURVEY SUMMARY REPORT FOR THE PROPOSED SAN DIEGO GAS & ELECTRIC COMPANY SYCAMORE TO PENASQUITOS 230 kV TRANSMISSION LINE PROJECT, SAN DIEGO COUNTY, CALIFORNIA

Mr. Taylor:

Rocks Biological Consulting, Inc. (RBC) performed special-status plant surveys on behalf of Busby Biological Services, Inc. (BBS) for the proposed San Diego Gas & Electric Company (SDG&E) Sycamore Canyon to Peñasquitos Substation 230 kilovolt (kV) transmission line project (Proposed Project) located in the City of San Diego, San Diego County, California (Attachment A: Figures 1 and 2). Three rounds of focused surveys for plant species considered rare, threatened, or endangered by the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and/or California Native Plant Society (CNPS), and/or plant species on SDG&E's Narrow Endemic Plant list were conducted within the Biological Survey Area (BSA) for the Proposed Project: round 1 in September and October of 2013; round 2 in April 2014; and round 3 in May of 2014.

Three federally and/or state-listed plant species – thread-leaved brodiaea (*Brodiaea filifolia*), Del Mar manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*), and San Diego button-celery (*Eryngium aristulatum* ssp. *parishii*) – were observed in the BSA. In addition, 18 other special-status plant species, as defined by their California Rare Plant Rank (CRPR), were observed in the BSA. The 21 species observed within the BSA include (in alphabetical order by scientific name):

- spineshrub (*Adolphia californica*; CRPR 2B.1)
- Del Mar manzanita (FE, CRPR 1B.1)
- Palmer's sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego sunflower (Bahiopsis laciniata; CRPR 4.2)
- thread-leaved brodiaea (FT, SE, CRPR 1B.1)
- summer-holly (Comarostaphylis diversifolia ssp. diversifolia; CRPR 1B.2)
- wart-stemmed ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- seaside cistanthe (*Cistanthe maritima*; CRPR 4.2)
- small-flowered Morning-glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa sand aster (Corethrogyne filaginifolia var. linifolia; 1B.1)
- western dichondra (*Dichondra occidentalis*; CRPR 4.2)
- San Diego button-celery (FE, SE, CRPR 1B.1)
- coast barrel cactus (Ferocactus viridescens var. viridescens; CRPR 2B.1)
- Palmer's grapplinghook (Harpagonella palmeri; CRPR 4.2)

- graceful tarplant (Holocarpha virgata ssp. elongata; CRPR 4.2)
- decumbent goldenbush (Isocoma menziesii var. decumbens; CRPR 1B.2)
- San Diego marsh-elder (Iva hayesiana; CRPR 2B.2)
- southwestern spiny rush (Juncus acutus ssp. leopoldii; CRPR 4.2)
- Robinson's pepper-grass (Lepidium virginicum var. robinsonii; CRPR 4.3)
- Torrey pine (as planted individuals) (Pinus torreyana; CRPR 1B.2)
- Nuttall's scrub oak (Quercus dumosa; CRPR 1B.1)

This survey report summarizes the methods used to conduct the surveys and the results of the surveys. In addition, a brief discussion about the results is also provided.

#### **PROJECT DESCRIPTION**

In an effort to increase the efficiency and supply of renewable generated power to the California Independent System Operator (CAISO) grid, CAISO has identified a policy-driven need for a new 230 kV transmission line to connect the existing SDG&E Sycamore Canyon and Peñasquitos Substations. In response to the CAISO Request for Proposal (RFP) for this new 230 kV transmission line, SDG&E proposes to construct and operate a new, approximately 16.5-mile 230 kV transmission line between the existing SDG&E Sycamore Canyon Substation in the City of San Diego on the Marine Corps Air Station (MCAS) Miramar base and the existing Peñasquitos Substation in the Torrey Hills community of the City of San Diego (Attachment A: Figures 1 and 2). The Proposed Project would also include the consolidation of two existing 69 kV power lines onto new double-circuit, steel structures that would replace existing, predominantly wood structures. All new transmission line facilities would be located within existing SDG&E, right-of-way (ROW) or within franchise position within existing public roadways.

#### **BSA DESCRIPTION**

The approximately 1,058.88-acre BSA is comprised of mesa tops, which are often developed, and steep canyons that bisect the mesas. The BSA includes a 500-foot-wide survey corridor along the approximately 16.5-mile alignment, the Sycamore Canyon and Peñasquitos Substations, and the proposed Sycamore and Stowe construction yards. Within the BSA, a total of approximately 414.80 acres is classified as developed, disturbed, bare ground, or ornamental land cover types. The dominant natural vegetation communities within the BSA include approximately 179.86 acres of Diegan coastal sage scrub, approximately 93.44 acres of southern mixed chaparral, approximately 85.32 acres of nonnative grassland, approximately 78.51 acres of scrub oak chaparral, and approximately 71.12 acres of chamise chaparral.

The canyons within the BSA drain south into Peñasquitos Creek and often support riparian vegetation communities, including approximately 3.41 acres of southern willow scrub, approximately 2.63 acres of southern coast live oak riparian forest, approximately 1.40 acres of mulefat scrub, and approximately 1.37 acres of southern riparian scrub.

Some areas within the BSA are comprised of revegetated areas and often include special-status plants that were planted either as ornamentals or as mitigation for impacts not associated with the Proposed Project. Because these revegetated communities are human-made, they are

differentiated from naturally occurring vegetation communities, and any special status plants in these areas are mapped with a revegetated modifier.

#### **METHODS**

Focused special-status plant surveys were conducted for the Proposed Project within the BSA that includes a 500-foot-wide survey corridor along the approximately 16.5-mile alignment, the Sycamore Canyon and Peñasquitos Substations, and the proposed Sycamore and Stowe construction yards.

Prior to the start of the focused surveys, a list of the special-status plant species that have potential to occur within or adjacent to the BSA was developed from a query of the CDFW's California Natural Diversity Database (CNDDB), the SanGIS database, data provided by SDG&E from other projects, research using the San Diego Natural History Museum's (SDNHM) plant distribution mapping and voucher specimen lists, and local knowledge of special-status plant species likely to occur in the area. The CNDDB query included a review of special-status plant species reported within 1, 3, and 5 miles of the Proposed Project alignment. Prior to conducting the surveys, species on the CNDDB list were carefully considered for their potential to occur within or adjacent to the BSA, and a list of target species was developed for the Proposed Project.

A plant species was classified as 'special-status' if it had one or more of the designations summarized in Table 1, below.

**Table 1: Status Abbreviations and Explanations** 

| STATUS ABBREVIATION                  |     | STATUS EXPLANATION  |  |
|--------------------------------------|-----|---|--|
| FEDERAL                              | FE  | federally listed endangered species                             |  |
|                                      | FT  | federally listed threatened species                             |  |
|                                      | FC  | federal candidate species, proposed for listing                 |  |
| STATE                                | SE  | California state-listed endangered species                      |  |
|                                      | ST  | California state-listed threatened species                      |  |
|                                      | SR  | California state-listed rare species (plants only)              |  |
| CALIFORNIA RARE PLANT RANK<br>(CRPR) | 1A  | presumed extirpated in California and rare or extinct elsewhere |  |
|                                      | 1B  | rare, threatened, or endangered in California and elsewhere     |  |
|                                      | 2A  | presumed extirpated in California but more common elsewhere     |  |
|                                      | 2B  | rare, threatened, or endangered in California but more common   |  |
|                                      |     | elsewhere   |  |
|                                      | 3   | more information needed   |  |
|                                      | 4   | limited distribution  |  |
| CRPR 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)           |  |
|                                      | 0.3 | Not very threatened in California (<20% of occurrences          |  |
|                                      |     | threatened / low degree and immediacy of threat or no current   |  |
|                                      |     | threats known)  |  |

Species that were on the CNDDB list, but were recently "considered but rejected (CBR)" as a special-status species by CNPS because they are more common than previously thought or because their taxonomic rank has changed, were not included as they do not meet the criteria to be classified as a special-status species.

Surveys were conducted by walking meandering transects throughout the BSA. When a special-status plant species was observed, a waypoint was taken with a handheld Global Positioning System (GPS) that recorded the plant's location and the elevation above mean sea level (amsl). Where vegetation was very dense on steep slopes, such as in scrub oak chaparral, documentation of some species was accomplished through the use of binoculars and marking of the species' location on a field map that was later digitized and incorporated into the Geographic Information System (GIS) database.

Plant names used herein follow the *Checklist of the Vascular Plants of San Diego County, 4<sup>th</sup> edition* (*Checklist*; Rebman and Simpson 2006). Additional plant references used included *The Jepson Manual: vascular plants of California, Second Edition (Jepson Manual*; Baldwin et al. 2012), the Consortium of California Herbarium voucher data, and the San Diego Plant Atlas. If the *Jepson Manual* and the *Checklist* differ in plant taxonomic treatments, such as recognition or lumping of a variety, then the taxonomy of the *Checklist* and the taxonomic opinion of Dr. Jon Rebman (personal communication 2014), Curator of Botany at the SDNHM, took precedence.

#### **RESULTS**

Three rounds of special-status plant surveys were conducted: round 1 occurred between September 25 and October 2, 2013; round 2 occurred between April 2 and April 15, 2014; and round 3 occurred between May 12 and May 29, 2014. Surveys were conducted by Lee Ripma (LR; RBC), Jim Rocks (JR; RBC), Brian Lohstroh (BL; Lohstroh Biological Consulting), Margie Mulligan (MM; Mulligan Biological Consulting), Kristen Hasenstab-Lehman (KH; RBC), Ryan Meszaros (RM; BBS), Karen Weber (KW; BBS), Pete Dolan (PD; BBS), and Warren Schmidtmann (WS; SDNHM). A list of surveyors and survey dates are summarized in Table 2, below.

**Table 2. Survey Dates and Surveyors** 

| Survey Round                  | Survey Date | Surveyor(s)        |
|-------------------------------|-------------|--------------------|
| Round 1<br>(Late Summer/Fall) | 9/25/13     | LR, JR             |
|                               | 9/26/13     | LR, JR, MM, BL     |
|                               | 9/27/13     | LR, BL, MM, WS     |
|                               | 9/30/13     | LR, JR, MM, BL     |
|                               | 10/1/13     | JR, MM, BL, LR     |
|                               | 10/2/13     | LR, MM             |
|                               | 10/4/13     | LR                 |
| Round 2<br>(Early Spring)     | 4/2/14      | JR, BL, RM, PD     |
|                               | 4/3/14      | JR, BL, RM, PD     |
|                               | 4/7/14      | LR, MM, BL, JR     |
|                               | 4/8/14      | BL, MM, KW         |
|                               | 4/9/14      | LR, MM, KW, JR     |
|                               | 4/10/14     | LR, BL, KW, MM     |
|                               | 4/11/14     | LR, MM, JR, BL, PD |
|                               | 4/15/14     | MM, BL             |
| Round 3<br>(Late Spring)      | 5/12/14     | LR, JR, MM, BL     |
|                               | 5/13/14     | LR, JR, MM, BL     |
|                               | 5/15/14     | LR, KH, JR, MM, BL |
|                               | 5/19/14     | LR, KH             |
|                               | 5/21/14     | LR, KH, MM, BL     |

| 5/29/14 | LR, KH |
|---------|--------|

#### **Special-Status Plant Species Observed**

Attachment B contains a list of the target species and their potential to occur within the BSA as well as plants that are known to occur within the vicinity of the BSA based on the CNDDB results but that were excluded from the target list since they have no potential to occur within the BSA. Attachment C is a compendium of plant species observed within the BSA during the special-status plant surveys.

Twenty-one special-status plant species, including three listed plant species – thread-leaved brodiaea (FT, SE), Del Mar manzanita (FE), San Diego button-celery (FE, SE) – were observed in the BSA. The locations of the special-status plant species are presented in Attachment A: Figure 3, Maps 1 through 25. Each special-status plant species observed during these surveys is discussed below, including its distribution, location within the BSA, and threat rank.

#### Spineshrub (Adolphia californica)

Spineshrub is a CRPR 2B.1 species (seriously threatened in California but more common elsewhere). It is a deciduous shrub in the Rhamnaceae family that typically blooms from December to May. This species is often found on dry slopes in chaparral, coastal sage scrub, and grassland. Spineshrub is known from San Diego County and Baja California, Mexico, at elevations between 145 and 2,430 feet amsl. This species is threatened by development, road construction, nonnative plant species, and grazing (CNPS 2014).

Spineshrub was observed in many locations within the BSA. On the west side of the BSA, populations of spineshrub were found south of the intersection of Carmel Mountain Road and Carmel Country Road east to the intersection of Interstate 15 and Poway Road. Occurrences of spineshrub varied from scattered individuals in open grassland and Diegan coastal sage scrub to hundreds of individuals forming nearly monotypic spineshrub scrub on west and south facing slopes. The approximate total number of individuals within the BSA exceeds 7,500.

#### Del Mar Manzanita (Arctostaphylos glandulosa ssp. crassifolia)

Del Mar manzanita is a federally listed endangered species, a CRPR 1B.1 species (seriously threatened in California and elsewhere), and an NCCP-covered species. It is an evergreen shrub in the Ericaceae family that typically blooms from December to June. This species is found in maritime chaparral on sandstone soil formations. Del Mar manzanita is known from San Diego County and in Baja California, Mexico, at elevations between 0 and 1,200 feet amsl. This species is threatened by development, agricultural practices, and fuel modification efforts (CNPS 2014).

Del Mar manzanita was found in only one portion of the BSA, southwest of the Del Mar Mesa Preserve, along the Del Mar Mesa Trail. There are six separate occurrences of Del Mar manzanita within the BSA, which contain a total of 10 individuals. Some individuals co-occur in patches with the much more common Eastwood manzanita (*Arctostaphylos glandulosa* ssp. *glandulosa*) that has a very similar appearance.

Because the two subspecies are sympatric and morphologically similar, each *A. glandulosa* observed within the BSA was classified to subspecies level. The endangered Del Mar manzanita is distinguished from Eastwood's manzanita in having hairs that are either puberulent or setaceous, but not glandular (Rebman 2014, pers. comm.). In addition, the fruit of Del Mar manzanita is spheric, but markedly depressed on the top and bottom (Munz 1974; Parker et al. 2013; Rebman 2014, pers. comm.). Some authors use growth habit, leaf margin, and leaf color to distinguish the subspecies, but hair type and fruit (if available) are the key characters that are used to differentiate subspecies (Rebman 2014, pers. comm.).

#### Palmer's Sagewort (Artemisia palmeri)

Palmer's sagewort is a CRPR 4.2 species (limited distribution and moderately threatened in California). It is a deciduous shrub in the Asteraceae family that typically blooms from May to September. This species is found in mesic, sandy soils along drainages in chaparral, coastal sage scrub, and riparian habitats. Palmer's sagewort is known from San Diego County and in Baja California, Mexico, at elevations between 45 and 3,005 feet amsl. This species is threatened by development, flood control projects, and possibly by nonnative plant species (CNPS 2014).

Palmer's sagewort was found in three discrete areas within the BSA – two populations along drainages associated with Los Peñasquitos Canyon and one in McConigle Canyon just west of State Route 56. Each population consisted of numerous small groupings of three to five individuals, for a total of about 200 individuals within the BSA. Palmer's sagewort was found along drainages with riparian species, such as willows (*Salix* spp.), coast live oak (*Quercus agrifolia*), and western sycamore (*Platanus racemosa*).

## San Diego Sunflower (Bahiopsis laciniata)

San Diego sunflower is a CRPR 4.2 species (limited distribution and fairly endangered in California). It is a shrub in the Asteraceae family that typically blooms from February to June. This species typically is observed on dry, south or west-facing slopes in chaparral and coastal sage scrub. San Diego sunflower is known from Orange and San Diego counties as well as from Baja California and Sonora, Mexico. It is found at elevations between 195 and 2,460 feet amsl. This species is threatened by development (CNPS 2014).

Several hundred individuals of San Diego sunflower were observed naturally occurring across the BSA in patches ranging from five individuals to large populations with up to 100 individuals. This species was also documented in several revegetation areas, including at Peñasquitos Substation and in large plantings on manufactured slopes at the southern terminus of Briarlake Woods Drive and along Maler Drive near Black Mountain Open Space Preserve. This species was not observed east of Interstate 15.

#### Thread-Leaved Brodiaea (Brodiaea filifolia)

Thread-leaved brodiaea is listed as a federally threatened species, a California state-listed endangered species, a CRPR 1B.1 species, and a *SDG&E Subregional NCCP* (NCCP) covered species. Thread-leaved brodiaea is a perennial herb (bulb) in the Asparagaceae family that regrows annually from an underground corm; it is distributed in southern California from San Diego to Los Angeles

and east to the San Bernardino Mountains. The typical habitat of thread-leaved brodiaea ranges from grasslands to ephemeral wetlands, such as vernal pools at low elevations, and meadows in montane habitat (CNPS 2014). Thread-leaved brodiaea occurs at elevations between 80 and 2, 400 feet amsl in San Diego County.

Thread-leaved brodiaea was found in one location within the BSA. Approximately 62 flowering individuals were observed growing in deep clay soils, within a mix of native and non-native grassland, at the City of San Diego's Black Mountain Open Space Preserve. Typically, not all individuals of thread-leaved brodiaea flower each year, and many non-flowering corms remain dormant below ground. As a result, the population size is often much larger than the number of individuals observed flowering. Notably, this population of thread-leaved brodiaea is the southernmost occurrence for this species across its range.

#### Wart-Stemmed Ceanothus (Ceanothus verrucosus)

Wart-stemmed ceanothus is a CRPR 2B.2 species (moderately threatened in California but more common elsewhere) and an NCCP-covered species. It is an evergreen shrub in the Rhamnaceae family that typically blooms from December to May. This species is found in chaparral and coastal sage scrub near typically near the coast. Wart-stemmed ceanothus is known from Riverside and San Diego counties as well as from Baja California, Mexico, at elevations between 3 and 1,250 feet amsl. This species is threatened primarily by development (CNPS 2014).

Wart-stemmed ceanothus was found in one discrete area of the BSA, on the north side of Los Peñasquitos Canyon, east of the Peñasquitos Substation, and south of Manorgate Drive. The population consists of approximately 80 plants, most of which are in small patches of one to three plants with one larger area of 30 individuals.

#### Seaside Cistanthe (Cistanthe maritima)

Seaside cistanthe is a CRPR 4.2 species (limited distribution and moderately threatened in California). This species is a small, succulent annual or perennial herb in the Montiaceae family that occurs along the southern coast and throughout the Channel Islands of California and into northern Baja California, Mexico. The typical habitat of seaside cistanthe is sandy soil openings in coastal scrub, or on sea bluffs (CNPS 2014). In San Diego County this species is restricted to low elevations, below 1,000 feet amsl.

Seaside cistanthe was found in one location within the BSA, at the edge of the north side of Los Peñasquitos Canyon, growing with other special-status plant species. Approximately 500 vegetative and flowering individuals were observed in and around a disturbed opening within Diegan coastal sage scrub. Coast barrel cactus was also present at this location, and spineshrub was abundant immediately downslope.

#### Summer-Holly (Comarostaphylis diversifolia ssp. diversifolia)

Summer-holly is a CRPR 1B.2 species (moderately threatened in California and elsewhere). It is an evergreen shrub in the Ericaceae family that typically blooms from April to June. This species is found in chaparral and cismontane woodland. Summer-holly is known from Orange, Riverside,

Santa Barbara, and San Diego counties as well as from Baja California, Mexico, at elevations between 95 and 2,595 feet amsl. This species is threatened by development and gravel mining (CNPS 2014).

Summer-holly was found in a distinct segment of the BSA occurring in the mix of chaparrals from the north end of the Del Mar Mesa Preserve southwest to where Diegan coastal sage scrub becomes dominant. Summer-holly was observed most often on north facing slopes or along both banks of the ephemeral drainages at the bottom of canyons. Roughly, 700 individuals of summer-holly were observed in the BSA during the surveys.

#### Small-Flowered Morning-Glory (*Convolvulus simulans*)

Small-flowered morning-glory is a CRPR 4.2 species (limited distribution and moderately threatened in California). It is a small, sprawling annual herb in the Convolvulaceae family and is distributed from San Diego throughout the San Joaquin Valley to the San Francisco Bay area, and also on the Channel Islands in California. This species also occurs in Arizona and Baja California, Mexico. The typical habitat of small-flowered morning-glory is clay soils in annual grasslands, coastal sage scrub, and chaparral (CNPS 2014). Small-flowered morning-glory occurs at elevations between 100 and 2,800 feet amsl in San Diego County.

Small-flowered morning-glory was found within the BSA growing in clay soil in grassland habitat. At each of the five locations, only two to three individuals were observed. This species was observed growing alongside the federally endangered thread-leaved brodiaea.

#### Del Mar Mesa Sand Aster (Corethrogyne filaginifolia var. linifolia)

Del Mar Mesa sand aster, a California endemic species, is a CRPR 1B.1 species (seriously threatened in California and elsewhere) and an NCCP-covered species. It is a perennial herb in the Asteraceae family that typically blooms from May to September. This species typically is found in sandy soils associated with coastal bluff scrub, openings in maritime chaparral, and coastal sage scrub. Del Mar Mesa sand aster is known only from San Diego County, at elevations between 45 and 495 feet amsl. This species is threatened by development, nonnative plant species, trampling by foot traffic, and road maintenance (CNPS 2014).

Del Mar sand aster was observed in two areas along an existing SDG&E access route within the Del Mar Mesa Preserve. This species was growing in very low numbers along the edge of dirt roads and in openings. It was observed co-occurring with the more widespread common sand aster (*Corethrogyne filaginifolia* var. *filaginifolia*). In total, about 35 individuals of Del Mar Mesa sand aster were observed in the BSA.

This difficult species complex has been moved among genera, split into multiple species, multiple varieties, or treated as a single, highly variable species of *Corethrogyne* (Munz 1974, Lane 1992). The *Jepson Manual* recognizes a single taxon of *Corethrogyne*, *C. filaginifolia*, with no subspecific taxa and contains a note that eliminating subspecific taxa is likely eliminating morphological entities (Markos and Strother 2013). In San Diego, botanists recognize the local varieties because of largely consistent morphological characteristics, soil affinities, and relatively discrete geographic ranges.

The most distinctive character on the Del Mar sand aster (*C. f.* var. *linifolia*) are the flowering heads (inflorescence) that are large, globose, and covered with soft, silvery, tomentose (woolly) trichomes (hairs); this contrasts with the smaller cylindrical heads covered in glandular trichomes of the common sand aster (*C. f.* var. *filaginifolia*) (Munz 1974). During the surveys, plants with intermediate characteristics were observed in the field. If the flowering heads were tomentose rather than glandular, then the individual was determined to be Del Mar sand aster, even where growing with common sand aster (Rebman 2014, pers. comm.).

#### Western Dichondra (Dichondra occidentalis)

Western dichondra is a CRPR 4.2 species (limited distribution and moderately threatened in California). It is a matted, stoloniferous perennial herb in the Convolvulaceae family and is distributed from the central coast, throughout the Channel Islands, and to the Peninsular Ranges within California. Western dichondra also occurs in Baja California, Mexico. This species typically grows amongst rocks and shrubs in coastal sage scrub, chaparral, and oak woodland and is often prevalent following a fire (CNPS 2014). In San Diego County this species occurs at elevations less than 1,700 feet amsl.

Western dichondra was found in five widely spaced locations across the BSA from the Peñasquitos Substation to the hills just west of the Sycamore Canyon Substation. This species is more often seen following a fire or other disturbance and becomes less common as perennial woody vegetation matures. These widely scattered populations within the BSA are a result of the disturbance-following nature of this species.

#### San Diego Button-Celery (Eryngium aristulatum ssp. parishii)

San Diego button-celery is a federally listed endangered species, a state-listed endangered species, a CRPR 1B.1 species (seriously threatened in California and elsewhere), and a NCCP-covered species. It is an annual/perennial herb in the Apiaceae family that typically blooms from April to June. This species is found in mesic soils within and around vernal pools in coastal sage scrub and grassland. San Diego button-celery is known from Riverside and San Diego counties as well as from Baja California, Mexico, at elevations between 65 and 2,035 feet amsl. This species is threatened by development, nonnative plant species, trampling by foot traffic, road maintenance, agricultural practices, grazing, vehicle activity, and illegal dumping (CNPS 2014).

San Diego button-celery was observed in two locations within the BSA - in the vernal pools immediately east of the Peñasquitos Substation and in the vernal pool complexes on Del Mar Mesa. Approximately 125 individuals were observed between the two locations. San Diego button-celery was not observed east of Del Mar Mesa.

#### Coast Barrel Cactus (Ferocactus viridescens)

Coast barrel cactus is a CRPR 2B.1 species (seriously threatened in California but more common elsewhere) and an NCCP-covered species. It is a stem succulent in the Cactaceae family that typically blooms from May to June. This species typically is found on dry, west and south facing slopes in chaparral, coastal sage scrub, grassland, and adjacent to vernal pools. Coast barrel cactus is known from Riverside and San Diego counties as well as from Baja California, Mexico, at

elevations between 10 and 1,480 feet amsl. This species is threatened by development, nonnative plant species, trampling by foot traffic, road maintenance, agricultural practices, grazing, vehicle activity, and illegal dumping (CNPS 2014).

Coast barrel cactus was found consistently from the Peñasquitos Substation east to Del Mar Mesa and was less common east of Interstate 15. Of the approximately 1,000 individuals observed during the surveys, coast barrel cactus was most common on the rocky, south and west facing slopes along the north side of Los Peñasquitos Canyon and along Del Mar Mesa. Coast barrel cactus was one of the few plants growing within and under chamise chaparral.

#### Palmer's Grappling-Hook (Harpagonella palmeri)

Palmer's grappling-hook is a CRPR 4.2 species (limited distribution and moderately threatened in California) and a NCCP-covered species. It is an annual herb in the Boraginaceae family that typically blooms from March to May. This species typically is found in clay soils (occasionally granitic) in chaparral, coastal sage scrub, and grassland. Palmer's grappling-hook is known from southern California in Los Angeles, Orange, Riverside, and San Diego counties as well as from Santa Catalina Island, and it is also known from both Baja California and mainland Mexico. It occurs at elevations between 65 and 3,135 feet amsl. This species is threatened mainly by development, nonnative plant species, and agricultural practices (CNPS 2014).

Palmer's grappling-hook was found on clay soils in openings along the north edge of Los Peñasquitos Canyon and in the grasslands at the base of Black Mountain. This species was largely absent from the Del Mar Mesa area probably as a result of the sandstone soil type in the area. Palmer's grappling-hook was not observed east of Interstate 15.

#### Graceful Tarplant (Holocarpha virgata ssp. elongata)

Graceful tarplant, a California endemic species, is a CRPR 4.2 species (limited distribution and moderately threatened in California). It is an annual herb in the Asteraceae family that typically blooms from May to November. This species typically is found in clay soils in chaparral, cismontane woodland, coastal sage scrub, grassland, and disturbed areas. Graceful tarplant is known from southern California in Orange, Riverside, and San Diego counties, at elevations between 195 and 3,610 feet amsl. This species is threatened mainly by development (CNPS 2014).

Graceful tarplant was observed within grassland or along disturbed edges, such as dirt roads and trails in five areas within the BSA. This species typically flowers in the late summer or fall and was observed during the fall 2013 surveys near an existing SDG&E tower and at the base of Black Mountain.

#### Decumbent Goldenbush (Isocoma menziesii var. decumbens)

Decumbent goldenbush is a CRPR 1B.2 species (moderately threatened in California and elsewhere). It is a shrub in the Asteraceae family that typically blooms from April to November. This species typically is found in sandy, and often disturbed, areas in chaparral and coastal sage scrub. Decumbent goldenbush is known from southern California in Los Angeles, Orange, and San Diego counties as well as from San Clemente Island and Santa Catalina Island, and it is also known

from Baja California, Mexico. It occurs at elevations between 30 and 445 feet amsl. This species is threatened by development (CNPS 2014).

Decumbent goldenbush was found consistently from near the Peñasquitos Substation across the BSA to just west of Interstate 15, with approximately 2,500 individuals observed within the BSA. This species was found in openings in coastal sage scrub and chaparral along the north side of Los Peñasquitos Canyon and across Del Mar Mesa, and in grasslands with clay soils at the base of Black Mountain.

Taxonomists recognize several varieties of *Isocoma menziesii*. The two varieties that are present within the BSA, *I.m.* var. *decumbens* (decumbent goldenbush) and *I. m.* var. *vernonioides* (coastal goldenbush), can be difficult to differentiate because they have very similar morphology and because they co-occur and can hybridize where their ranges overlap. To separate the two varieties, the type of hairs on each individual was examined, the degree of toothing along the margin of the leaf was considered. Decumbent goldenbush has leaves that have fine, dense, cobwebby hairs and leaf margins that are entire or only have one or two pairs of distal teeth (Keil 2013). In contrast, coastal goldenbush has tomentose leaf hairs with an opaque center that are thicker and more robust. This fine hair difference is the key character for determining the decumbent goldenbush variety (Rebman 2014, pers. comm.).

#### San Diego Marsh-Elder (Iva hayesiana)

San Diego marsh-elder is a CRPR 2B.2 species (moderately threatened in California but more common elsewhere). It is a perennial herb in the Asteraceae family that typically blooms from April to October. This species is found along ephemeral drainages, alkali marshes, and playas. San Diego marsh-elder is known from San Diego County and from Baja California, Mexico, at elevations between 30 and 1,640 feet amsl. This species is threatened by waterway channelization, coastal development, nonnative plant species, and vehicle activity (CNPS 2014).

San Diego marsh-elder was observed growing naturally in two locations within the BSA. This species was documented growing with Palmer's sagewort along the drainage in McGonigle Canyon, and another population was observed along Peñasquitos Creek just east of Interstate 15. This species was also observed as a primary component of a revegetated area (with southwestern spiny rush) within McConigle Canyon where the drainage passes under Carmel Valley Road west of Camino Del Sur.

#### Southwestern Spiny Rush (Juncus acutus ssp. leopoldii)

Southwestern spiny rush is a CRPR 4.2 species (limited distribution and moderately threatened in California). It is a rhizomatous herb in the Juncaceae family that blooms from May to June. This species typically is found along ephemeral drainages, alkaline marshes and seeps, mesic areas of coastal dunes, and coastal salt marsh. Southwestern spiny rush is known from southern California in Imperial, Los Angeles, Orange, Santa Barbara, San Diego, San Luis Obispo, and Ventura counties; from Nevada, Arizona, and Georgia; and from Baja California, Mexico, as well as into South America. It is found at elevations between 10 and 2,955 feet amsl. This species is threatened by development and flood control activities (CNPS 2014).

Southwestern spiny rush was observed in two locations in the BSA. One individual was observed growing in a canyon between residential housing in Rancho Peñasquitos west of Black Mountain. This species was also observed as a primary component of a revegetation effort (with San Diego marsh-elder) within McConigle Canyon, where the drainage passes under Carmel Valley Road west of Camino Del Sur.

#### Robinson's Pepper-Grass (Lepidium virginicum var. robinsonii)

Robinson's pepper-grass is a CRPR 4.3 species (limited distribution but not very threatened in California). It is an annual herb in the Brassicaceae family that typically blooms from January to July. This species typically is found in chaparral and coastal sage scrub. Robinson's pepper-grass is known from Los Angeles, Orange, Riverside, Santa Barbara, San Bernardino, San Diego, and Ventura counties as well as from Santa Cruz Island and from Baja California, Mexico. It is found at elevations between 3 and 2,905 feet amsl. This species is threatened by development and possibly by nonnative plant species (CNPS 2014).

Robinson's pepper-grass was observed in the BSA on clay soils in open coastal sage scrub or along the edges of dirt roads. Each of the small patches of this plant was observed along the north edge of Los Peñasquitos Canyon immediately south of Carmel Mountain Road.

Robinson's pepper-grass is a dainty annual which is recognized in the 5th edition checklist of San Diego County (Rebman and Simpson 2014, in press), despite no longer being recognized in the *Jepson Manual* treatment of *Lepidium* (Al-Shehbaz 2014). Dr. Rebman (2014, pers. comm.) recognizes this taxon as distinct because of its round glabrous pedicels that are often longer than the fruit as well as its cauline, lobed leaves with narrow segments.

#### Torrey Pine (as planted individuals) (*Pinus torreyana*)

Torrey pine is a CRPR 1B.2 species (moderately threatened in California and elsewhere) and is a NCCP-covered species. It is an evergreen tree in the Pinaceae family. This species typically is found in sandstone in chaparral and closed-cone coniferous forest. Torrey pine is known from San Diego and Santa Barbara counties at elevations between 245 and 525 feet amsl. This species is threatened by development; it was threatened by the five-spined engraver bark beetle at Torrey Pines State Reserve, but biological control has contained the infestation (CNPS 2014).

Torrey pine was observed in the BSA as planted individuals around the Peñasquitos Substation. No natural occurrences of this species were observed.

#### Nuttall's Scrub Oak (Quercus dumosa)

Nuttall's scrub oak is a CRPR 1B.1 species (seriously threatened in California and elsewhere). It is an evergreen shrub in the Fagaceae family that typically blooms from February to April. This species is found in sandy or clay loam soils in chaparral, coastal sage scrub, and closed-cone coniferous forest. Nuttall's scrub oak is known from southern California from Orange, Santa Barbara, San Diego, and Ventura counties as well as from Baja California, Mexico, at elevations between 45 and 1,315 feet amsl. This species is threatened by development, fire suppression, and vegetation/fuels management (CNPS 2014).

Nuttall's scrub oak was present in the BSA as individual shrubs or small patches within chaparral and also as the dominant species on some north and east facing slopes. At least 1,500 individuals were observed within the BSA primarily from State Route 56 across Del Mar Mesa and then to the west along the north side of Los Peñasquitos Canyon. A population of approximately 60 individuals was also present on a north-facing slope east of Interstate 15 south of Scripps Poway Parkway.

Nuttall's scrub oak routinely hybridizes with other *Quercus* species, such as *Q. engelmannii* and *Q. berberidifolia* in San Diego County. One hybrid species, Torrey's scrub oak (*Q.* X acutidens), is common in San Diego County (Rebman 2014 pers. comm.) and was frequently observed within the BSA. Hybridization with other *Quercus* species represents a natural threat to the Nuttall's scrub oak (CNPS 2014).

A number of morphological characters were used to differentiate individual oaks as either Torrey's scrub oak (i.e., a hybrid oak) or Nuttall's scrub oak in the field. The first morphological character examined was growth habit and height. Nuttall's scrub oak consists of individuals with a mounded, impenetrable growth habit, 3 to 9 feet in height, whereas hybrids are usually more robust or tree like in growth form (Tucker 2013). Lateral terminal branches of Nuttall's scrub oak appear to be at perpendicular angles, whereas hybrids have an acute branching pattern. Nuttall's scrub oak, though generally evergreen, is not as densely leafy overall and on each branch as other sympatric oaks (Tucker 2013). Most importantly, individuals with softly spreading stellate hairs on the abaxial surface, not strongly appressed stellate hairs, were deemed Nuttall's scrub oaks (Munz 1974; Tucker 2013; Rebman 2014, pers. comm.). In the absence of other field characteristics, hairs were used as the definitive identification feature for Nuttall's scrub oaks (Rebman 2014, pers. comm.).

#### **DISCUSSION**

Three separate rounds of special-status plant surveys were conducted within the BSA between late summer 2013 to late spring 2014 to allow for observation and identification of the target special-status plant species identified for the Proposed Project. These surveys spanned the varying germination, vegetative growth, and flowering periods for all target special-status plant species. A total of 21 special-status plant species were documented within the BSA. All are considered to be special-status species based on their federal, state, and/or CRPR designations. Of the 21 species, three are federally listed endangered or threatened, and two of these are also state-listed endangered species.

San Diego County received below average rainfall during the 2014 water year (October 1, 2013, to September 30, 2014). To date, rainfall is currently at 50 percent of average, with a total rainfall of approximately 5.01 inches recorded at Lindbergh Field. For comparison, the 2013 water year had approximately 6.55 inches of rainfall, which is 61 percent of average; the 2012 water year had approximately 7.9 inches of rainfall, which is 73 percent of average; and the 2011 water year had approximately 12.7 inches of rainfall, which is 118 percent of average (CNRFC 2014). The BSA is between approximately 12 and 17 miles away from Lindbergh Field. Although the total rainfall within the BSA may have been slightly different from that recorded at Lindbergh Field, the percent of average is comparable.

While some annual plant species were probably not significantly affected by the below average rainfall, the below average rainfall may have resulted in little or no germination or growth for the

federally listed threatened and state-listed endangered San Diego thornmint (*Acanthomintha ilicifolia*; FT, SE, CRPR 1B.1), whose germination is positively correlated with seasonal rainfall. However, San Diego thornmint was observed flowering in low numbers at a reference population north of the BSA. Other drought-sensitive species – such as southern tarplant (*Centromadia parryi ssp. australis*; CRPR 1B.1), long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*; CRPR 1B.2), variegated dudleya (*Dudleya variegata*; CRPR 1B.2), and chaparral ragwort (*Senecio aphanactis*; CRPR 2B.2) – could have been absent as a result of low rainfall or difficult to observe as a result of reduced population sizes resulting from below average rainfall. However, some annuals germinated and flowered within the BSA, including several special-status annuals (e.g., Robinson's pepper-grass, Palmer's grappling-hook) and rainfall-dependent perennials (e.g., thread-leaved brodiaea). It is likely that many of the target annual special-status plant species flowered this season but probably in reduced numbers as compared to years with near average rainfall.

The results of all three rounds of focused special-status plant species surveys will be combined and evaluated to fully assess potential impacts to the special-status plant species within the BSA. It is mandatory that federally listed, state-listed, and CRPR List 1 and 2 species be fully considered during the California Environmental Quality Act (CEQA) analysis.

Please do not hesitate to contact me at melissa@busbybiological.com or 858.334.9507 if you have any questions.

Sincerely,

Melissa Busby

Owner/Principal Biologist

MelmaBusbon

Busby Biological Services, Inc.

Jim Rocks

Owner/Principal Biologist Rocks Biological Consulting, Inc.

Jm Roch

cc: Elisha Back, TRC Solutions, Inc.

Rob Fletcher, SDG&E

#### Attachments

1: Figures 1 through 3

2: Special-status Plants with Potential for Occurrence

3: Plant Species Observed

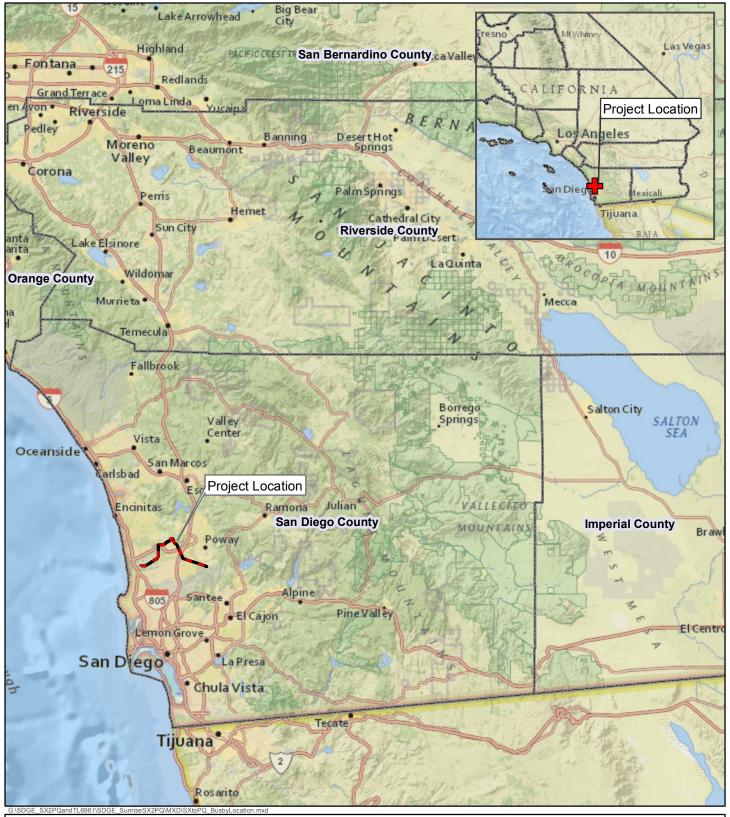
# References

- Al-Shehbaz, I.A. 2013. *Lepidium*, in Jepson Flora Project (eds.) *Jepson eFlora*, <a href="http://ucjeps.berkeley.edu/cgi-">http://ucjeps.berkeley.edu/cgi-</a> bin/get\_IJM.pl?tid=91772, accessed on Jun 13 2014.
- Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, editors. 2012. The Jepson manual: vascular plants of California, second edition. University of California Press, Berkeley.
- California Native Plant Society (CNPS). 2014. Inventory of Rare and Endangered Plants (online edition, v7-14jun). California Native Plant Society. Sacramento, CA. Accessed on June 16, 2014 from http://www.cnps.org/inventory.
- California Nevada River Forecast Center. 2014. Monthly precipitation data from water year 2011 though water year 2014. http://www.cnrfc.noaa.gov/monthly\_precip.php. Accessed June 23, 2014.
- Consortium of California Herbaria. 2014. Data provided by the participants of the Consortium of California Herbaria (ucjeps.berkeley.edu/consortium/). Accessed October 2013 and June 2014.
- Lane. 1992. Novon 2:213 In: Markos, S. and J.L. Strother. 2013. *Corethrogyne*, in Jepson Flora Project (eds.) Jepson eFlora, <a href="http://ucjeps.berkeley.edu/cgi-bin/get\_IJM.pl?tid=391">http://ucjeps.berkeley.edu/cgi-bin/get\_IJM.pl?tid=391</a>, accessed on Jun 24 2014.
- Munz, P.A. 1974. A Flora of Southern California. University of California Press, Berkley.
- Markos, S. and J.L. Strother. 2013. *Corethrogyne*, in Jepson Flora Project (eds.) Jepson eFlora, http://ucjeps.berkeley.edu/cgi-bin/get\_IJM.pl?tid=391, accessed on Jun 24 2014.
- Parker, V.T., Vasey, M.C., and J.E. Keeley. 2013. *Arctostaphylos*, in Jepson Flora Project (eds.) *Jepson eFlora*, http://ucjeps.berkeley.edu/cgi-bin/get\_IJM.pl?tid=49169, accessed on Jun 17 2014.
- Rebman, J. 2014. Personal Communication regarding identification of difficult taxa in San Diego County. June 17.
- Rebman, J., and M.S. Simpson. 2006. *Checklist of the Vascular Plants of San Diego County*. 4<sup>th</sup> edition.
- Rebman, J.P. and M.G. Simpson. In press. Checklist of the vascular plants of San Diego County 5<sup>th</sup> edition.
- San Diego Natural History Museum. 2013. www.sdplantatlas.org. Accessed October and November 2013.
- Tucker, J.M. 2013. *Quercus*, in Jepson Flora Project (eds.) *Jepson eFlora*, http://ucjeps.berkeley.edu/cgi-bin/get\_IJM.pl?tid=40582, accessed on Jun 13 2014.

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United States Fish and Wildlife Service. 2011. Section 4 of the Endangered Species Act. http://www.fws.gov/endangered/esa-library/pdf/listing.pdf.

# ATTACHMENT A Figures



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# Sycamore to Peñasquitos 230 kV Transmission Line Project

**Proposed Project Location** 

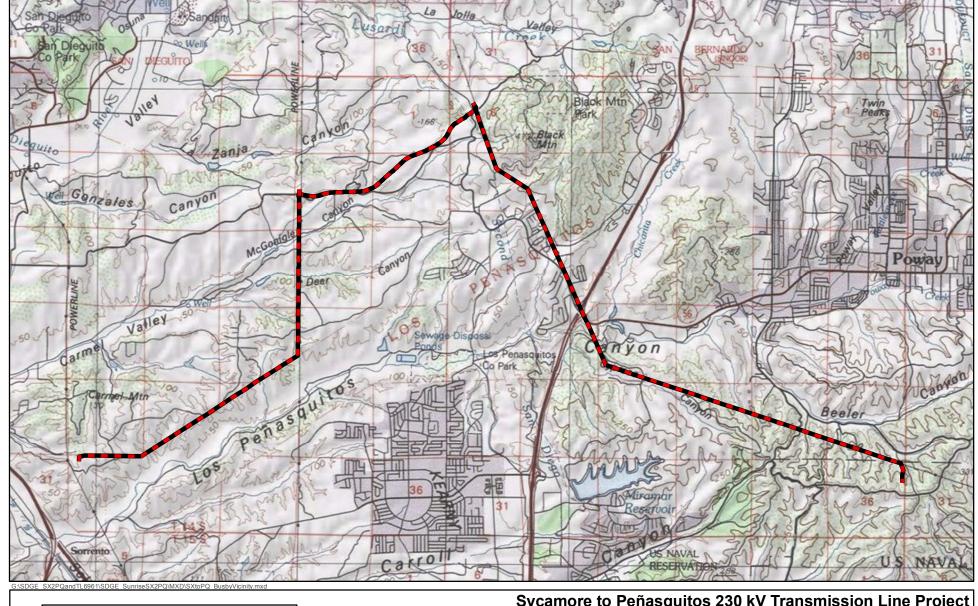
Proposed Project

Figure 1









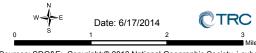
Proposed Project

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# Sycamore to Peñasquitos 230 kV Transmission Line Project

**Proposed Project Vicinity** 

Figure 2





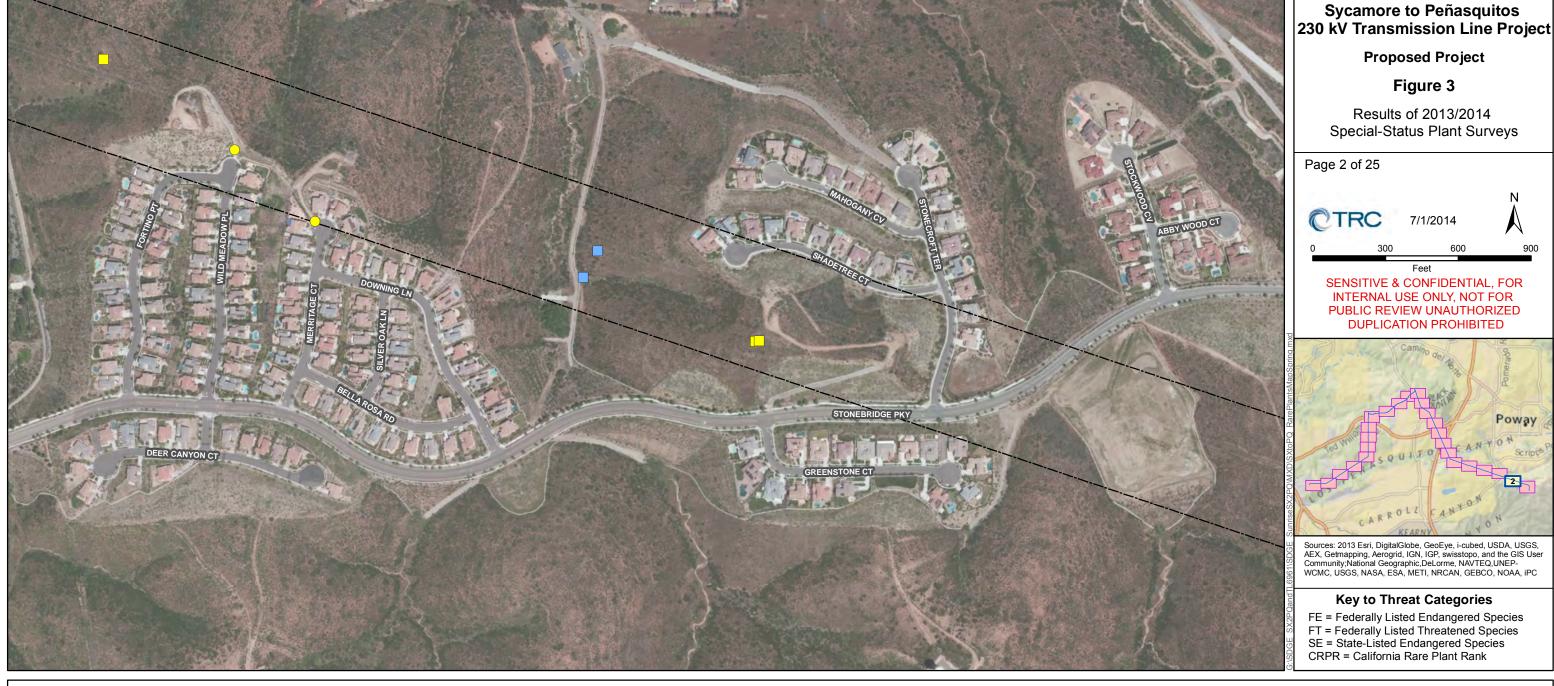
Sources: SDG&E; Copyright: 2013 National Geographic Society, i-cubed



- ▲ Spineshrub (*Adolphia californica*; CRPR 2B.1)
- △ Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- △ Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- △ San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- ▲ Summer-Holly (Comarostaphylis diversifolia ssp. diversifolia; CRPR 1B.2)
- ▲ Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- △ Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (Corethrogyne filaginifolia var. linifolia; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)

- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (Ferocactus viridescens; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (Holocarpha virgata ssp. elongata; CRPR 4.2)
- Decumbent Goldenbush (Isocoma menziesii var. decumbens; CRPR 1B.2)
- San Diego Marsh-Elder (Iva hayesiana; CRPR 2B.2)
- Spiny Rush (Juncus acutus ssp. leopoldii; CRPR 4.2)
- Robinson's Pepper-Grass (Lepidium virginicum var. robinsonii; CRPR 4.3)
- Nuttall's Scrub Oak (Quercus dumosa; CRPR 1B.1)
- Thread Leaved Brodiaea (Brodiaea filifolia; FT, SE, CRPR 1B.1)

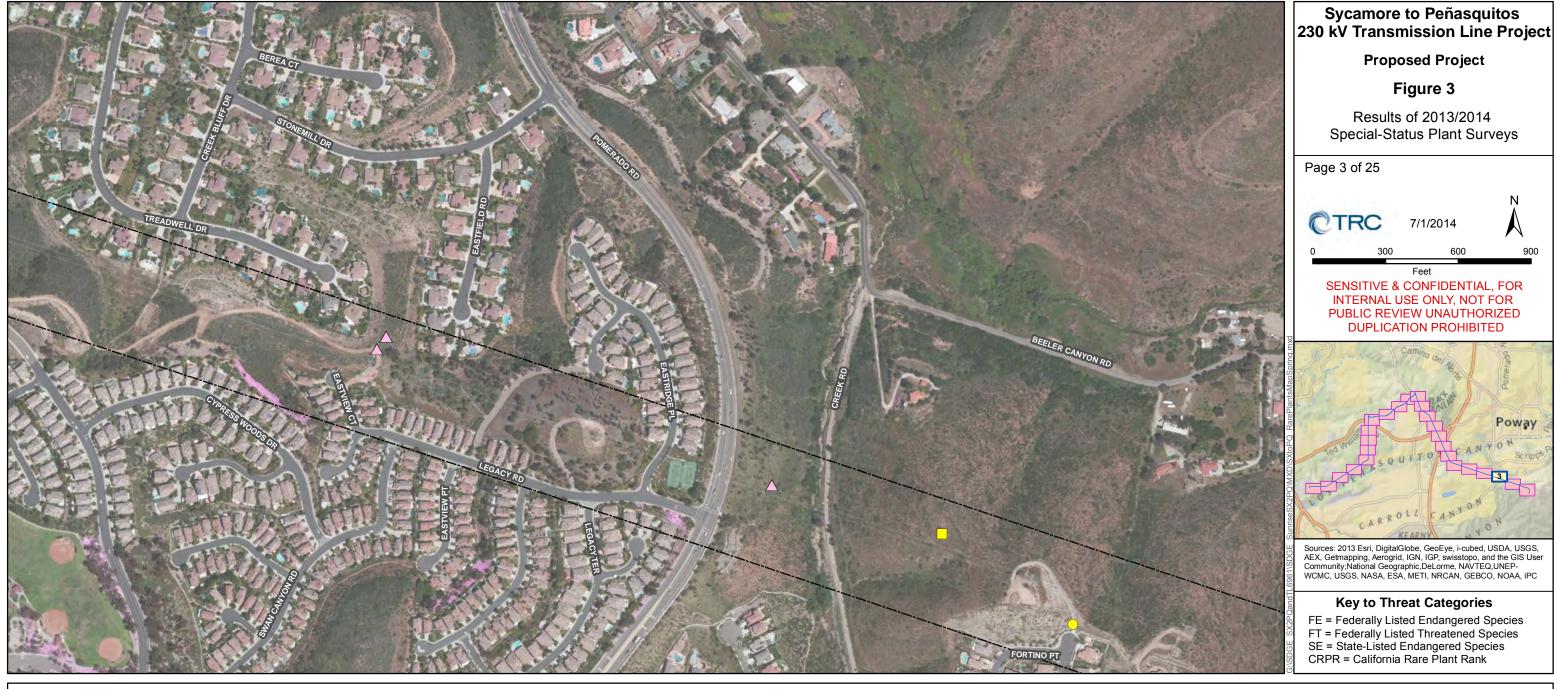
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- ♦ Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (Juncus acutus ssp. leopoldii; CRPR 4.2)
- ♦ Torrey Pine (*Pinus torreyana*; CRPR 1B.2)
- Biological Survey Area



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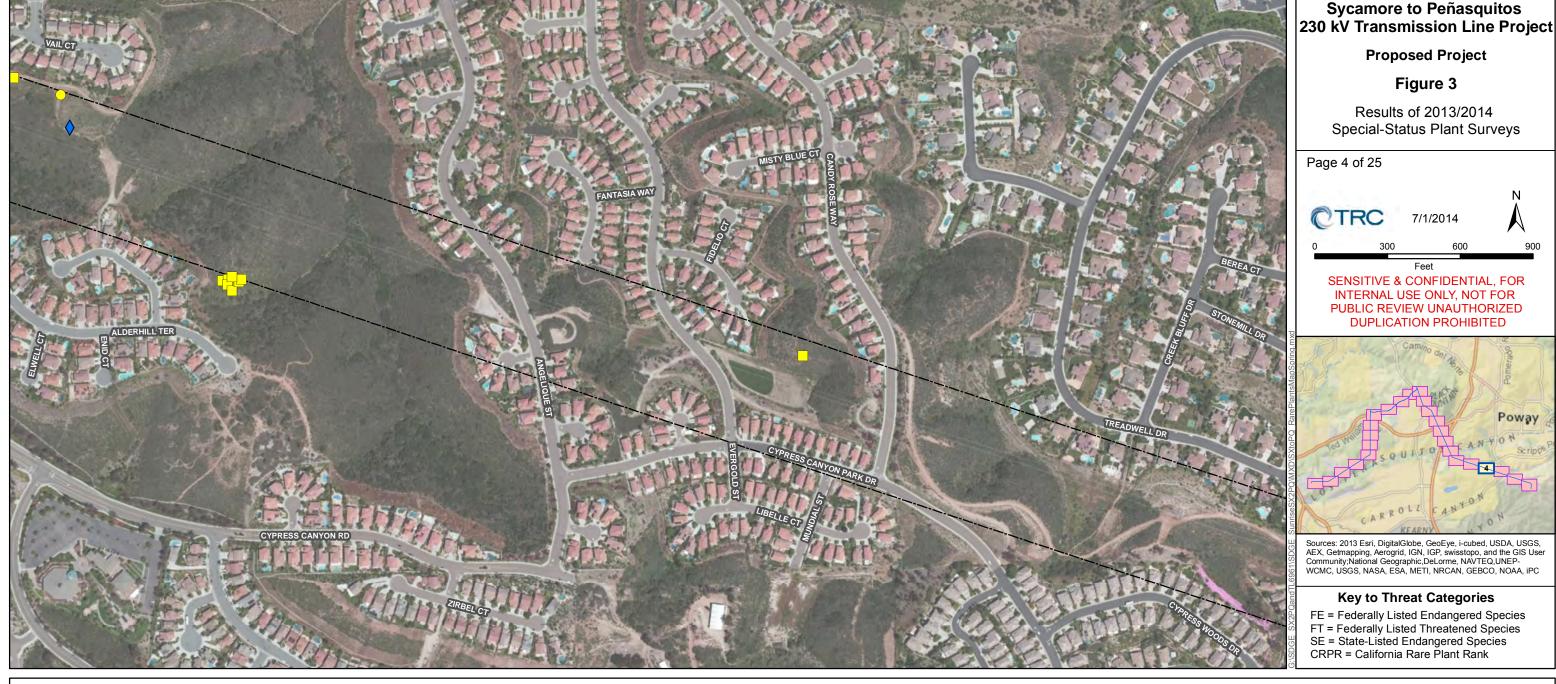
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# **Special-Status Plants Observed in Revegetated Areas**

Poway

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (Bahiopsis laciniata; CRPR 4.2)
- ♦ Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
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# **Special-Status Plants Observed in Revegetated Areas**

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (Bahiopsis laciniata; CRPR 4.2)
- ♦ Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (Juncus acutus ssp. leopoldii; CRPR 4.2)
- ♦ Torrey Pine (*Pinus torreyana*; CRPR 1B.2)

Biological Survey Area



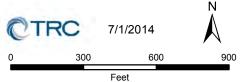
# **Sycamore to Peñasquitos** 230 kV Transmission Line Project

# **Proposed Project**

# Figure 3

Results of 2013/2014 Special-Status Plant Surveys

Page 6 of 25



SENSITIVE & CONFIDENTIAL, FOR INTERNAL USE ONLY, NOT FOR PUBLIC REVIEW UNAUTHORIZED **DUPLICATION PROHIBITED** 



Sources: 2013 Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community;National Geographic,DeLorme, NAVTEQ,UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

## **Key to Threat Categories**

FE = Federally Listed Endangered Species FT = Federally Listed Threatened Species

SE = State-Listed Endangered Species

#### **Special-Status Plants Observed**

- ▲ Spineshrub (*Adolphia californica*; CRPR 2B.1)
- △ Del Mar Manzanita (Arctostaphylos glandulosa ssp. crassifolia; FE, CRPR 1B.1)
- △ Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- △ San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- ▲ Summer-Holly (Comarostaphylis diversifolia ssp. diversifolia; CRPR 1B.2)
- ▲ Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- △ Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (Corethrogyne filaginifolia var. linifolia; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)

- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (Ferocactus viridescens; CRPR 2B.1)
- Palmer's Grapplinghook (Harpagonella palmeri; CRPR 4.2)
- Graceful Tarplant (Holocarpha virgata ssp. elongata; CRPR 4.2)
- Decumbent Goldenbush (Isocoma menziesii var. decumbens; CRPR 1B.2)
- San Diego Marsh-Elder (Iva hayesiana; CRPR 2B.2)
- Spiny Rush (Juncus acutus ssp. leopoldii; CRPR 4.2)
- Robinson's Pepper-Grass (Lepidium virginicum var. robinsonii; CRPR 4.3)
- Nuttall's Scrub Oak (Quercus dumosa; CRPR 1B.1)
- Thread Leaved Brodiaea (Brodiaea filifolia; FT, SE, CRPR 1B.1)

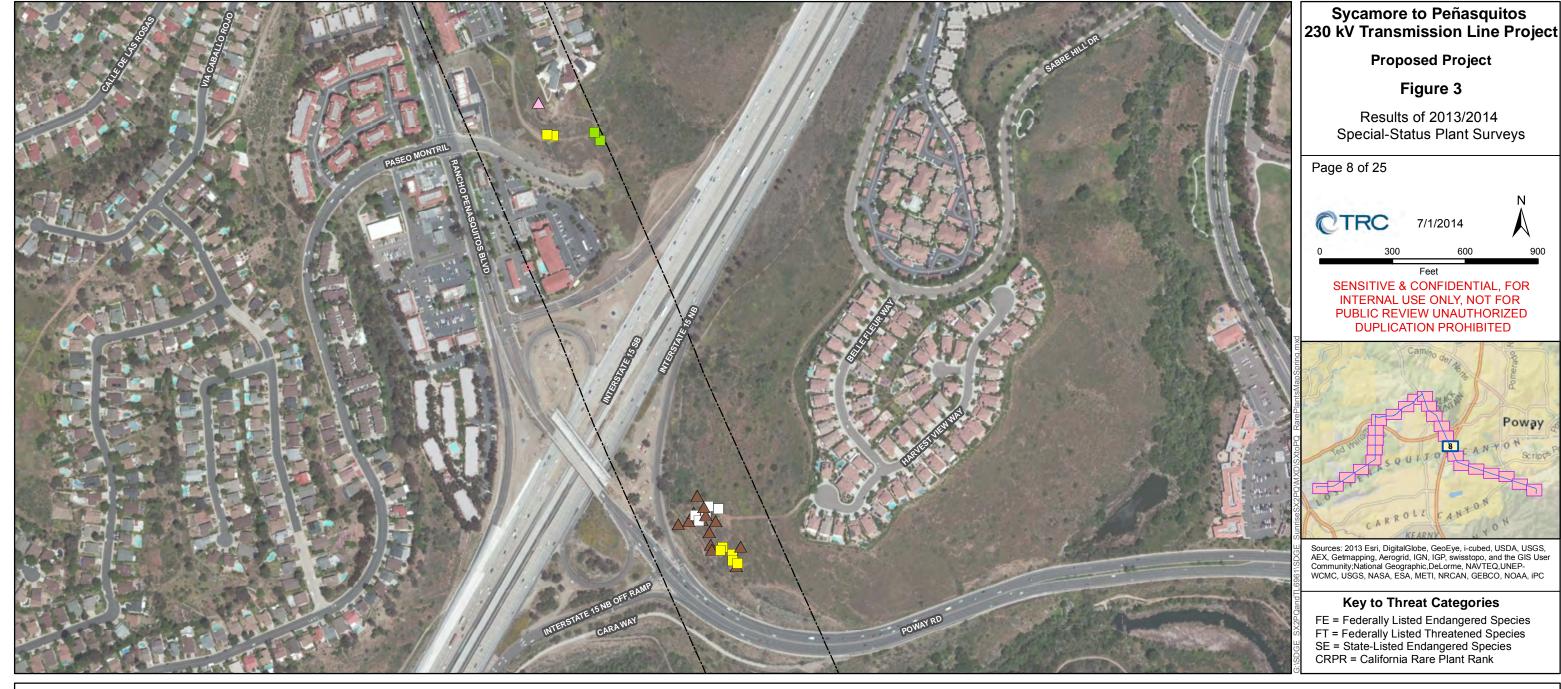
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (Bahiopsis laciniata; CRPR 4.2)
- ♦ Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (Juncus acutus ssp. leopoldii; CRPR 4.2)
- ♦ Torrey Pine (*Pinus torreyana*; CRPR 1B.2)
- Biological Survey Area



- ▲ Spineshrub (*Adolphia californica*; CRPR 2B.1)
- △ Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- △ Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- △ San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- ▲ Summer-Holly (Comarostaphylis diversifolia ssp. diversifolia; CRPR 1B.2)
- ▲ Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- △ Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (Corethrogyne filaginifolia var. linifolia; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)

- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (Ferocactus viridescens; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (Holocarpha virgata ssp. elongata; CRPR 4.2)
- Decumbent Goldenbush (Isocoma menziesii var. decumbens; CRPR 1B.2)
- San Diego Marsh-Elder (Iva hayesiana; CRPR 2B.2)
- Spiny Rush (Juncus acutus ssp. leopoldii; CRPR 4.2)
- Robinson's Pepper-Grass (Lepidium virginicum var. robinsonii; CRPR 4.3)
- Nuttall's Scrub Oak (Quercus dumosa; CRPR 1B.1)
- Thread Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

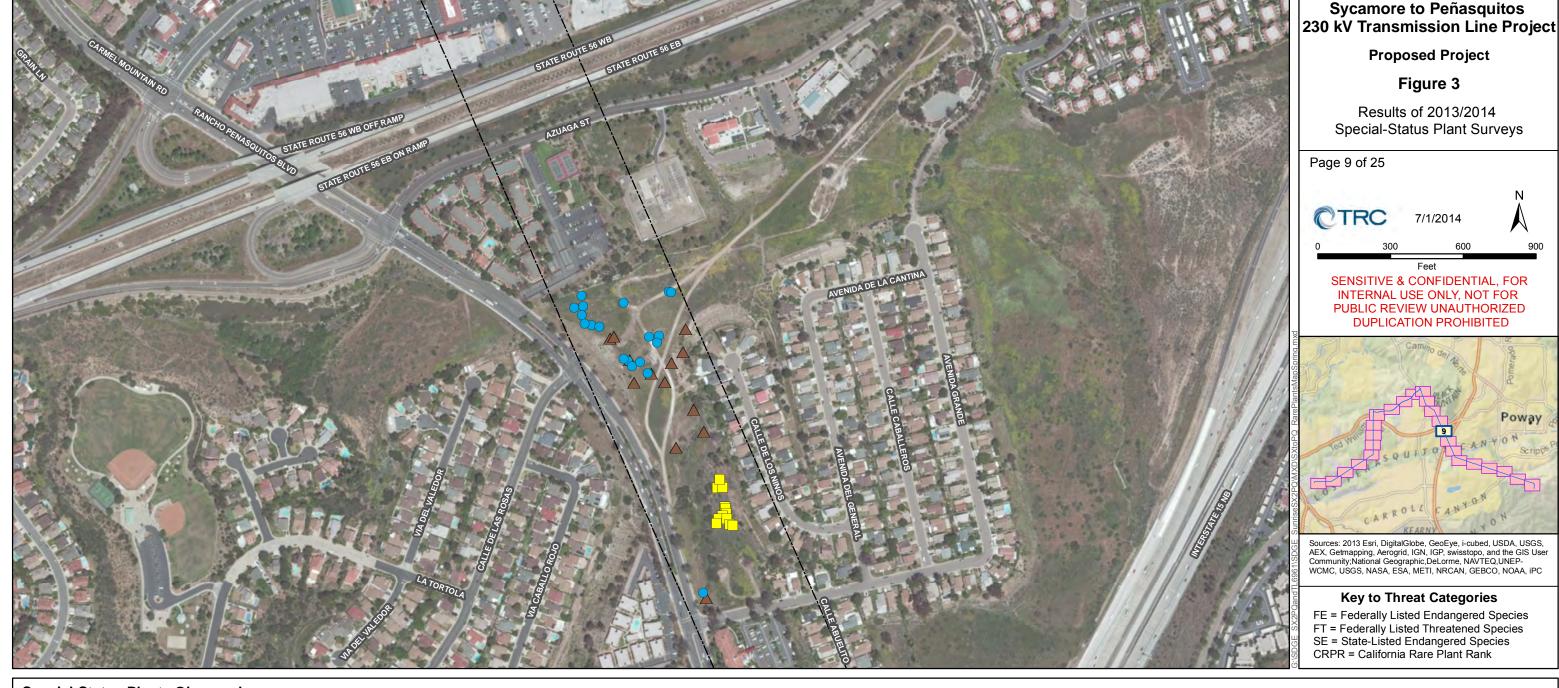
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (Bahiopsis laciniata; CRPR 4.2)
- ♦ Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (Juncus acutus ssp. leopoldii; CRPR 4.2)
- ♦ Torrey Pine (*Pinus torreyana*; CRPR 1B.2)
- Eiological Survey Area



- ▲ Spineshrub (*Adolphia californica*; CRPR 2B.1)
- △ Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- △ Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- △ San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- ▲ Summer-Holly (Comarostaphylis diversifolia ssp. diversifolia; CRPR 1B.2)
- ▲ Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- △ Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (Convolvulus simulans; CRPR 4.2)
- Del Mar Mesa Sand Aster (Corethrogyne filaginifolia var. linifolia; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)

- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (Ferocactus viridescens; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (Isocoma menziesii var. decumbens; CRPR 1B.2)
- San Diego Marsh-Elder (Iva hayesiana; CRPR 2B.2)
- Spiny Rush (Juncus acutus ssp. leopoldii; CRPR 4.2)
- Robinson's Pepper-Grass (Lepidium virginicum var. robinsonii; CRPR 4.3)
- Nuttall's Scrub Oak (Quercus dumosa; CRPR 1B.1)
- Thread Leaved Brodiaea (Brodiaea filifolia; FT, SE, CRPR 1B.1)

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (Bahiopsis laciniata; CRPR 4.2)
- ♦ Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- ♦ Torrey Pine (*Pinus torreyana*; CRPR 1B.2)
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- ▲ Spineshrub (*Adolphia californica*; CRPR 2B.1)
- △ Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- △ Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- △ San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- ▲ Summer-Holly (Comarostaphylis diversifolia ssp. diversifolia; CRPR 1B.2)
- ▲ Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- △ Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (Corethrogyne filaginifolia var. linifolia; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)

- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (Harpagonella palmeri; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (Isocoma menziesii var. decumbens; CRPR 1B.2)
- San Diego Marsh-Elder (Iva hayesiana; CRPR 2B.2)
- Spiny Rush (Juncus acutus ssp. leopoldii; CRPR 4.2)
- Robinson's Pepper-Grass (Lepidium virginicum var. robinsonii; CRPR 4.3)
- Nuttall's Scrub Oak (Quercus dumosa; CRPR 1B.1)
- Thread Leaved Brodiaea (Brodiaea filifolia; FT, SE, CRPR 1B.1)

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- ♦ Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (Juncus acutus ssp. leopoldii; CRPR 4.2)
- ♦ Torrey Pine (*Pinus torreyana*; CRPR 1B.2)
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- ▲ Spineshrub (*Adolphia californica*; CRPR 2B.1)
- △ Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- △ Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- △ San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- ▲ Summer-Holly (Comarostaphylis diversifolia ssp. diversifolia; CRPR 1B.2)
- ▲ Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- △ Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (Convolvulus simulans; CRPR 4.2)
- Del Mar Mesa Sand Aster (Corethrogyne filaginifolia var. linifolia; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)

- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (Ferocactus viridescens; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (Isocoma menziesii var. decumbens; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (Juncus acutus ssp. leopoldii; CRPR 4.2)
- Robinson's Pepper-Grass (Lepidium virginicum var. robinsonii; CRPR 4.3)
- Nuttall's Scrub Oak (Quercus dumosa; CRPR 1B.1)
- Thread Leaved Brodiaea (Brodiaea filifolia; FT, SE, CRPR 1B.1)

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (Bahiopsis laciniata; CRPR 4.2)
- ♦ Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- ♦ Torrey Pine (*Pinus torreyana*; CRPR 1B.2)
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- ▲ Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
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- San Diego Marsh-Elder (Iva hayesiana; CRPR 2B.2)
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- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
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- ♦ Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
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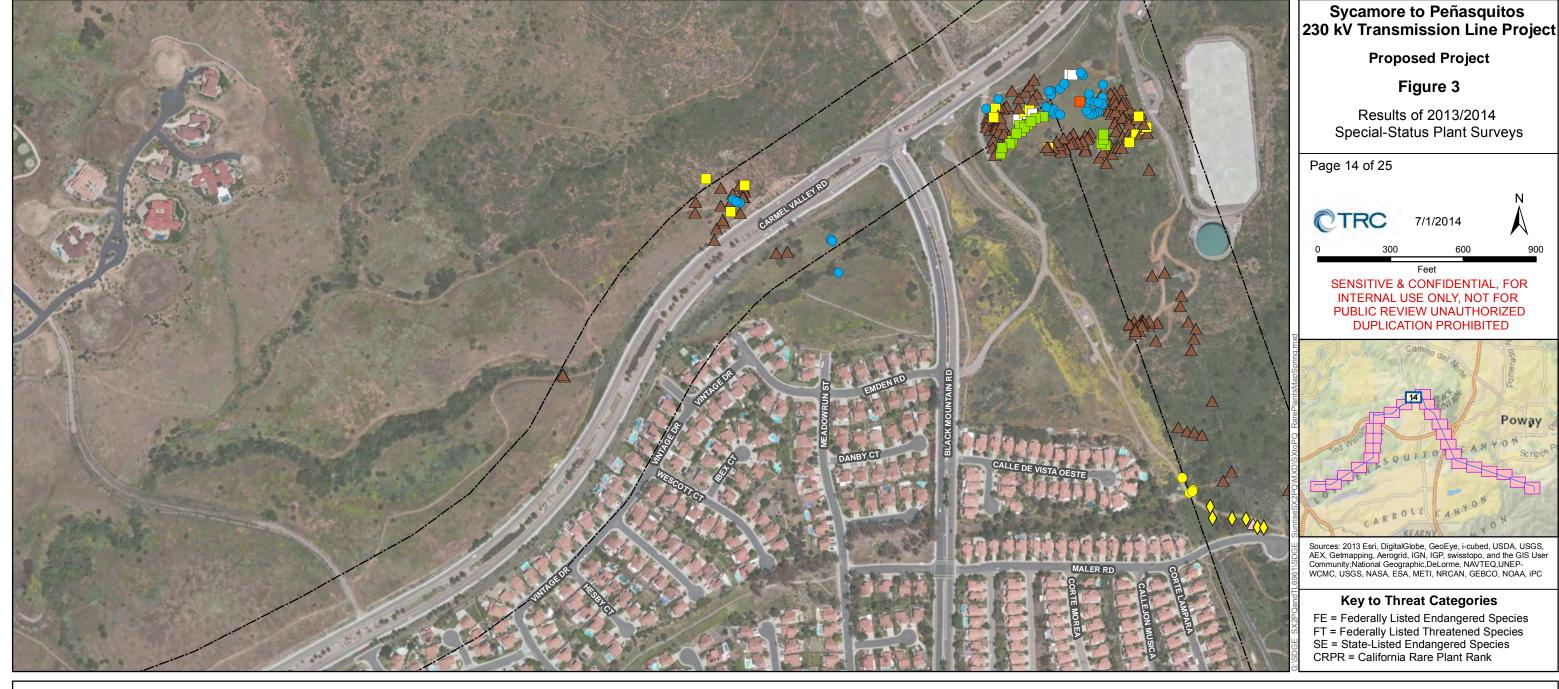
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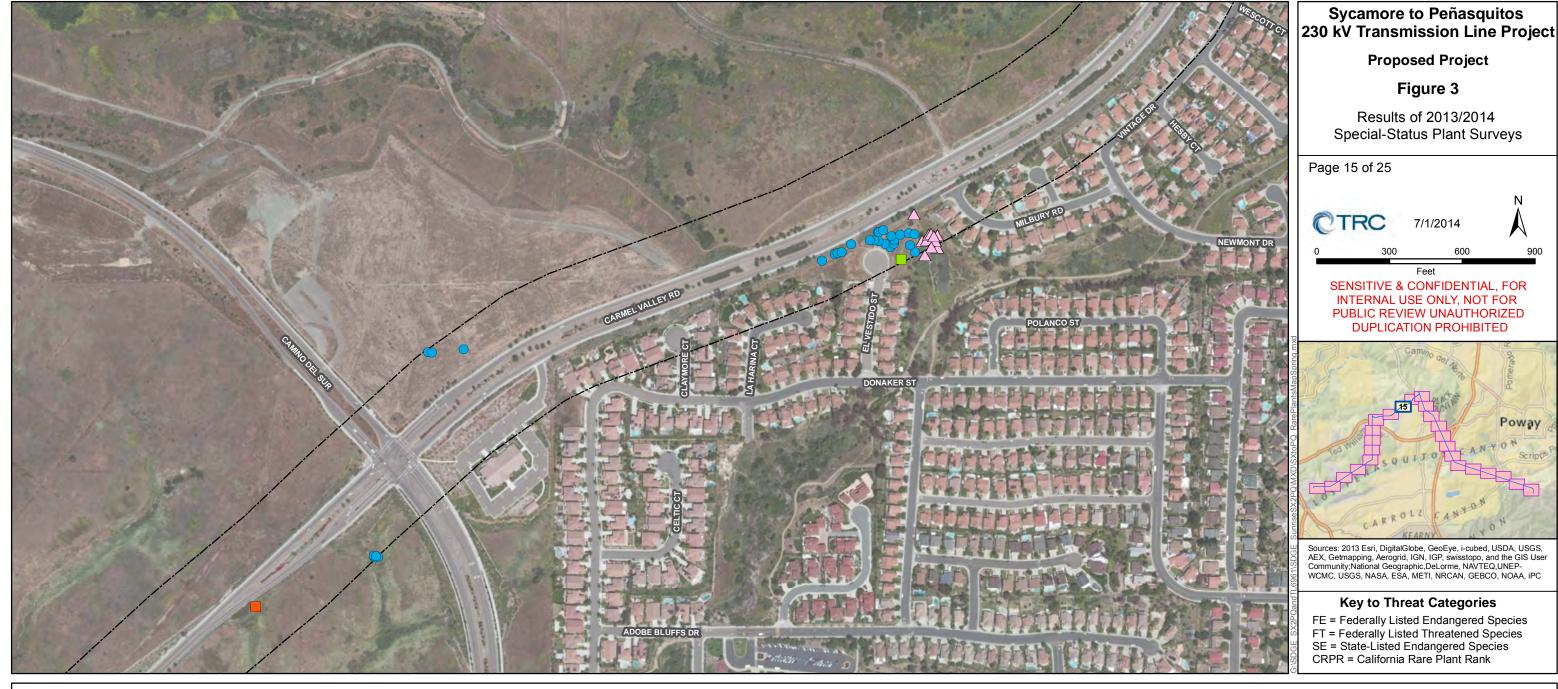
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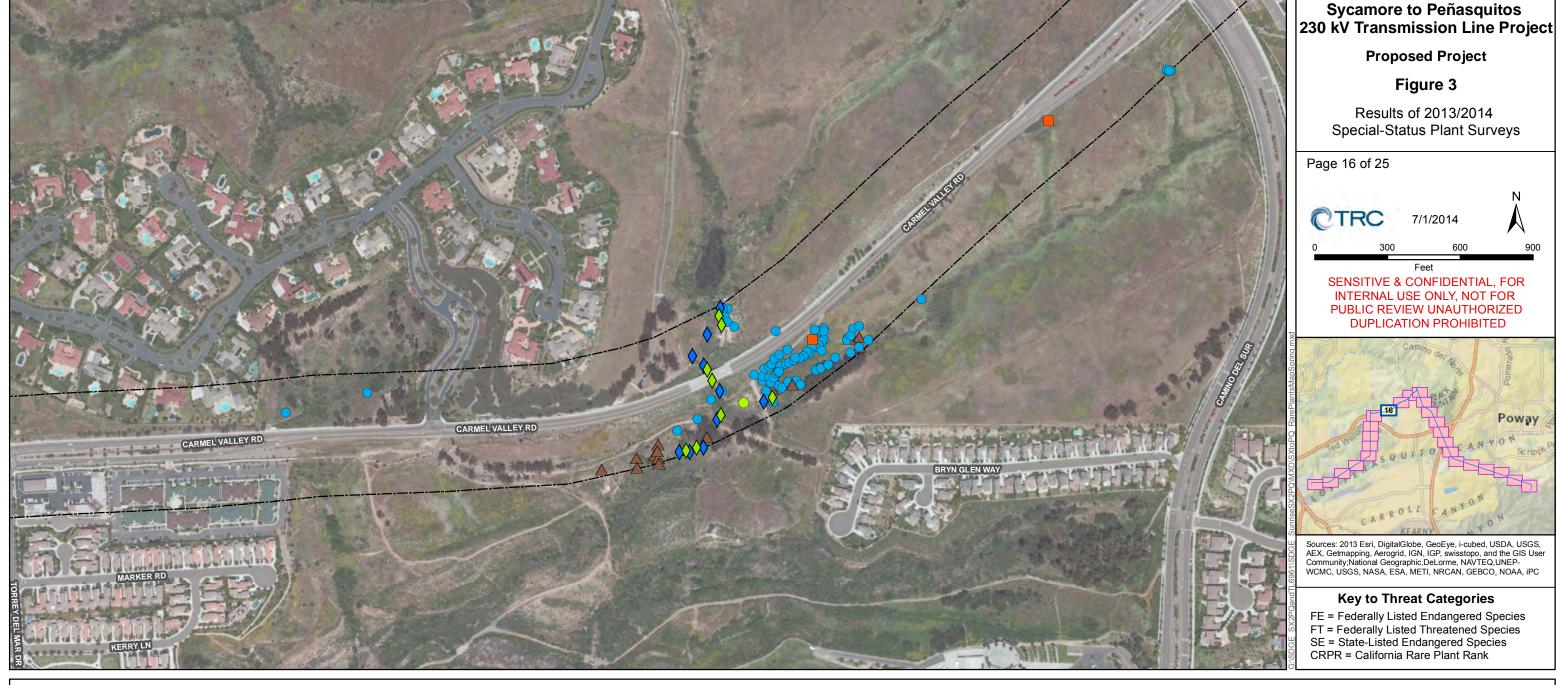
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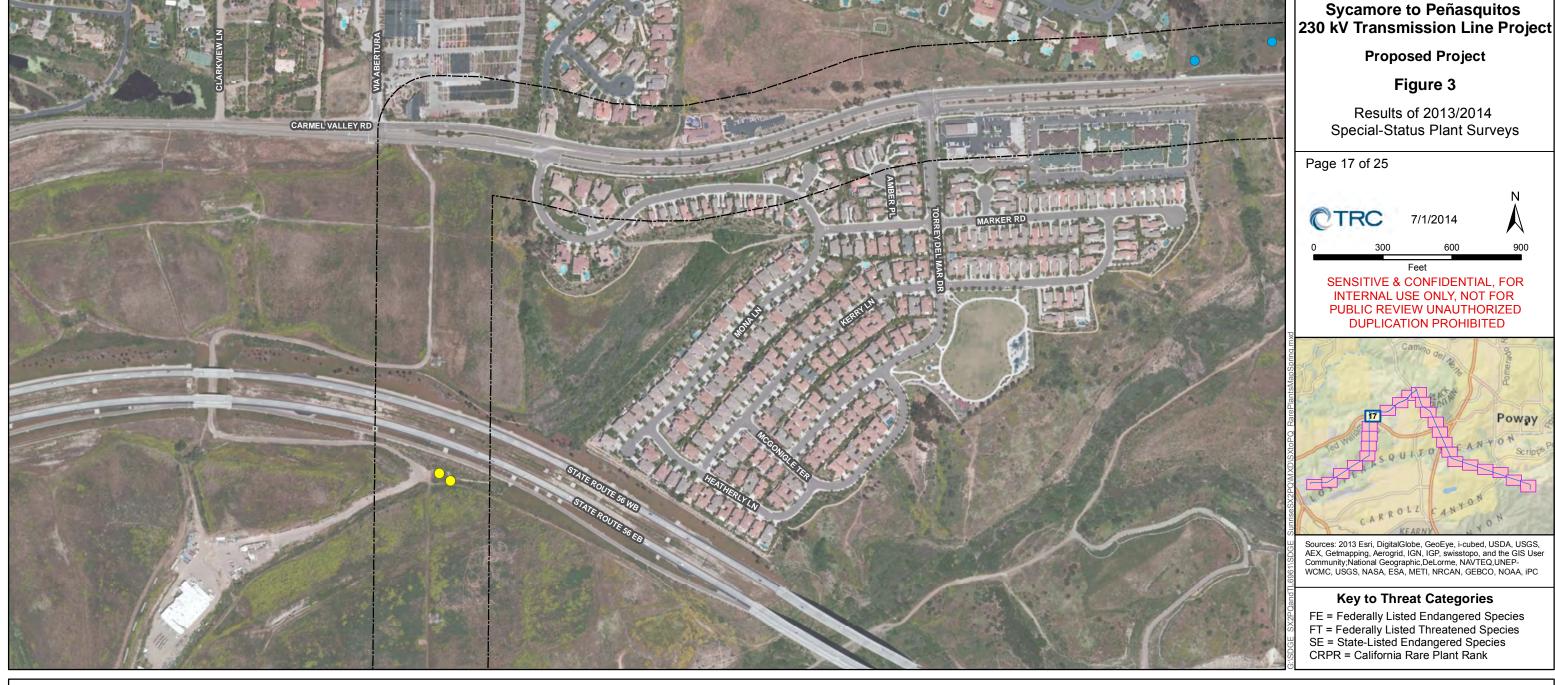
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- Del Mar Mesa Sand Aster (Corethrogyne filaginifolia var. linifolia; 1B.1)
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- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (Isocoma menziesii var. decumbens; CRPR 1B.2)
- San Diego Marsh-Elder (Iva hayesiana; CRPR 2B.2)
- Spiny Rush (Juncus acutus ssp. leopoldii; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (Quercus dumosa; CRPR 1B.1)
- Thread Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

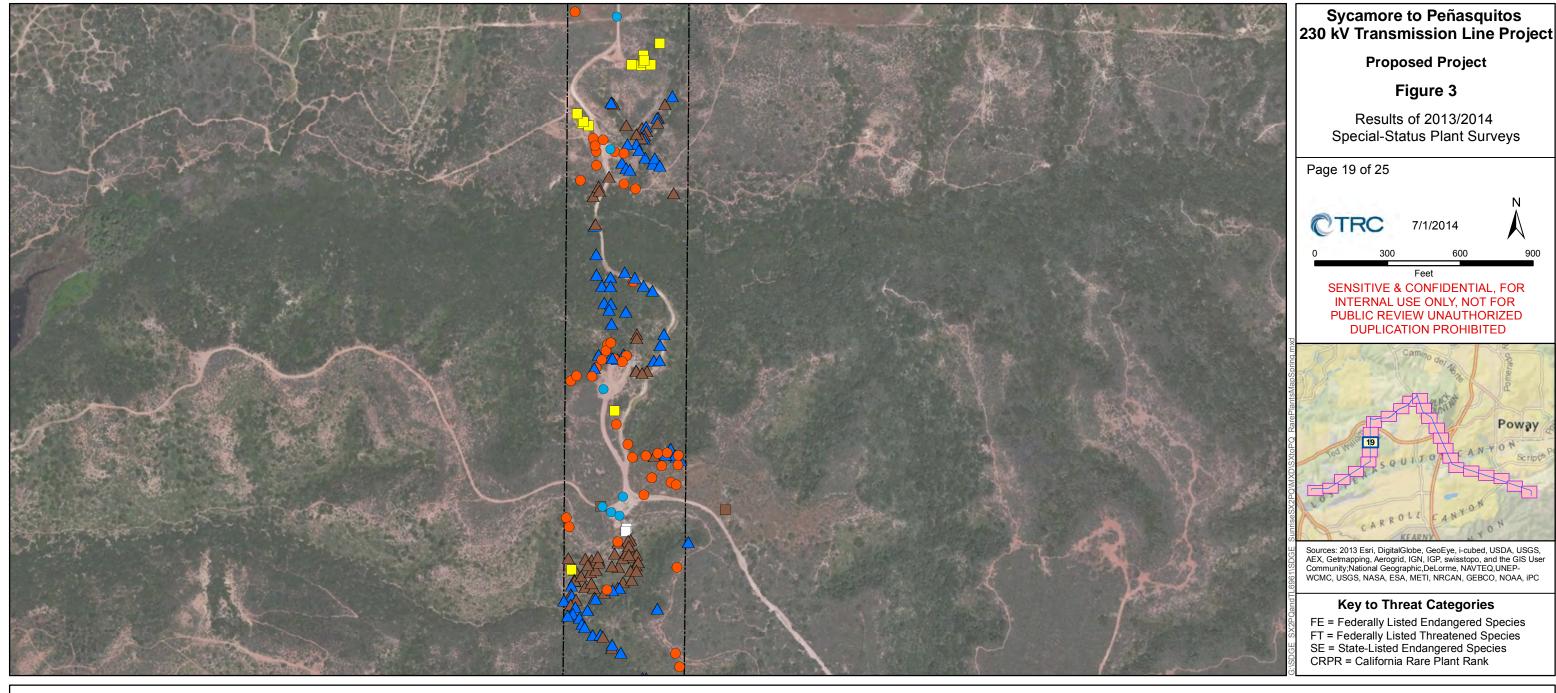
- San Diego Marsh-Elder (Iva hayesiana; CRPR 2B.2)
- San Diego Sunflower (Bahiopsis laciniata; CRPR 4.2)
- ♦ Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (Juncus acutus ssp. leopoldii; CRPR 4.2)
- ♦ Torrey Pine (*Pinus torreyana*; CRPR 1B.2)
- Eiological Survey Area



- ▲ Spineshrub (*Adolphia californica*; CRPR 2B.1)
- △ Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- △ Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- △ San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- △ Summer-Holly (Comarostaphylis diversifolia ssp. diversifolia; CRPR 1B.2)
- ▲ Wart-Stemmed Ceanothus (Ceanothus verrucosus; CRPR 2B.2)
- △ Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (Corethrogyne filaginifolia var. linifolia; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)

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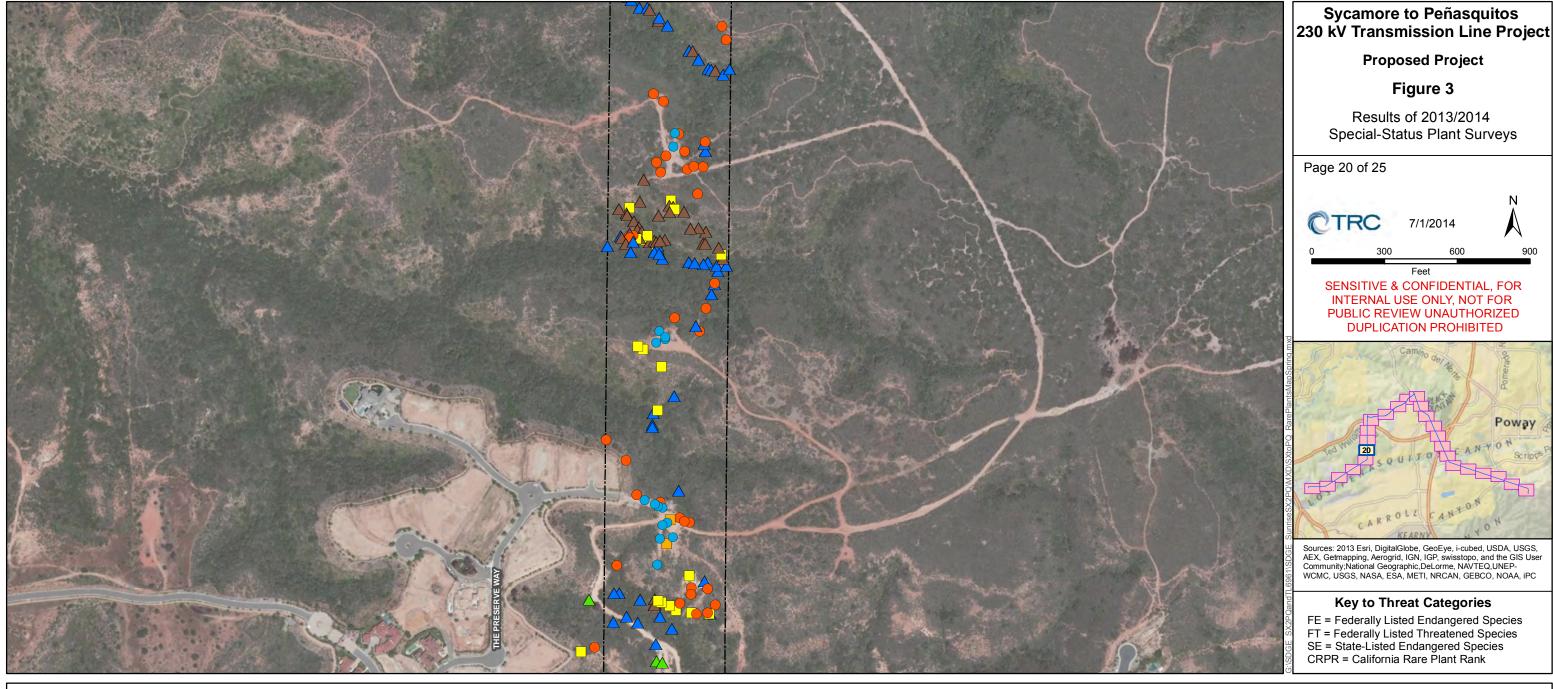
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (Bahiopsis laciniata; CRPR 4.2)
- ♦ Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (Juncus acutus ssp. leopoldii; CRPR 4.2)
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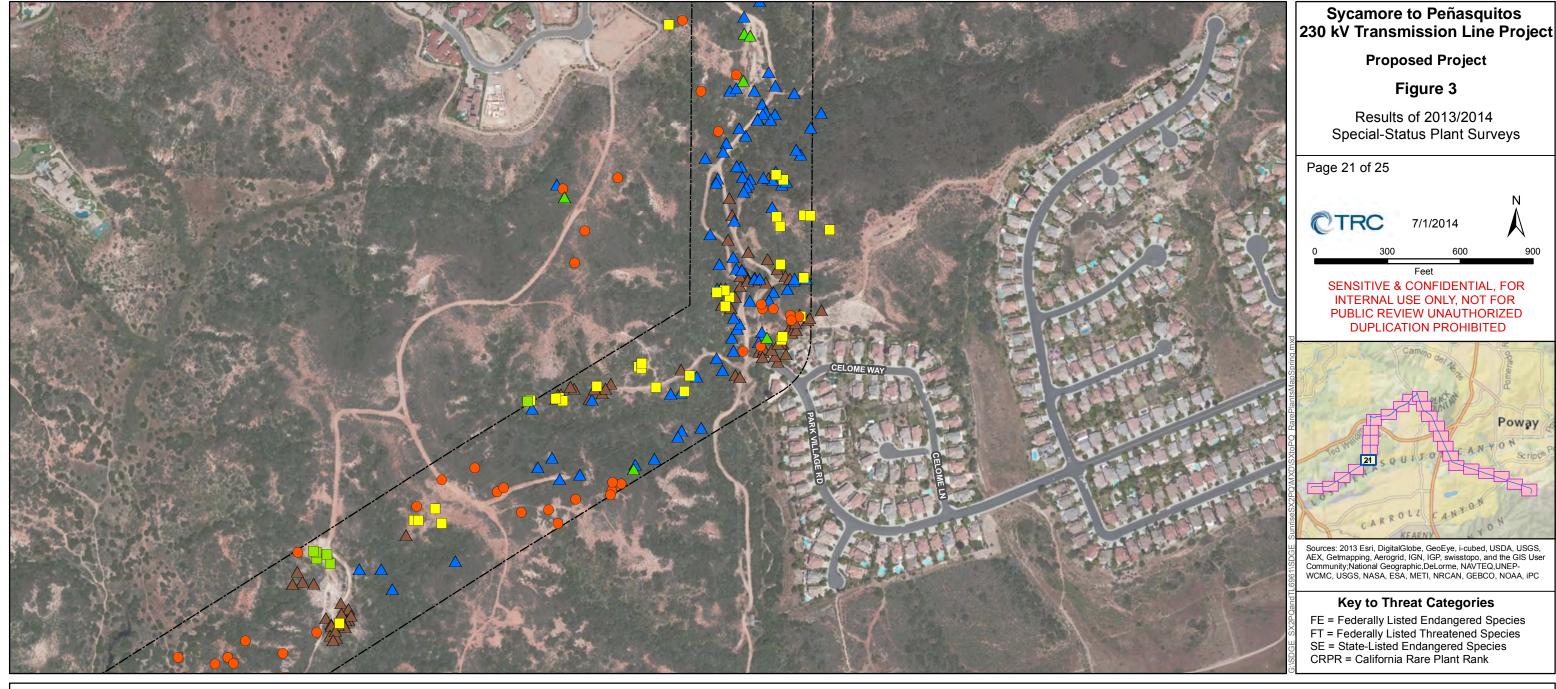
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
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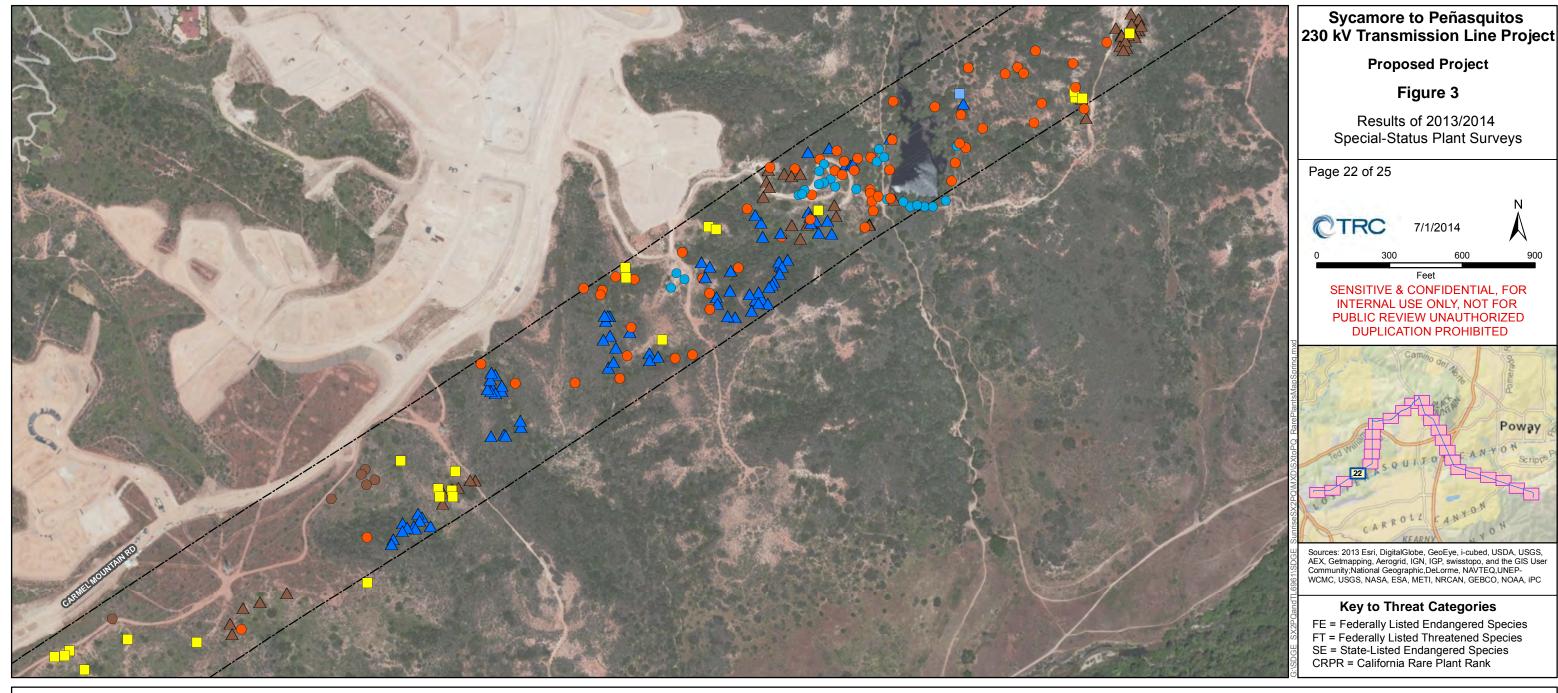
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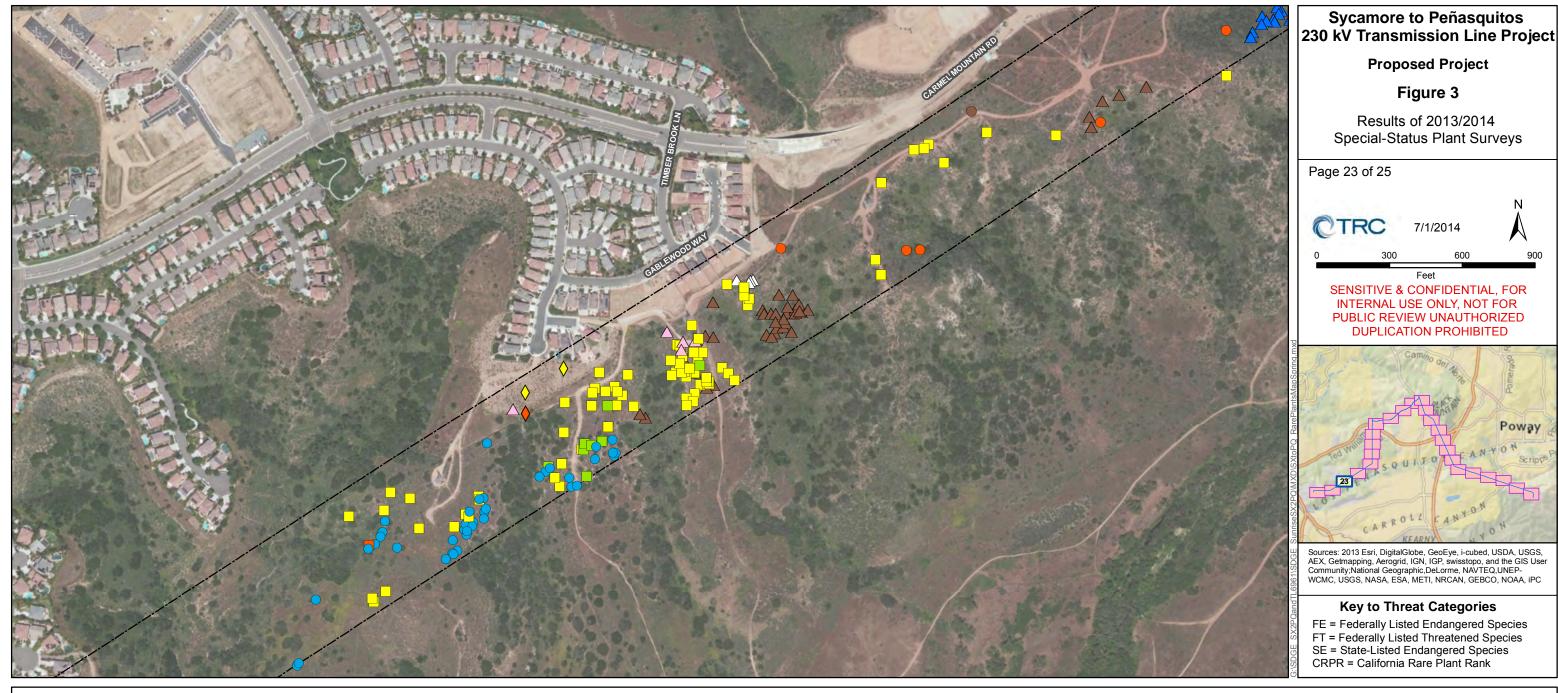
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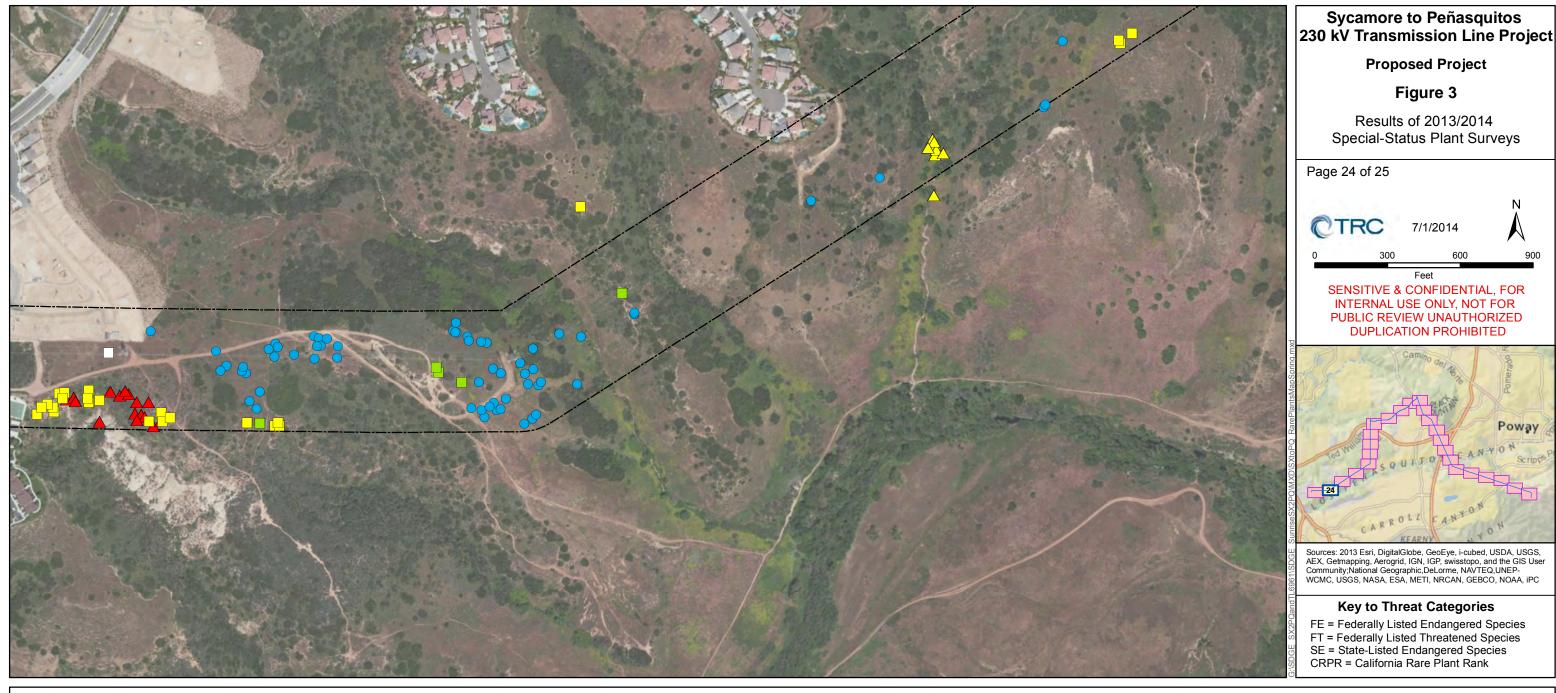
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- Biological Survey Area

# ATTACHMENT B Special-status Plants with Potential for Occurrence

| Species Name  | Potential to Occur   | Status                           | Habitat Description*  |
|---|--|----------------------------------|---|
| San Diego thornmint<br>(Acanthomintha ilicifolia)                       | Moderate. Known from Los Penasquitos Canyon Preserve and suitable soils present but suitable habitat limited. Critical Habitat occurs within 0.25 miles of the alignment. Not observed within the BSA.   | FT<br>SE<br>CRPR 1B.1<br>NCCP-NE | Annual herb. Blooms Apr-Jun.<br>Clay soils associated with vernal<br>pools in chaparral, coastal sage<br>scrub, grassland. Elev 30-3,150ft.   |
| Nuttall's acmispon<br>(Acmispon [Lotus<br>nuttallianus] prostrata)      | None. Species restricted to immediate coast. Elevation range in BSA is outside of elevation range for species.   | CRPR 1B.1<br>NCCP                | Annual herb. Blooms Mar-Jun.<br>Coastal dunes, coastal sage scrub.<br>Elev 0-35ft.  |
| spineshrub<br>(Adolphia californica)                                    | Present. Observed in many areas of the BSA; dominant in some Diegan coastal sage scrub areas.  | CRPR 2B.1                        | Deciduous shrub. Blooms Dec-<br>May. Clay soils in chaparral,<br>coastal sage scrub, grassland.<br>Elev 145-2,430ft.  |
| Shaw's agave<br>(Agave shawii var.<br>shawii)                           | None. Species restricted to immediate coast.   | CRPR 2B.1<br>NCCP-NE             | Leaf succulent. Blooms Sep-May.<br>Coastal bluff scrub, coastal sage<br>scrub. Elev 35-395ft.   |
| San Diego ambrosia<br>(Ambrosia pumila)                                 | Very low. Known<br>historically from vicinity<br>but suitable habitat not<br>observed within BSA.  | FE<br>CRPR 1B.1<br>NCCP-NE       | Rhizomatous herb. Blooms Apr-Oct. Often in disturbed areas with sandy loam or clay soils, sometimes alkaline areas, in chaparral, coastal sage scrub, grassland, vernal pools. Elev 65-1,365ft. |
| aphanisma<br>(Aphanisma blitoides)                                      | None. Species restricted to immediate coast.   | CRPR 1B.2<br>NCCP-NE             | Annual herb. Blooms Mar-Jun. Coastal bluff scrub, coastal dunes, coastal sage scrub. Elev 3- 1,000ft.   |
| Del Mar manzanita<br>(Arctostaphylos<br>glandulosa ssp.<br>crassifolia) | Present. Species observed both north and south of Del Mar Mesa Preserve. Two subspecies of Arctostaphylos glandulosa co-occur in the alignment. Most individuals observed were Eastwood's manzanita (Arctostaphylos glandulosa ssp. glandulosa). | FE<br>CRPR 1B.1<br>NCCP          | Evergreen shrub. Blooms Dec-<br>Jun. Sandy soils in maritime<br>chaparral. Elev 0-1,200ft.  |
| Otay manzanita<br>(Arctostaphylos<br>otayensis)                         | None. Species restricted to<br>Otay Mtn. area in southern<br>San Diego County.   | CRPR 1B.2<br>NCCP                | Evergreen shrub. Blooms Jan-<br>Apr. Chaparral, cismontane<br>woodland. Elev900-5,580ft.  |
| Palmer's sagewort<br>(Artemisia palmeri)                                | Present. Observed in small patches along several drainages.  | CRPR 4.2                         | Deciduous shrub. Blooms May-<br>Sep. Sandy, mesic areas in<br>chaparral, coastal sage scrub,<br>riparian habitats. Elev 45-3,005ft.   |
| coastal dunes milk-vetch  | None. Species restricted to  | FE                               | Annual herb. Blooms Mar-May.  |

| Species Name  | Potential to Occur  | Status                           | Habitat Description*   |
|---|---|----------------------------------|--|
| (Astragalus tener var.<br>titi)                         | immediate coast.  | SE<br>CRPR 1B.1<br>NCCP-NE       | Vernally mesic areas in coastal<br>dunes, coastal bluff scrub, coastal<br>prairie. Elev 3-165ft.   |
| Coulter's saltbush<br>(Atriplex coulteri)               | None. Suitable habitat not present.   | CRPR 1B.2                        | Perennial herb. Blooms Mar-Oct. Alkaline or clay soils in coastal dunes, coastal bluff scrub, coastal sage scrub, grassland. Elev 10- 1,510ft.   |
| South Coast saltscale<br>(Atriplex pacifica)            | None. Suitable habitat not present.   | CRPR 1B.2                        | Annual herb. Blooms Mar-Oct. Playas, coastal dunes, coastal bluff scrub, coastal sage scrub. Elev 0-460ft.   |
| Encinitas baccharis<br>(Baccharis vanessae)             | Low. Known historically from vicinity and suitable habitat present, but species extremely rare and not observed in BSA. | FT<br>SE<br>CRPR 1B.1<br>NCCP-NE | Deciduous shrub. Blooms Aug-<br>Nov. Maritime chaparral,<br>cismontane woodland. Elev 195-<br>2,365ft.   |
| San Diego sunflower<br>(Bahiopsis laciniata)            | Present. Observed in areas recently revegetated. Not observed naturally occurring.                                      | CRPR 4.2                         | Perennial shrub. Blooms Feb-<br>Aug. Dry slopes in coastal sage<br>scrub and chaparral. Elev 195-<br>2,460ft.  |
| Nevin's barberry<br>(Berberis nevinii)                  | None. Suitable habitat not present.   | FE<br>SE<br>CRPR 1B.1<br>NCCP-NE | Evergreen shrub. Blooms Mar-<br>Jun. Sandy or gravelly soils in<br>chaparral, coastal sage scrub,<br>cismontane woodland, riparian<br>scrub. Elev 895-2,710ft.   |
| golden-spined cereus<br>(Bergerocactus emoryi)          | None. Suitable habitat not present.   | CRPR 2B.2                        | Stem succulent. Blooms May-<br>Jun. Sandy soils in chaparral,<br>coastal sage scrub, closed-cone<br>coniferous forest. Elev 10-<br>1,295ft.  |
| San Diego goldenstar<br>(Bloomeria clevelandii)         | Moderate. Most collections occurrences are from south San Diego County but suitable habitat is present.                 | CRPR 1B.1<br>NCCP                | Bulbiferous herb. Blooms Apr-<br>May. Typically clay soils in vernal<br>pools associated with chaparral,<br>coastal sage scrub, grassland.<br>Elev 160-1,525ft.  |
| thread-leaved brodiaea<br>( <i>Brodiaea filifolia</i> ) | Present. Known occurrence<br>at Black Mountain Open<br>Space Preserve was found<br>growing in deep clay soils.          | FT<br>SE<br>CRPR 1B.1<br>NCCP    | Bulbiferous herb. Blooms Mar-<br>Jun. Typically clay soils in vernal<br>pools associated with playas,<br>chaparral, coastal sage scrub,<br>cismontane woodland, grassland.<br>Elev 80-3,675ft.   |
| Orcutt's brodiaea<br>( <i>Brodiaea orcuttii</i> )       | Moderate. Known historically from vicinity but limited suitable habitat present.  | CRPR 1B.1<br>NCCP                | Bulbiferous herb. Blooms Apr-<br>Jul. Typically mesic, clay soils<br>(sometimes serpentinite) in<br>vernal pools associated with<br>chaparral, cismontane woodland,<br>closed-cone coniferous forest,<br>meadows & seeps, grassland.<br>Elev 30-1,692ft. |
| Brewer's calandrinia<br>(Calandrinia breweri)           | High. Known from Los<br>Penasquitos Canyon<br>Preserve and suitable<br>habitat present. Not                             | CRPR 4.2                         | Annual herb. Blooms Mar – Jun. Sandy/loamy soils typically after fire or other disturbance. Elev 30-4,005ft.   |

| Species Name  | Potential to Occur   | Status                           | Habitat Description*  |
|---|--|----------------------------------|---|
|   | observed in BSA.   |                                  |   |
| Dunn's mariposa lily<br>(Calochortus dunnii)                                | None. Suitable habitat not present.  | SR<br>CRPR 1B.2<br>NCCP          | Bulbiferous herb. Blooms Apr-<br>Jun. Rocky, gabbroic or<br>metavolcanic areas in chaparral,<br>closed-cone coniferous forest,<br>grassland. Elev 605-6,005ft.      |
| Payson's jewelflower<br>(Caulanthus simulans)                               | None. Outside known range of species.  | CRPR 4.2<br>NCCP                 | Annual herb. Blooms Mar-May. Sandy, granitic areas in chaparral, coastal sage scrub. Elev 295- 7,220ft.   |
| Lakeside ceanothus<br>(Ceanothus cyaneus)                                   | None. Outside known range of species.  | CRPR 1B.2<br>NCCP                | Evergreen shrub. Blooms Apr-<br>Jun. Chaparral, closed-coned<br>coniferous forest. Elev 770-<br>2,480ft.  |
| wart-stemmed<br>ceanothus<br>(Ceanothus verrucosus)                         | Present. Known historically from vicinity and small population found in BSA.                             | CRPR 2B.2<br>NCCP                | Evergreen shrub. Blooms Dec-<br>May. Chaparral. Elev 3-1,250ft.   |
| southern tarplant<br>(Centromadia parryi ssp.<br>australis)                 | Moderate. Known historically from vicinity but limited suitable habitat present and not observed in BSA. | CRPR 1B.1                        | Annual herb. Blooms May-Nov.<br>Vernal pools, along the margins<br>of marshes, in vernally mesic<br>areas within grassland. Elev 0-<br>1,395ft.                     |
| Orcutt's pincushion<br>(Chaenactis glabriuscula<br>var. orcuttiana)         | None. Species restricted to immediate coast.   | CRPR 1B.1                        | Annual herb. Blooms Jan-Aug. Sandy soils in coastal dunes, coastal bluff scrub. Elev 0-330ft.   |
| salt marsh bird's-beak<br>(Chloropyron maritimum<br>ssp. maritimum)         | None. Species restricted to immediate coast. BSA outside of elevation range for species.                 | FE<br>SE<br>CRPR 1B.2<br>NCCP-NE | Hemiparasititc annual herb.<br>Blooms Mar-Oct. Coastal dunes,<br>coastal salt marsh. Elev 0-100ft.  |
| Orcutt's spineflower<br>(Chorizanthe orcuttiana)                            | None. Species restricted to immediate coast.   | FE<br>SE<br>CRPR 1B.1<br>NCCP-NE | Annual herb. Blooms Mar-May. Sandy openings in chaparral, coastal sage scrub, closed-cone coniferous forest. Elev 10-410ft.   |
| long-spined spineflower<br>(Chorizanthe<br>polygonoides var.<br>longispina) | High. Known historically from vicinity and suitable habitat present. Not observed within BSA.            | CRPR 1B.2                        | Annual herb. Blooms Apr-Jul. Clay soils, vernal pools in chaparral, coastal sage scrub, meadows & seeps, grassland. Elev 95-5,020ft.                                |
| San Miguel savory<br>(Clinopodium chandleri)                                | None. Outside known range of species.  | CRPR 1B.2<br>NCCP                | Shrub. Blooms Mar-Jul. Rocky, gabbroic or metavolcanic areas in chaparral, coastal sage scrub, cismontane woodland, riparian woodland, grassland. Elev 390-3,530ft. |
| summer-holly<br>(Comarostaphylis<br>diversifolia ssp.<br>diversifolia)      | Present. Observed in chaparral, primarily in the Del Mar Mesa Preserve and adjacent areas.               | CRPR 1B.2                        | Evergreen shrub. Blooms Apr-<br>Jun. Chaparral, cismontane<br>woodland. Elev 95-2,595ft.  |
| San Diego sand aster<br>(Corethrogyne<br>filaginifolia var. incana)         | None. Species restricted to immediate coast.   | CRPR 1B.1                        | Perennial herb. Blooms Jun-Sep.<br>Coastal bluff scrub, chaparral,<br>coastal sage scrub. Elev 10-380ft.  |
| Del Mar Mesa sand aster (Corethrogyne                                       | Present. In the Del Mar<br>Mesa area of the BSA.   | CRPR 1B.1<br>NCCP                | Perennial herb. Blooms May-Sep.<br>Coastal bluff scrub, maritime  |

| Species Name  | Potential to Occur   | Status                        | Habitat Description*   |
|---|--|-------------------------------|--|
| filaginifolia var. linifolia)                                       | Most sand aster observed in the BSA was common sand aster (Corethrogyne filaginifolia var. filaginifolia).   |                               | chaparral, coastal sage scrub.<br>Elev 45-495ft.   |
| snake cholla<br>(Cylindropuntia<br>californica var.<br>californica) | None. Outside known range of species.  | CRPR 1B.1<br>NCCP-NE          | Stem succulent. Blooms Apr-<br>May. Chaparral, coastal sage<br>scrub. Elev 95-495ft.   |
| Otay tarplant (Deinandra conjugens)                                 | None. Outside known range of species.  | FT<br>SE<br>CRPR 1B.1<br>NCCP | Annual herb. Blooms May-Jun.<br>Clay soils in coastal sage scrub,<br>grassland. Elev 80-985ft.   |
| Orcutt's bird's-beak<br>(Dicranostegia<br>orcuttiana)               | None. Outside known range of species.  | CRPR 2B.1<br>NCCP             | Hemiparasitic annual herb.<br>Blooms Apr-Jun. Coastal sage<br>scrub. Elev 30-1,150ft.  |
| short-leaved dudleya<br>( <i>Dudleya brevifolia</i> )               | Very low. Species very rare and well documented. Known to occur to the west in Carmel Mountain Preserve but not within the BSA.                        | SE<br>CRPR 1B.1<br>NCCP-NE    | Perennial herb. Blooms Apr-May.<br>Sandstone, openings in maritime<br>chaparral, coastal sage scrub.<br>Elev 95-820ft.   |
| many-stemmed dudleya<br>(Dudleya multicaulis)                       | None. Outside known range of species.  | CRPR 1B.2<br>NCCP             | Perennial herb. Blooms Apr-Jul. Often clay soils in chaparral, coastal sage scrub, grassland. Elev 45-2,595ft.   |
| variegated dudleya<br>( <i>Dudleya variegata</i> )                  | Moderate. Known historically from vicinity but species very rare and limited suitable habitat present. BSA also outside of species' core distribution. | CRPR 1B.2<br>NCCP             | Perennial herb. Blooms Apr-May.<br>Clay soils associated with vernal<br>pools in chaparral, cismontane<br>woodland, coastal sage scrub,<br>grassland. Elev 10-1,905ft. |
| sticky dudleya<br>( <i>Dudleya viscida</i> )                        | Very low. Known from populations to the north but very limited suitable habitat present.   | CRPR 1B.2<br>NCCP             | Perennial herb. Blooms May-Jun.<br>Rocky areas in coastal bluff scrub,<br>chaparral, coastal scrub,<br>cismontane woodland. Elev 30-<br>1,805ft.                       |
| Palmer's goldenbush<br>(Ericameria palmeri ssp.<br>palmeri)         | None. Suitable habitat not present.  | CRPR 1B.1<br>NCCP-NE          | Evergreen shrub. Blooms Sep-<br>Nov. Mesic areas in chaparral,<br>coastal sage scrub. Elev 95-<br>1,970ft.   |
| coast wallflower<br>( <i>Erysimum ammophilum</i> )                  | None. Species restricted to immediate coast.   | CRPR 1B.2<br>NCCP-NE          | Perennial herb. Blooms Feb-Jun. Sandy openings in coastal dunes, chaparral, coastal sage scrub. Elev 0-200ft.  |
| San Diego button-celery<br>(Eryngium aristulatum<br>var. parishii)  | Present. Observed in vernal pools near the Los Penasquitos Substation and present in the Del Mar Mesa Preserve.  | FE<br>SE<br>CRPR 1B.1<br>NCCP | Annual/perennial herb. Blooms<br>Apr-Jun. Vernal pools in coastal<br>sage scrub, grassland. Elev 65-<br>2,035ft.   |
| cliff spurge (Euphorbia<br>misera)                                  | None. Species restricted to immediate coast.   | CRPR 2B.2                     | Shrub. Blooms Dec-Aug. Rocky<br>areas in coastal bluff scrub,<br>coastal sage scrub, Mojavean  |

| Species Name  | Potential to Occur  | Status            | Habitat Description*  |
|---|---|-------------------|---|
|   |   |                   | desert scrub. Elev 30-1,640ft.  |
| San Diego barrel cactus<br>(Ferocactus viridescens)                                 | Present. Observed in several areas on dry, west-or south-facing slopes, often with spineshrub.      | CRPR 2B.1<br>NCCP | Stem succulent. Blooms May-<br>Jun. Chaparral, coastal sage<br>scrub, grassland, vernal pools.<br>Elev 10-1,480ft.                                    |
| Palmer's grapplinghook<br>(Harpagonella palmeri)                                    | Present. Common in Diegan Coastal sage scrub openings within the BSA.                               | CRPR 4.2<br>NCCP  | Annual herb. Blooms Mar-May.<br>Clay soils in chaparral, coastal<br>sage scrub, grassland, disturbed<br>areas. Elev 65-3,135ft.                       |
| Tecate cypress<br>(Hesperocyparis<br>[Cupressus] forbesii)                          | None. Outside known range of species.   | CRPR 1B.1<br>NCCP | Perennial evergreen tree.<br>Chaparral in southern San Diego<br>County. Elev 260-4,925ft.   |
| beach goldenaster<br>(Heterotheca sessiliflora<br>ssp. sessiliflora)                | None. Species restricted to immediate coast.  | CRPR 1B.1         | Perennial herb. Blooms Mar-Dec.<br>Coastal dunes, chaparral, coastal<br>sage scrub. Elev 0-4,020ft.   |
| graceful tarplant<br>(Holocarpha virgata ssp.<br>elongata)                          | Present. Observed in disturbed areas near towers and grasslands.                                    | CRPR 4.2          | Annual herb. Blooms May-Nov. Chaparral, cismontane woodland, coastal sage scrub, grassland. Elev 195-3,610ft.   |
| decumbent goldenbush<br>(Isocoma menziesii var.<br>decumbens)                       | Present. Common in grasslands and Diegan Coastal Sage Scrub within the BSA.                         | CRPR 1B.2         | Shrub. Blooms Apr-Nov. sandy, often disturbed, areas in chaparral, coastal sage scrub. Elev 30-445ft.   |
| San Diego marsh-elder<br>(Iva hayesiana)  | Present. Observed along drainages and in revegetated areas.   | CRPR 2B.2         | Perennial herb. Blooms Apr-Oct.<br>Drainages, marshes Playas. Elev<br>30-1,640ft.   |
| Southwestern spiny rush<br>(Juncus acutus ssp.<br>leopoldii)                        | Present. Observed along drainages and in revegetated areas.   | CRPR 4.2          | Perennial, rhizomatous herb. Blooms Mar-Jun. along drainages, alkali marsh, seeps. Elev 10- 2,955ft.  |
| Coulter's goldfields<br>(Lasthenia glabrata ssp.<br>coulteri)                       | None. Suitable habitat not present.   | CRPR 1B.1         | Annual herb. Blooms Feb-Jun.<br>Coastal salt marsh, playas, vernal<br>pools. Elev 3-4,005ft.  |
| heart-leaved pitcher sage<br>(Lepechinia cardiophylla)                              | None. Suitable habitat not present. BSA outside of elevation range for species.                     | CRPR 1B.2<br>NCCP | Shrub. Blooms Apr-Jun. Chaparral, cismontane woodland, closed-cone coniferous forest. Elev 1,705-4,495ft.   |
| Gander's pitcher sage<br>(Lepechinia gander)  | None. Outside known range of species.   | CRPR 1B.3<br>NCCP | Shrub. Blooms Jun-Jul. Gabbroic or metavolcanic areas in chaparral, coastal sage scrub, grassland, closed-cone coniferous forest. Elev 1,000-3,300ft. |
| Robinson's pepper-grass<br>( <i>Lepidium virginicum</i> var.<br><i>robinsonii</i> ) | Present. Several individuals<br>found in Diegan Coastal<br>Sage Scrub near Carmel<br>Mountain Road. | CRPR 4.3          | Annual herb. Blooms Jan-Jul.<br>Chaparral, coastal sage scrub.<br>Elev 3-2,905ft.   |
| sea dahlia<br>(Leptosyne maritima)  | None. Suitable habitat not present.   | CRPR 2B.2         | Perennial herb. Blooms Mar-<br>May. Coastal bluff scrub, coastal<br>sage scrub. Elev 15-495ft.  |

| Species Name   | Potential to Occur  | Status                           | Habitat Description*  |
|--|---|----------------------------------|---|
| felt-leaved monardella<br>(Monardella hypoleuca<br>ssp. lanata)                  | None. Outside known range of species.   | CRPR 1B.2<br>NCCP                | Rhizomatous herb. Blooms Jun-<br>Aug. chaparral, cismontane<br>woodland. Elev 980-5,170ft.  |
| willowy monardella<br>( <i>Monardella viminea</i> )                              | Very low. Known historically from vicinity but only marginally suitable habitat occurs and not observed in the BSA.       | FE<br>SE<br>CRPR 1B.1<br>NCCP-NE | Perennial herb. Blooms Jun-Aug.<br>Alluvial, ephemeral washes in<br>chaparral, coastal sage scrub,<br>riparian habitats. Elev 160-740ft.                    |
| little mousetail<br>(Myosurus minimus ssp.<br>apus)                              | Very low. Vernal pool habitat present but BSA outside the known range of this species in San Diego County.                | CRPR 3.1<br>NCCP                 | Annual herb. Blooms Mar-Jun.<br>Alkaline soils in vernal pools,<br>grassland. Elev 65-2,100ft.  |
| coast woolly-heads<br>(Nemacaulis denudata<br>var. denudata)                     | None. Species restricted to immediate coast.  | CRPR 1B.2                        | Annual herb. Blooms Apr-Sep.<br>Coastal dunes. Elev 0-330ft.  |
| spreading navarretia<br>(Navarretia fossalis)                                    | None. Vernal pools present<br>but outside known range<br>of species.  | FT<br>CRPR 1B.1<br>NCCP          | Annual herb. Blooms Apr-Jun. Shallow freshwater associated with marshes, playas, vernal pools, chenopod scrub. Elev 95- 2,150ft.                            |
| Dehesa beargrass (Nolina interrata)  | None. Outside known range of species and suitable soils not present.  | SE<br>CRPR 1B.1<br>NCCP          | Perennial herb. Blooms Jun-Jul.<br>Gabbroic, metavolcanic, or<br>serpentinite areas in chaparral.<br>Elev 605-2,805ft.                                      |
| California Orcutt grass<br>(Orcuttia californica)                                | Very low. Vernal pool habitat present but outside the known range of this species in San Diego County.                    | FE<br>SE<br>CRPR 1B.1<br>NCCP    | Annual herb. Blooms Apr-Aug.<br>Vernal pools. Elev 45-2,165ft.  |
| short-lobed broomrape<br>( <i>Orobanche parishii</i> ssp.<br><i>brachyloba</i> ) | None. Suitable habitat not present.   | CRPR 4.2                         | Parasitic, perennial herb. Blooms<br>Apr-Oct. Sandy soils associated<br>with coastal bluff scrub, coastal<br>dunes, coastal sage scrub. Elev<br>10-1,000ft. |
| Gander's ragwort<br>(Packera ganderi)  | None. Outside known range of species and suitable soils not present. BSA is outside of elevation range for species.       | SR<br>CRPR 1B.2<br>NCCP          | Perennial herb. Blooms Apr-Jun.<br>Gabbroic outcrops & burned<br>areas in chaparral. Elev 1,310-<br>3,940ft.  |
| Torrey pine<br>(Pinus torreyana ssp.<br>torreyana)                               | Present (as planted individuals at Los Penasquitos Substation). Not observed naturally occurring.                         | CRPR 1B.2<br>NCCP                | Evergreen tree. Sandstone areas in chaparral, closed-cone coniferous forest. Elev 245-525ft.  |
| San Diego mesa mint<br>(Pogogyne abramsii)                                       | High. Known from vernal pools within the Del Mar Mesa Preserve and suitable habitat present. Not observed within the BSA. | FE<br>SE<br>CRPR 1B.1<br>NCCP    | Annual herb. Blooms Mar-Jul.<br>Vernal pools. Elev 295-660ft.   |
| Otay Mesa mint<br>(Pogogyne nudiuscula)  | None. Vernal pools present<br>but outside known range<br>of species.  | FE<br>SE<br>CRPR 1B.1<br>NCCP-NE | Annual herb. Blooms May-Jul.<br>Vernal pools. Elev 295-820ft.   |

| Species Name                                 | Potential to Occur   | Status                  | Habitat Description*  |
|--|--|-------------------------|---|
| Nuttall's scrub oak<br>(Quercus dumosa)      | Present. Dominant in<br>Scrub Oak Chaparral and<br>also occurs as scattered<br>individuals.                                      | CRPR 1B.1               | Evergreen shrub. Blooms Feb-<br>Apr. Sandy or clay loam soils<br>associated with chaparral, coastal<br>sage scrub, closed-cone<br>coniferous forest. Elev 45-<br>1,315ft. |
| small-leaved rose<br>(Rosa minutifolia)      | None. Outside known range of species.  | SE<br>CRPR 2B.1<br>NCCP | Deciduous shrub. Blooms Jan-<br>Jun. Chaparral, coastal sage<br>scrub. Elev 490-525ft.  |
| chaparral ragwort<br>(Senecio aphanactis)    | Moderate. Known from<br>the Del Mar Mesa Preserve<br>but species very rare and<br>limited suitable habitat<br>present.           | CRPR 2B.2               | Annual herb. Blooms Jan-Apr.<br>Chaparral, coastal sage scrub,<br>cismontane woodland. Elev 45-<br>2,625ft.   |
| purple stemodia<br>(Stemodia durantifolia)   | Very Low. Known from rocky drainages on MCAS Miramar and Mission Trails Regional Park but very limited suitable habitat present. | CRPR 2B.1               | Perennial herb. Blooms Jan-Dec.<br>Rocky, seasonally dry drainages in<br>San Diego County. Elev 90-985ft.   |
| estuary seablite (Suaeda esteroa)            | None. Species restricted to immediate coast. BSA is outside of elevation range for species.                                      | CRPR 1B.2               | Perennial herb. Blooms May-Oct.<br>Coastal salt marsh. Elev 0-20ft.   |
| Parry's tetracoccus<br>(Tetracoccus dioicus) | None. Suitable habitat, including soils, not present.  | CRPR 1B.2<br>NCCP       | Deciduous shrub. Blooms Apr-<br>May. Chaparral, coastal sage<br>scrub. Elev 540-3,280ft.  |

See Table 1 for status abbreviation explanations. NCCP=NCCP-covered species; NCCP-NE=SDG&E Narrow Endemic.

<sup>\* =</sup> This information is from online CNPS Rare Plant Inventory and observation of species in specific habitats in San Diego County

# ATTACHMENT C Plant Species Observed



# **ATTACHMENT C Plant Species Observed**

**Family Scientific Name Common Name** Adoxaceae Sambucus nigra ssp. caerulea Blue Elderberry

Agavaceae Chlorogalum parviflorum Small-Flower Soap-Plant/Amole

Agavaceae Hesperoyucca whipplei Chaparral Candle Yucca schidigera Mohave Yucca

Aizoaceae \*Aptenia cordifolia Baby Sun Rose, Shrubby Dewplant

> \*Carpobrotus chilensis Sea-fig \*Carpobrotus edulis Iceplant

\*Malephora crocea Coppery Mesemb \*Mesembryanthemum crystallinum Crystalline Iceplant \*Mesembryanthemum nodiflorum Slender-Leaf Iceplant

Alliaceae Allium praecox **Early Onion** 

Amaranthaceae \*Amaranthus blitoides **Prostrate Amaranth** Anacardiaceae Malosma laurina Laurel Sumac Rhus integrifolia Lemonadeberry \*Schinus molle Peruvian Pepper Tree

\*Schinus terebinthifolius **Brazilian Pepper Tree** Toxicodendron diversilobum Western Poison-Oak

\*Anthriscus caucalis **Bur Chervil Apiaceae** Apium graveolens Common Celery

Bowlesia incana Hoary Bowlesia

Conium maculatum Common Poison Hemlock

Daucus pusillus Rattlesnake Weed

Eryngium aristulatum var. parishii San Diego Button-celery

Foeniculum vulgare **Sweet Fennel** Sanicula crassicaulis Pacific Sanicle \*Torilis arvensis Tall Sock-Destroyer Yabea microcarpa California Hedge-Parsley Asclepias fascicularis Narrow-Leaf Milkweed Funastrum cynanchoides var. hartwegii Climbing Milkweed

Apocynaceae

Asphodelaceae \*Asphodelus fistulosus Hollow-Stem Asphodel Asteraceae Acourtia microcephala Sacapellote

Ambrosia psilostachya Western Ragweed Coastal Sagebrush Artemisia californica Artemisia douglasiana **Douglas Mugwort** Artemisia palmeri Palmer's Sagewort Baccharis pilularis Coyote Brush

Baccharis salicifolia Mule-Fat, Seep-Willow Baccharis sarothroides **Broom Baccharis** Bahiopsis laciniata San Diego Sunflower Rush Sweetbush Bebbia juncea var. aspera Carduus pycnocephalus Italian Thistle Tocalote

\*Centaurea melitensis Corethrogyne filaginifolia var. filaginifolia Sand-Aster

Corethrogyne filaginifolia var. linifolia Del Mar Mesa Sand Aster \*Cotula australis Australian Brass-Buttons

Family Scientific Name

Cotula coronopifolia

\*Cynara cardunculus ssp. flavescens

Deinandra fasciculata

\*Dittrichia graveolens

Encelia californica Encelia farinosa var. farinosa \*Erigeron bonariensis

Erigeron canadensis

\*Erigeron sumatrensis

Erigeron foliosus var. foliosus

Eriophyllum confertiflorum var. confertiflorum

\*Gazania linearis \*Glebionis coronaria Grindelia camporum

Gutierrezia californica

Hazardia squarrosa var. grindelioides

\*Hedypnois cretica Helianthus gracilentus \*Helminthotheca echioides Heterotheca grandiflora

Holocarpha virgata ssp. elongata

\*Hypochaeris glabra

Isocoma menziesii var. decumbens Isocoma menziesii var. menziesii Isocoma menziesii var. vernonioides Iva havesiana

\*Lactuca serriola Lasthenia gracilis

Layia platyglossa \*Logfia gallica

Osmadenia tenella

\*Pulicaria paludosa Pluchea odorata var. odorata

Pluchea sericea
Porophyllum gracile

Pseudognaphalium biolettii Pseudognaphalium californicum Pseudognaphalium canescens

\*Pseudognaphalium luteoalbum

Pseudognaphalium microcephalum Psilocarphus brevissimus var. brevissimus Psilocarphus tenellus var. tenellus

Silybum marianum
\*Sonchus asper ssp. asper
\*Sonchus oleraceus

Stephanomeria diegensis Stephanomeria exigua ssp. deanei

Stephanomeria virgata ssp. pleurocarpa Stylocline gnaphaloides

Tragopogon porrifolius Uropappus lindleyi Xanthium strumarium **Common Name** 

African Brass-Buttons
Artichoke Thistle, Cardoon

Fascicled Tarweed

Stinkwort

California Encelia Brittlebush, Incienso Flax-Leaf Horseweed

Horseweed

**Tropical Horseweed** 

Leafy Daisy

Long-Stem Golden-Yarrow

Treasure Flower
Garland/Crown Daisy

Gumplant

California Matchweed

Southern Sawtooth Goldenbush

Crete Hedypnois Slender Sunflower Bristly Ox-Tongue Telegraph Weed Graceful Tarplant Smooth Cat's Ear

Decumbent Goldenbush
Spreading Goldenbush
Coastal Goldenbush
San Diego Marsh-Elder
Prickly Lettuce

Common Goldfields
Tidy Tips

Narrow-Leaf Cottonrose

Osmadenia False-Fleabane Salt Marsh Fleabane

Arrow Weed Odora

Bicolor Cudweed California Everlasting Wright's Cudweed

Fragrant Everlasting Cudweed

White Everlasting
Dwarf Woolly Marbles
Slender Woolly Marbles

Milk Thistle
Prickly Sow-Thistle
Common Sow-Thistle
San Diego Wreath-Plant
Deane's Small Wreath-Plant

Tall Wreath-Plant Everlasting Nest-Straw Salsify, Oyster Plant

Silver Puffs Cocklebur

| Family          | Scientific Name                            | Common Name             |
|-----------------|--|-------------------------|
| Berberidaceae   | Berberis pinnata ssp. pinnata              | Shiny-Leaf Barberry     |
| Bignoniaceae    | Catalpa speciosa                           | Southern Catalpa        |
| Boraginaceae    | Amsinckia menziesii var. intermedia        | Rancher's Fiddleneck    |
|                 | Cryptantha intermedia var. intermedia      | Nievitas Cryptantha     |
|                 | *Echium candicans                          | Pride of Madeira        |
|                 | Eriodictyon crassifolium var. crassifolium | Felt-Leaf Yerba Santa   |
|                 | Eucrypta chrysanthemifolia var.            |                         |
|                 | chrysanthemifolia                          | Common Eucrypta         |
|                 | Harpagonella palmeri                       | Palmer's Grappling-Hook |
|                 | Heliotropium curassavicum var. oculatum    | Salt Heliotrope         |
|                 | Pectocarya linearis ssp. ferocula          | Slender Pectocarya      |
|                 | Phacelia cicutaria var. hispida            | Caterpillar Phacelia    |
|                 | Phacelia distans                           | Wild-Heliotrope         |
|                 | Phacelia grandiflora                       | Giant-Flower Phacelia   |
|                 | Pholistoma auritum var. auritum            | Fiesta Flower           |
|                 | Pholistoma racemosum                       | San Diego Fiesta Flower |
|                 | Plagiobothrys collinus var. gracilis       | San Diego Popcornflower |
| Brassicaceae    | *Brassica nigra                            | Black Mustard           |
|                 | *Brassica tournefortii                     | Sahara Mustard          |
|                 | Cardamine californica                      | Milk Maids              |
|                 | Caulanthus lasiophyllus                    | California Mustard      |
|                 | *Coronopus didymus                         | Lesser Wart-Cress       |
|                 | *Hirschfeldia incana                       | Short-Pod Mustard       |
|                 | Lepidium nitidum var. nitidum              | Shining Peppergrass     |
|                 | Lepidium virginicum var. robinsonii        | Robinson's Peppergrass  |
|                 | Lepidium virginicum ssp. virginicum        | Virginia Peppergrass    |
|                 | Raphanus sativus                           | Wild Radish             |
|                 | Rorippa palustris ssp. palustris           | Bog Yellowcress         |
|                 | *Sisymbrium irio                           | London Rocket           |
|                 | Thysanocarpus curvipes                     | Lacepod                 |
| Cactaceae       | Cylindropuntia prolifera                   | Coast Cholla            |
|                 | Ferocactus viridescens var. viridescens    | Coast Barrel Cactus     |
|                 | Opuntia littoralis                         | Coast Prickly-Pear      |
|                 | Opuntia phaeacantha                        | Desert Prickly-Pear     |
|                 | Opuntia xvaseyi                            | Mesa Prickly-Pear       |
| Capparaceae     | Cleome arborea                             | Bladderpod              |
| Caprifoliaceae  | Lonicera subspicata var. denudata          | Johnston's Honeysuckle  |
| Caryophyllaceae | Cardionema ramosissimum                    | Tread Lightly           |
|                 | Cerastium glomeratum                       | Mouse-Ear Chickweed     |
|                 | *Petrorhagia dubia                         | Hairy Pink              |
|                 | *Polycarpon tetraphyllum var. tetraphyllum | Four-Leaf Allseed       |
|                 | Silene laciniata ssp. laciniata            | Southern Pink           |
|                 | Spergula arvensis                          | Stickwort, Starwort     |
|                 | *Stellaria media                           | Common Chickweed        |
| Chenopodiaceae  | Atriplex canescens var. canescens          | Four-wing Saltbush      |
|                 | Atriplex lentiformis                       | Big Saltbush            |
|                 | Atriplex prostrata                         | Spearscale              |
|                 | *Atriplex semibaccata                      | Australian Saltbush     |
|                 | *Chenopodium album                         | Lamb's Quarters         |
|                 | Chenopodium californicum                   | California Goosefoot    |
|                 | Chenopodium murale                         | Nettle-Leaf Goosefoot   |
|                 | *Kochia scoparia ssp. scoparia             | Mexican Fireweed        |

| <u>Family</u>   | Scientific Name                                | Common Name                       |
|-----------------|--|-----------------------------------|
|                 | *Salsola australis                             | Australian Tumbleweed             |
| Cistaceae       | *Cistus creticus                               | Purple Rock-Rose                  |
|                 | *Cistus ladanifer                              | Gum Cistus                        |
|                 | Crocanthemum scoparium var. scoparium          | Peak Rush-rose                    |
| Cleomaceae      | Peritoma arborea var. arborea                  | Coast Bladderpod                  |
| Convolvulaceae  | Calystegia macrostegia ssp. arida              | Southern California Morning-Glory |
|                 | Calystegia macrostegia ssp. tenuifolia         | San Diego Morning-Glory           |
|                 | *Convolvulus arvensis                          | Field Bindweed                    |
|                 | Convolvulus simulans                           | Small-Flower Bindweed             |
|                 | Cuscuta californica var. californica           | Chaparral Dodder                  |
|                 | Dichondra occidentalis                         | Western Dichondra/Ponyfoot        |
| Crassulaceae    | Crassula connata                               | Pygmyweed                         |
|                 | *Crassula ovata                                | Jade Plant                        |
|                 | Dudleya lanceolata                             | Lance-Leaf Dudleya                |
|                 | Dudleya pulverulenta                           | Chalk Dudleya                     |
| Cucurbitaceae   | Marah macrocarpa                               | Chilicothe                        |
| Cyperaceae      | Bolboschoenus maritimus ssp. paludosus         | Prairie Bulrush                   |
|                 | Cyperus eragrostis                             | Tall Flatsedge                    |
|                 | Cyperus erythrorhizos                          | Red-Root Flatsedge                |
|                 | Eleocharis montevidensis                       | Dombey's Spike-Rush               |
|                 | Eleocharis parishii                            | Parish's Spike-Rush               |
|                 | Schoenoplectus acutus var. occidentalis        | Viscid Bulrush                    |
|                 | Schoenoplectus americanus                      | Olney's Bulrush                   |
|                 | Schoenoplectus californicus                    | California Bulrush                |
| Dryopteridaceae | Dryopteris arguta                              | Coastal Wood Fern                 |
| Ericaceae       | Arctostaphylos glandulosa ssp. crassifolia     | Del Mar Manzanita                 |
|                 | Arctostaphylos glandulosa ssp. glandulosa      | Eastwood's Manzanita              |
|                 | Comarostaphylis diversifolia ssp. diversifolia | Summer-Holly                      |
|                 | Xylococcus bicolor                             | Mission Manzanita                 |
| Euphorbiaceae   | Croton setigerus                               | Doveweed                          |
| •               | *Euphorbia maculata                            | Spotted Spurge                    |
|                 | *Euphorbia peplus                              | Petty Spurge                      |
|                 | Euphorbia polycarpa                            | Small-Seed Sandmat                |
|                 | *Ricinus communis                              | Castor Bean                       |
| Fabaceae        | Acacia cyclops                                 | Western Coastal Wattle            |
|                 | *Acacia redolens                               | Desert Carpet                     |
|                 | Acmispon americanus var. americanus            | Spanish Lotus                     |
|                 | Acmispon glaber var. glaber                    | Deerweed                          |
|                 | Acmispon micranthus                            | Grab Lotus                        |
|                 | Acmispon strigosus                             | Bishop's/Strigose Lotus           |
|                 | Astragalus trichopodus var. lonchus            | Ocean Locoweed                    |
|                 | Lathyrus vestitus var. alefeldii               | San Diego Sweet Pea               |
|                 | *Melilotus indicus                             | Indian Sweetclover                |
|                 | *Parkinsonia aculeata                          | Mexican palo verde                |
|                 | Trifolium hirtum                               | Rose Clover                       |
|                 | Vicia villosa ssp. varia                       | Hairy Vetch                       |
| Fagaceae        | Quercus agrifolia var. agrifolia               | Coast Live Oak, Encina            |
| -               | Quercus dumosa                                 | Nuttall's Scrub Oak               |
|                 | Quercus Xacutidens                             | Torrey's Scrub Oak                |
| Gentianaceae    | Zeltnera venusta                               | Canchalagua                       |
| Geraniaceae     | Erodium botrys                                 | Long-Beak Filaree/Storksbill      |
|                 | Erodium brachycarpum                           | Short-Beak Filaree/Storksbill     |

| <u>Family</u>   | Scientific Name                          | Common Name                    |
|-----------------|--|--------------------------------|
|                 | Erodium cicutarium                       | Red-Stem Filaree/Storksbill    |
|                 | Erodium moschatum                        | White-Stem Filaree/Storksbill  |
|                 | Geranium carolinianum                    | Carolina Geranium              |
|                 | *Geranium dissectum                      | Cut-Leaf Geranium              |
| Grossulariaceae | Ribes speciosum                          | Fuchsia-Flower Gooseberry      |
| Iridaceae       | Sisyrinchium bellum                      | Blue-Eyed-Grass                |
| Juncaceae       | Juncus acutus ssp. leopoldii             | Southwestern Spiny Rush        |
| Lamiaceae       | *Lamium amplexicaule                     | Henbit                         |
|                 | Marrubium vulgare                        | Horehound                      |
|                 | Salvia apiana                            | White Sage                     |
|                 | Salvia columbariae                       | Chia                           |
|                 | Salvia leucophylla                       | San Luis Purple Sage           |
|                 | Salvia mellifera                         | Black Sage                     |
|                 | Stachys ajugoides                        | Ajuga Hedge-Nettle             |
|                 | Stachys rigida var. quercetorum          | Oak Hedge-Nettle               |
| Liliaceae       | Calochortus splendens                    | Splendid Mariposa Lily         |
| Lythraceae      | *Lythrum hyssopifolia                    | Grass Poly                     |
| Malvaceae       | Malacothamnus densiflorus                | Many-Flower Bushmallow         |
|                 | Malva parviflora                         | Cheeseweed                     |
|                 | Malvella leprosa                         | Alkali Mallow                  |
|                 | Sidalcea malviflora ssp. sparsifolia     | Checker-Bloom                  |
| Melanthiaceae   | Toxicoscordion fremontii                 | Death camas                    |
| Montiaceae      | Calandrinia ciliata                      | Red Maids                      |
| Molluginaceae   | *Glinus lotoides                         | Lotus Sweetjuice               |
| Montiaceae      | Claytonia perfoliata ssp. mexicana       | Mexican Miner's-Lettuce        |
|                 | Cistanthe maritima                       | Seaside Cistanthe              |
|                 |  | Scarlet Pimpernel, Poor Man's  |
| Myrsinaceae     | Anagallis arvensis                       | Weatherglass                   |
| Myrtaceae       | Eucalyptus cladocalyx                    | Sugar Gum                      |
|                 | *Eucalyptus globulus                     | Tasmanian bluegum              |
| Nyctaginaceae   | Mirabilis laevis var. crassifolia        | Coastal Wishbone Plant         |
| Onagraceae      | Clarkia epilobioides                     | Canyon Godetia                 |
|                 | Clarkia purpurea ssp. quadrivulnera      | Four-Spot Clarkia              |
|                 | Epilobium canum ssp. canum               | California Fuchsia             |
|                 | Epilobium ciliatum ssp. ciliatum         | Willow Herb                    |
| Orobanchaceae   | Castilleja foliolosa                     | Woolly Indian Paintbrush       |
|                 | Cordylanthus rigidus ssp. setigerus      | Dark-Tip Bird's Beak           |
| Oxalidaceae     | *Oxalis pes-caprae                       | Bermuda-Buttercup              |
| Paeoniaceae     | Paeonia californica                      | California Peony               |
| Papaveraceae    | Eschscholzia californica                 | California Poppy               |
| Phyrmaceae      | Mimulus aurantiacus                      | Monkey Flower Bush             |
|                 | Mimulus guttatus                         | Seep Monkey Flower             |
| Pinaceae        | *Pinus pinea                             | Italian Stone Pine             |
|                 | Pinus torreyana                          | Torrey Pine                    |
| Plantaginaceae  | Antirrhinum nuttallianum ssp. subsessile | Big-Gland Nuttall's Snapdragon |
|                 | Collinsia heterophylla var. heterophylla | Chinese Houses                 |
|                 | Keckiella cordifolia                     | Climbing Bush Penstemon        |
|                 | Plantago coronopus                       | Cut-Leaf Plantain              |
|                 | Plantago erecta                          | Dot-Seed Plantain              |
| Plumbaginaceae  | *Limonium californicum                   | Western Marsh-Rosemary         |
| _               | *Limonium perezii                        | Perez's Marsh-Rosemary         |
| Poaceae         | Agrostis exarata                         | Spike Bent Grass               |

| Family        | Scientific Name                            | Common Name                    |
|---------------|--|--------------------------------|
| <del></del>   | *Avena barbata                             | Slender Wild Oat               |
|               | *Avena fatua                               | Wild Oat                       |
|               | Bothriochloa barbinodis                    | Cane Bluestem                  |
|               | *Brachypodium distachyon                   | Purple Falsebrome              |
|               | *Briza minor                               | Quaking Grass                  |
|               | *Bromus diandrus                           | Ripgut Grass                   |
|               | *Bromus hordeaceus                         | Soft Chess                     |
|               | *Bromus madritensis ssp. rubens            | Foxtail Chess, Red Brome       |
|               | *Cortaderia selloana                       | Selloa Pampas Grass            |
|               | *Crypsis schoenoides                       | Swamp Prickle Grass            |
|               | *Cynodon dactylon                          | Bermuda Grass                  |
|               | Echinochloa crus-galli                     | Common Barnyard Grass          |
|               | *Ehrharta calycina                         | Perennial Veldt Grass          |
|               | Ehrharta erecta                            | Panic Veldt Grass              |
|               | Elymus condensatus                         | Giant Wild-Rye                 |
|               | *Festuca myuros                            | Rat-tail Fescue                |
|               | *Festuca perennis                          | Perennial ryegrass             |
|               | *Hordeum murinum ssp. glaucum              | Glaucous Barley                |
|               | *Lamarckia aurea                           | Golden-Top                     |
|               | Melica imperfecta                          | Coast Range Melic              |
|               | *Melinis repens ssp. repens                | Natal Grass                    |
|               | Muhlenbergia microsperma                   | Little-Seed Muhly              |
|               | Muhlenbergia rigens                        | Deergrass                      |
|               | Pennisetum setaceum                        | Crimson Fountain Grass         |
|               | *Polypogon monspeliensis                   | Annual Beard Grass             |
|               | Schismus barbatus                          | Mediterranean Schismus         |
|               | Stipa cernua                               | Nodding Needlegrass            |
|               | Stipa coronata                             | Giant Stipa                    |
|               | Stipa lepida                               | Foothill Needlegrass           |
|               | Stipa miliacea var. milacea                | Smilo Grass                    |
|               | Stipa pulchra                              | Purple Needlegrass             |
| Polemoniaceae | Linanthus dianthiflorus                    | Farinose Ground Pink           |
|               | Navarretia hamata ssp. hamata              | Hooked Skunkweed               |
|               | Navarretia hamata ssp. leptantha           | <b>Hooked Pincushion Plant</b> |
| Polygonaceae  | Chorizanthe fimbriata var. fimbriata       | Fringed Spineflower            |
|               | Eriogonum elongatum var. elongatum         | Tall Buckwheat                 |
|               | Eriogonum fasciculatum var. fasciculatum   | Coast California Buckwheat     |
|               | Lastarriaea coriacea                       | Lastarriaea                    |
|               | Pterostegia drymarioides                   | Granny's Hairnet, G. C. P.     |
|               | *Rumex crispus                             | Curly Dock                     |
| Polypodiaceae | Polypodium californicum                    | California Polypody            |
| Portulacaceae | *Calandrinia ciliata                       | Red Maids                      |
|               | *Portulaca oleracea                        | Purslane                       |
| 5.            |  | Scarlet Pimpernel, Poor Man's  |
| Primulaceae   | Anagallis arvensis                         | Weatherglass                   |
|               | Primula clevelandii ssp. clevelandii       | Padre's Shooting Star          |
| Dt a side s   | Samolus parviflorus                        | Water-Pimpernel                |
| Pteridaceae   | Adiantum jordanii                          | California Maidenhair          |
|               | Cheilanthes clevelandii                    | Cleveland's Lip Fern           |
|               | Pellaea andromedifolia var. andromedifolia | Coffee Fern                    |
|               | Pellaea mucronata ssp. mucronata           | Bird's Foot Cliff-Brake        |
|               | Pentagramma triangularis ssp. maxonii      | Maxon's Silverback Fern        |

| Family            | Scientific Name                            | Common Name                       |
|-------------------|--|-----------------------------------|
|                   | Pentagramma triangularis ssp. triangularis | California Goldback Fern          |
|                   | Pentagramma triangularis ssp. viscosa      | Sticky Silverback Fern            |
| Ranunculaceae     | Clematis pauciflora                        | Ropevine Clematis                 |
|                   | Ranunculus hebecarpus                      | Hairy-Fruit Buttercup             |
|                   | Thalictrum fendleri var. polycarpum        | Smooth-Leaf Meadow-Rue            |
| Resedaceae        | Reseda luteola                             | Dyer's Rocket                     |
| Rhamnaceae        | Adolphia californica                       | Spineshrub                        |
|                   | Ceanothus tomentosus                       | Ramona-Lilac                      |
|                   | Ceanothus verrucosus                       | Wart-Stem-Lilac                   |
|                   | Rhamnus crocea                             | Spiny Redberry                    |
| Rosaceae          | Aphanes occidentalis                       | Western Lady's Mantle             |
| Nosuccuc          | Adenostoma fasciculatum                    | Chamise                           |
|                   | Cercocarpus minutiflorus                   | San Diego Mountain-Mahogany       |
|                   | Cotoneaster lacteus                        | Milk-Flower Cotoneaster           |
|                   | Heteromeles arbutifolia                    | Toyon, Christmas Berry            |
|                   | Prunus ilicifolia ssp. ilicifolia          | Islay, Holly-Leaf Cherry          |
|                   | Rubus ursinus                              | California Blackberry             |
| Rubiaceae         | Galium aparine                             | Common Bedstraw, Goose Grass      |
| Nabiaccac         | Galium nuttallii ssp. nuttallii            | San Diego Bedstraw                |
| Rutaceae          | Cneoridium dumosum                         | Coast Spice Bush, Bush-Rue        |
| Salicaceae        | Salix exigua var. hindsiana                | Hinds's Willow                    |
| Jancaceae         | Salix gooddingii                           | Goodding's Black Willow           |
|                   | Salix laevigata                            | Red Willow                        |
|                   | Salix lasiolepis                           | Arroyo Willow                     |
| Saururaceae       | Anemopsis californica                      | Yerba Mansa                       |
| Saxifragaceae     | Jepsonia parryi                            | Coast Jepsonia                    |
| Scrophulariaceae  | Scrophularia californicus                  | California Bee Plant              |
| Scropilalariaceae | *Myoporum laetum                           | Lollypop Tree                     |
| Selaginellaceae   | Selaginella bigelovii                      | Bigelow's Spike-Moss              |
| Solanaceae        |  | Tree Tobacco                      |
| Solaliaceae       | *Nicotiana glauca                          |                                   |
|                   | Solanum parishii<br>Solanum xanti          | Parish's Nightshade               |
| Tamaricaceae      | *Tamarix ramosissima                       | Chaparral Nightshade<br>Saltcedar |
|                   |  | Common Goldenstar                 |
| Themidaceae       | Bloomeria crocea var. crocea               |                                   |
|                   | Brodiaea filifolia                         | Threadleaf Brodiaea               |
| <b>-</b> .        | Dichelostemma capitatum ssp. capitatum     | Blue Dicks, School Bells          |
| Typhaceae         | Typha domingensis                          | Southern Cattail                  |
| Urticaceae        | Hesperocnide tenella                       | Western Nettle                    |
|                   | Parietaria hespera var. californica        | California Pellitory              |
|                   | Parietaria hespera var. hespera            | Western Pellitory                 |
|                   | Urtica dioica ssp. holosericea             | Hoary Nettle                      |
|                   | *Urtica urens                              | Dwarf Nettle                      |
| Violaceae         | Viola pedunculata                          | Johnny Jump-Up                    |
| Vitaceae          | Vitis girdiana                             | Southern California Wild Grape    |

<sup>\* =</sup> Non-native species