

ATTACHMENT 4.4-C: RARE PLANT SURVEY REPORT

**San Diego Gas &
Electric Company
East County
Substation Project
Rare Plant
Survey Report**

July 28, 2009

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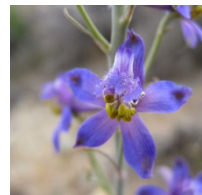


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I. Summary

Sensitive plant surveys were conducted March through May 2009 at the proposed San Diego Gas & Electric Company's (SDG&E's) East County (ECO) Substation Project survey area (survey area). Survey results were positive for eight sensitive plant species. No plant species listed as threatened or endangered by the U.S. Fish and Wildlife Service (USFWS) or the California Department of Fish and Game (CDFG) were observed. In order of sensitivity based on their ranking by the California Native Plant Society (CNPS), the following sensitive plants were observed:

Jacumba Milkvetch (*Astragalus douglasii* var. *perstrictus*) - CNPS List 1B.2
Sticky Geraea - (*Geraea viscida*) - CNPS List 2.3
Desert Beauty - (*Linanthus bellus*) - CNPS List 2.3
Scarlet Gilia; Slender-leaf Ipomopsis (*Ipomopsis tenuifolia*) - CNPS List 2.3
Palmer's Grappling-hook (*Harpagonella palmeri*) - CNPS List 4.2
Pride-of-California; Campo Pea (*Lathyrus splendens*) - CNPS List 4.3
Jacumba Monkey Flower (*Mimulus aridus*) - CNPS List 4.3
Oceanblue Larkspur (*Delphinium parishii* var. *subglobosum*) - CNPS List 4.3

II. Project Description

The East County Substation Project area lies partially within the town of Jacumba in southeastern San Diego County and runs to the town of Boulevard in unincorporated San Diego County. The project includes the construction of one new substation, an approximately 13.5-mile 138 kilovolt (kV) transmission line on new steel and wood poles, and rebuilding the Boulevard Substation. The transmission line will extend from the East County Substation, south of Jade Mountain west for 9 miles, and then turn north for approximately 4.5 miles to the new proposed Boulevard Substation (Figures 1: Project Vicinity Map). The portion of the project that runs east-west is located 150 feet from the existing 500 kV Southwest Powerlink (SWPL) transmission line. The site is on the U.S. Geological Survey (USGS) 7.5 minute Live Oak Springs, Tierra Del Sol, and Jacumba Quadrangles (Figure 2: USGS Quadrangle Map).

The survey area includes a 300-foot-wide transmission line corridor and an area approximately 700 feet around the proposed substation sites. Also included are proposed new access roads, fly yards, pull sites, temporary work areas, staging yards, retention ponds, and areas where existing roads would be widened or re-graded.

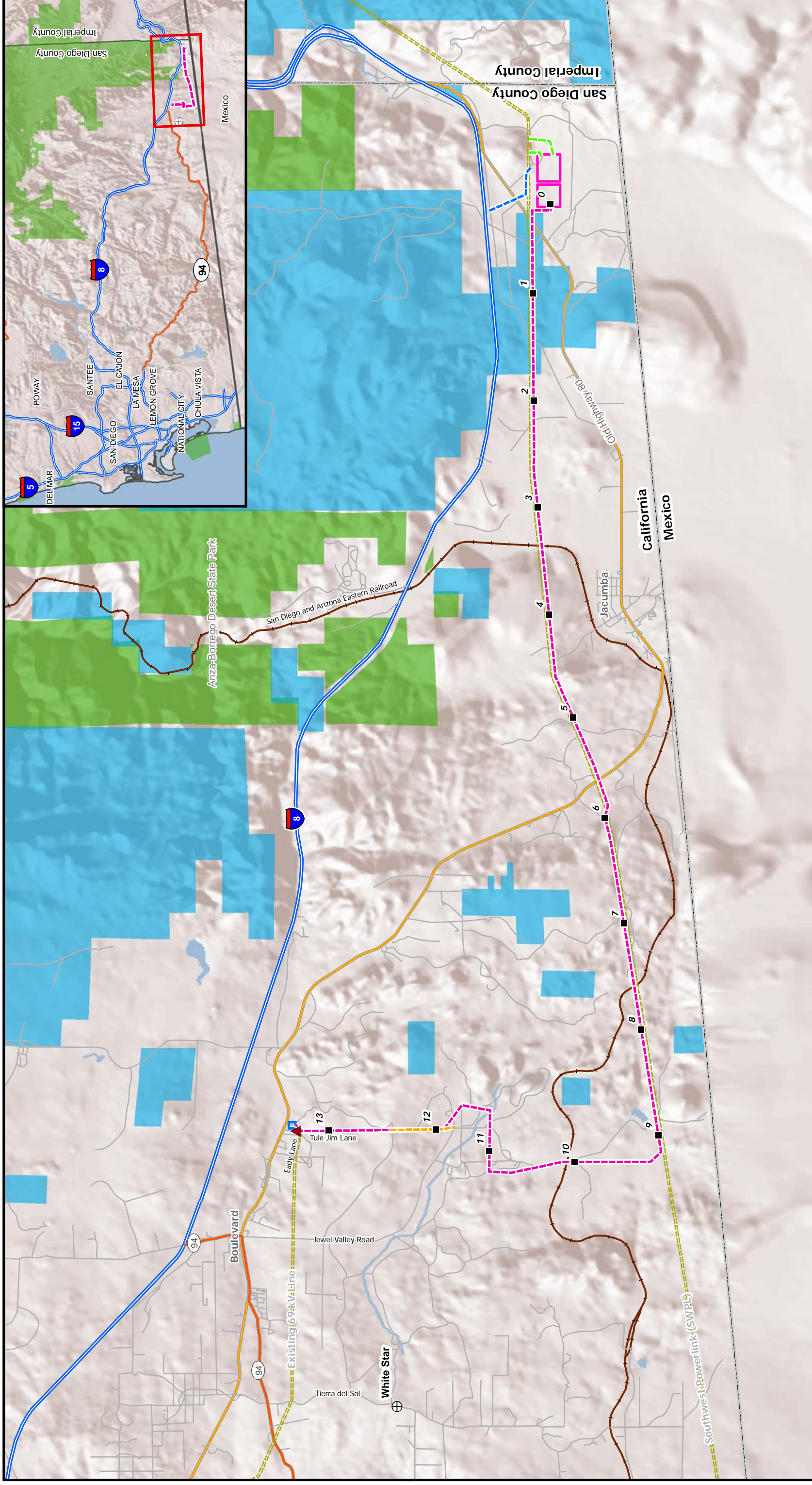




Figure 1: Project Vicinity Map

- Proposed SWPL Loop-In
- Proposed 138 kV Line
- Proposed 12 kV Temporary Distribution Tap
- 445 Circuit Collocated with 138 kV Line
- Existing Transmission Line
- Proposed ECO Substation
- Boulevard Substation Rebuild
- ▲ Existing Boulevard Substation
- Proposed 138 kV Line Milepost
- ⊕ Existing Transmission Line
- Bureau of Land Management
- California State Park
- Interstate
- Highway
- Local Road
- Major Road
- Railroad


East County Substation Project



SDGE
A Scudder Energy Utility



NSIGNIA
ENVIRONMENTAL



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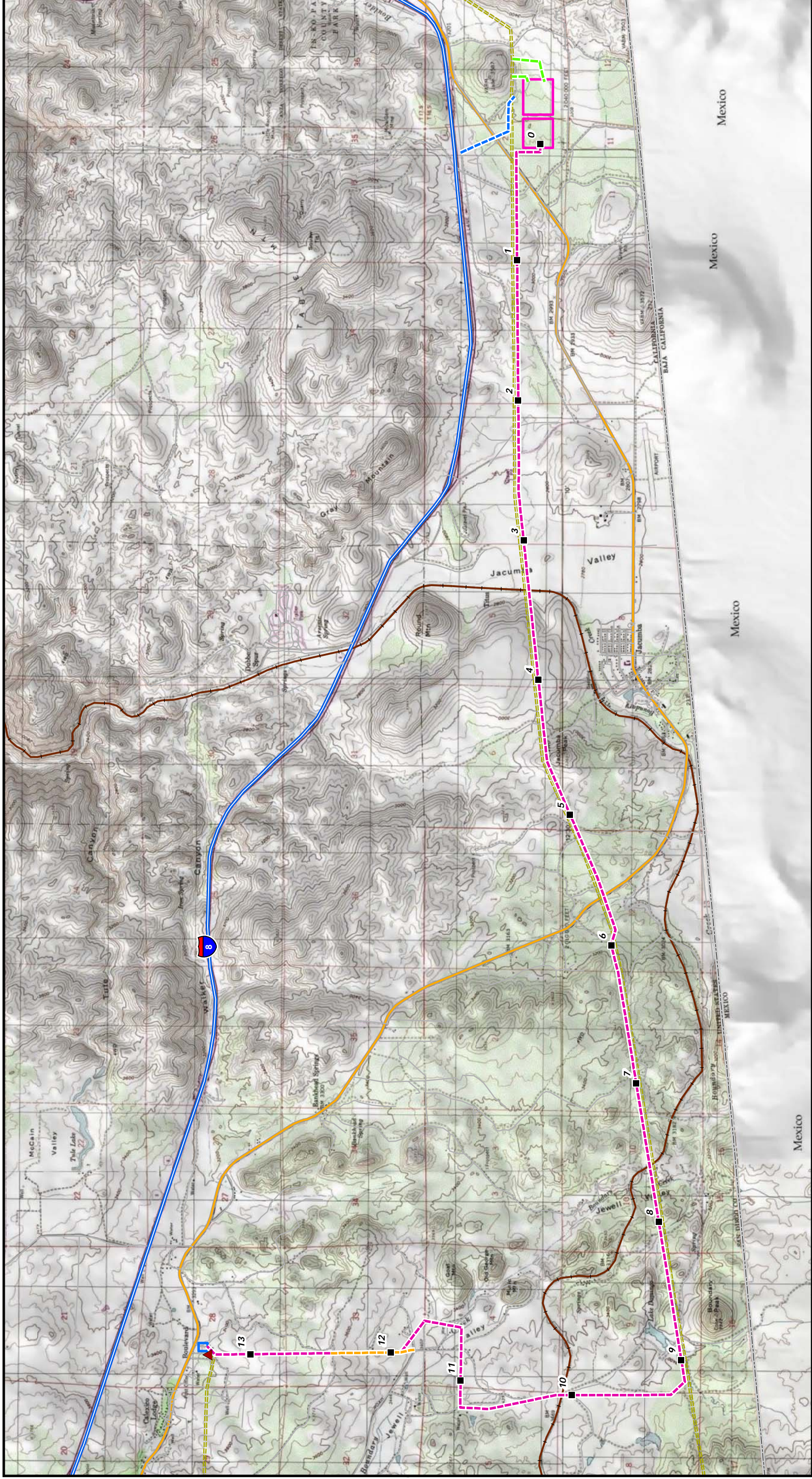


Figure 2: USGS Quadrangle Map

- Proposed SWPL Loop-In
- Proposed 138 kV Line
- Proposed 12 kV Temporary Distribution Tap
- 445 Circuit Collocated with 138 kV Line
- Existing Transmission Line
- Proposed ECO Substation
- Boulevard Substation Rebuild
- ▲ Existing Boulevard Substation
- Proposed 138 kV Line Milepost
- ⊕ Communication Facility
- Interstate
- Highway
- Local Road
- Major Road
- Railroad

East County Substation Project



1:42,000



The survey area is mostly undeveloped, but there are existing dirt roads that are frequently used by the Border Patrol for border surveillance and there is evidence of trash dumping and minor disturbances to vegetation. U.S. Interstate 8 is located to the north and the U.S./Mexico border is to the south. U.S. Old Highway 80 crosses the survey area at three locations.

III. Methods

Surveys for plant species considered rare, threatened, or endangered by the CNPS, CDFG, and/or USFWS were performed in accordance with CNPS Botanical Survey Guidelines (revised June 2001) from March through May, 2009. Prior to the start of the surveys, a “target list” of sensitive plant species that may occur within or adjacent to the survey area was developed from many sources including Insignia Environmental’s 2008 rare plant survey of the ECO substation site and the list entitled “Sensitive Plant Species with Potential to Occur in the East County Substation Project Area” that they generated and included in the Proponent’s Environmental Assessment (PEA) document. Other prominent sources included the results of a query of the CDFG’s California Natural Diversity Database (CNDDDB), lists of voucher specimens at the San Diego Natural History Museum’s (SDNHM) Herbarium, and local knowledge of rare plants likely to occur in the area. Timing of the surveys was designed to coincide with the blooming period of sensitive plant species on the target list. The blooming season for plants has some variability, depending upon adequate rainfall and warm weather so surveys were conducted more than once in areas most likely to support rare plants.

Surveys were conducted by qualified botanists walking the 300-foot-wide transmission line corridor, ECO and Boulevard substation footprints approximately 700 foot buffer around the proposed substation sites. The survey also included proposed new access roads, fly yards, pull sites, temporary work areas, staging yards, retention ponds, and areas where existing roads would be widened or re-graded. When a sensitive plant species was observed, a waypoint was taken with a handheld Global Positioning System that recorded the plant’s location within the survey area and the elevation. Field notes were taken to document the approximate size of each sensitive plant population, or group of individuals, and the plant’s proximity to a proposed steel pole or other project feature.

In addition to focused rare plant surveys, USFWS protocol surveys for the Quino checkerspot butterfly (*Euphydryas editha quino* [QCB]) were conducted within the survey area in 2009 by Rocks Biological Consulting. One of the requirements of a

QCB survey is to note all flowering plants that could serve as nectar sources for butterflies. The QCB surveys were conducted from March 18, 2009 to May 5, 2009 and all plants observed during these surveys were recorded. This information was used to help determine the optimal time to conduct focused surveys for rare plant species.

All surveys were conducted by Jim Rocks of Rocks Biological Consulting; Cindy Jones Daverin of Mariposa Biology; Margie Mulligan, Botanist at the SDNHM; and/or Jon Rebman, Ph.D, Curator of Botany at the SDNHM. A rare plant occurrence map is found in Attachment A: Rare Plant Species Occurrences Maps and a complete list of species observed within the survey area is included in Attachment B: Survey Area Plant Species List. Plant names follow Rebman and Simpson (2006). Additional plant references used included "The Jepson manual: higher plants of California" (Hickman 1993), and Reiser's "Rare Plants of San Diego County" (1994).

List 1. Rare Plant Survey Dates and Personnel

- 3/18/09 - J. Rocks, C. Jones Daverin, M. Mulligan
- 3/19/09 - J. Rocks, C. Jones Daverin
- 3/23/09 - J. Rocks, C. Jones Daverin
- 3/25/09 - J. Rocks, C. Jones Daverin, M. Mulligan
- 3/29/09 - J. Rocks
- 3/30/09 - J. Rocks, C. Jones Daverin
- 3/31/09 - J. Rocks, C. Jones Daverin
- 4/01/09 - J. Rocks, C. Jones Daverin, M. Mulligan
- 4/06/09 - J. Rocks
- 4/07/09 - J. Rocks, C. Jones Daverin, M. Mulligan
- 4/09/09 - J. Rocks, C. Jones Daverin
- 4/14/09 - J. Rocks, C. Jones Daverin, M. Mulligan, J. Rebman
- 4/16/09 - J. Rocks, C. Jones Daverin
- 4/17/09 - J. Rocks
- 4/19/09 - J. Rocks
- 4/22/09 - J. Rocks, C. Jones Daverin
- 4/27/09 - J. Rocks, C. Jones Daverin
- 4/29/09 - J. Rocks, M. Mulligan
- 5/05/09 - J. Rocks, C. Jones Daverin

IV. Vegetation Communities

Surveys for sensitive plant species were conducted in habitats that were deemed suitable to support sensitive species based on assessments conducted prior to

onset of the focused surveys. Nearly all of the survey area was surveyed on foot at least once with the exception of the large agricultural field and other highly disturbed or developed areas that would not support rare species or even native vegetation.

Vegetation within the study area consists of mixed desert scrub, juniper woodland, chamise-redshank chaparral, shadscale scrub, oak woodland, riparian scrub, and fresh emergent wetland. Agriculture and residential/developed areas are also present. The dominant vegetation communities onsite are mixed desert scrub in the eastern portion and chamise-redshank chaparral in the western portion of the site.

Common shrub and perennial species in the eastern substation's mixed desert scrub include jojoba (*Simmondsia chinensis*), waterjacket (*Lycium andersonii*), lotebush (*Ziziphus parryi* var. *parryi*), ephedra (*Ephedra* spp.), Gander's cholla (*Cylindropuntia ganderi* var. *ganderi*), Mojave yucca (*Yucca schidigera*), and creosote (*Larrea tridentata*). As the transmission lines heads west, some of these shrubs are replaced by boundary goldenbush (*Ericameria brachylepis*), desert apricot (*Prunus fremontii*), and catclaw acacia (*Acacia greggii*). In the rock outcrops yellow bush penstemon (*Keckiella antirrhinoides*) is a dominant shrub.

Annuals present in the mixed desert scrub include dense patches of common goldfields (*Lasthenia gracilis*), desert dandelion (*Malacothrix glabrata*), wild heliotrope (*Phacelia distans*), California butterweed (*Senecio californicus*), California coreopsis (*Coreopsis californica* var. *californica*), and pincushion (*Chaenactis* spp.).

Juniper woodland is present in the eastern portion of the survey area and is similar to the mixed desert scrub in plant composition with the exception being the dominance of California juniper (*Juniperus californicus*). The other shrubs and perennials are present in lower numbers. Annuals are sparser in the juniper woodland than in the mixed desert scrub.

The chamise-redshank chaparral areas contain large boulder hills and outcrops along the east-west portion and are relatively flat, lacking boulder outcrops along the north-south portion. Thickets of chamise (*Adenostoma fasciculatum*) and red shank are dominant, with sugar bush (*Rhus ovata*), holly-leaf cherry (*Prunus ilicifolia*), point-leaf manzanita (*Arctostaphylos pungens*), and California buckwheat (*Eriogonum fasciculatum*). The rock outcrops also support Jacumba monkey flower (CNPS List 4.3). Openings in the chaparral between steel pole (SP)-38 and the Boulevard Substation support foothill buckwheat (*Eriogonum wrightii* var.

membranaceum), common goldfields, weak-leaf bur-sage (*Ambrosia confertiflora*), and white-margin sandmat (*Chamaesyce albomarginata*).

Washes, classified as riparian scrub, are found within some upland vegetation communities onsite. The washes, with looser and sandier soils than the surrounding uplands, contained many of the same plant species as the mixed desert scrub, chamise-redshank chaparral, and juniper woodland, depending on the location of the wash. Additional species found in the washes include cheesebush (*Ambrosia salsola* var. *salsola*), chaparral woolly-star (*Eriastrum densifolium* ssp. *elongatum*), Wallace's woolly daisy (*Eriophyllum wallacei*), and Schott's calico (*Loeseliastrum schottii*).

Fresh emergent wetland was mapped in Carrizo Creek. Vegetation present includes tamarisk (*Tamarisk ramosissima*), honey mesquite (*Prosopis glandulosa* var. *torreyana*), and cheesebush. In washes that have running water throughout the spring, seep monkey flower (*Mimulus guttatus*) and other wetland species are present.

Oak woodland is defined by clusters of interior coast live oak (*Quercus agrifolia* var. *oxydenia*) trees. In the rock outcrop areas, other species present include chaparral shrubs and pride-of-California (CNPS List 4.3). Non-native grasses are part of the understory in other areas.

Shadscale scrub occurs on the project site as a small patch of vegetation with the dominant shrub being shadscale or four-wing saltbush (*Atriplex canescens* var. *canescens*). Non-native red-stem filaree (*Erodium cicutarium*) is the dominant annual plant. This vegetation community had few other annual wildflowers or shrubs.

V. Results

Eight sensitive plant species were observed during the 2009 surveys. No state or federally listed plant species was observed in the survey area. All species are considered sensitive based on their CNPS listing status; however, CNPS List 4 species (Palmer's grappling-hook, pride-of-California, Jacumba monkey flower, and oceanblue larkspur) are not required to be addressed under the California Environmental Quality Act (CEQA) and impacts on these species would not require mitigation. These species were documented in the survey area and are included here as they are considered sensitive plants. An explanation of the CNPS lists is provided in Table 2 (CNPS 2009).

List 2. Explanation of CNPS Listings and Threat Codes

LIST 1A: Presumed extinct in California.

LIST 1B: Rare, threatened, or endangered in California and elsewhere.

LIST 2: Rare, threatened, or endangered in California, but more common elsewhere.

LIST 3: We need more information about this plant (Review List).

LIST 4: Limited distribution (Watch List).

Threat Code

0.1: Seriously endangered in California

0.2: Fairly endangered in California

0.3: Not very endangered in California

A description of each species' regulatory status, typical flowering period, geographic distribution, general habitat, and a detailed account of their location and approximate abundance within the survey area follows. Plant species are listed in order of sensitivity from most sensitive to least sensitive. Representative photographs of each species observed within the area were taken in the field and are included here along with a map of the documented distribution of each species within San Diego County as of July 2009. Each point on the map represents a voucher specimen that was collected and deposited at the San Diego Herbarium at the SDNHM. Use of the maps was approved through express permission of the SDNHM Botany Department. Also of note, was the discovery of a new San Diego County plant record. Indian breadroot (*Pediomelum californicum*) was observed near the population of desert beauty west of steel pole SP-70. This species is known from many counties to the north, but not previously documented in San Diego. There is no regulatory constraint associated with this species.

Jacumba Milkvetch (*Astragalus douglasii* var. *perstrictus*)



Photos © J. Rebman

Fabaceae – Pea Family

CNPS List: 1B.2

Federal Listing: None

State Listing: None

Perennial herb; flowers April - June

Jacumba milkvetch is a stout perennial with a small range within the United States. This species is restricted to southeastern San Diego County primarily near Campo, Jacumba and Boulevard, California at elevations between 850 meters (m) – 1400 m above mean sea level (msl) (Consortium of California Herbaria 2009). Jacumba milkvetch also occurs in Baja California, Mexico. The typical habitat of this species is sandy or stony openings often within or adjacent to oak woodland and/or ephemeral drainages.

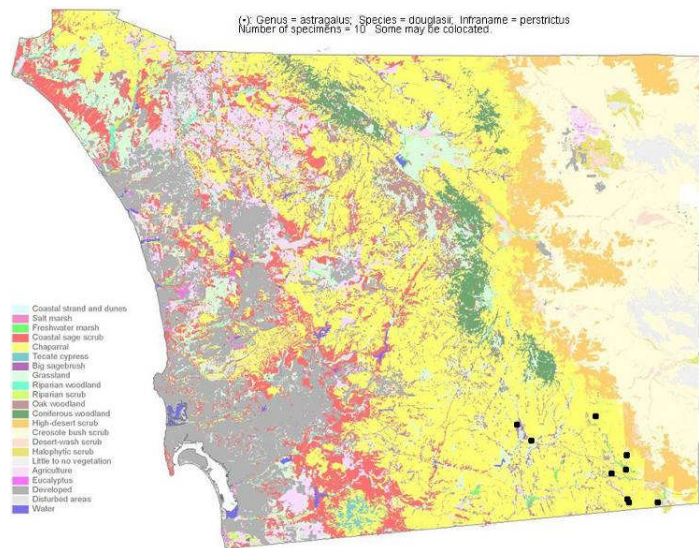
Jacumba milkvetch was found in many locations within the survey area. All occurrences were west of where the proposed transmission line crosses over Highway 80, west of the town of Jacumba, California. No individuals were observed within the survey area east of Highway 80. Typically, Jacumba Milkvetch was observed as a single individual or diffuse clusters of 2 – 10 individuals, but a few larger patches of 30 – 100 individuals were also noted.

Reporting from the north end of the survey area to the south and east, scattered individuals of Jacumba milkvetch were found near the proposed new Boulevard Substation site at the extreme north end of the survey area. It was also observed in low numbers adjacent to Tule Jim Road in sandy openings from SP-1 to SP-7 with a denser cluster between SP-5 and SP-6. This species was not observed between SP-7 and SP-11, but several scattered plants were found in the open field near SP-12 where a fly yard is proposed. Approximately 30 individuals of

Jacumba Milkvetch were observed on private land between SP-20 and SP-21 and less than 5 plants were documented near SP-23. Jacumba milkvetch was not observed between SP-23 and SP-47.

The largest population of approximately 100 loosely clustered individuals was documented near the Oak Woodland Riparian drainage that occurs between SP-48 and SP-49 north of the existing transmission line.

Jacumba milkvetch is considered the most sensitive plant species observed within the survey area in 2009 based on its CNPS List 1B.2 ranking. 1B species are “rare, threatened, or endangered in California and elsewhere.” The threat code 0.2 denotes that this species is “fairly endangered in California.” Based on our survey and understanding of the proposed project, it appears that impacts on most individuals of Jacumba milkvetch can be avoided as most do not occur immediately adjacent to a steel pole or other direct impact area, but rather are located between poles where disturbance to vegetation is not likely to occur. However, some individuals of Jacumba milkvetch occur within old dirt roads that may be used during construction.



Map A. Documented distribution of Jacumba milkvetch (*Astragalus douglasii* var. *perstrictus*) within San Diego County (San Diego Natural History Museum, July 2009).

Sticky Geræa (*Geræa viscida*)



Photos © J. Rocks



Asteraceae – Sunflower Family

CNPS List: 2.3

Federal Listing: None

State Listing: None

Short-lived perennial; flowers April - June

Sticky geræa is a short-lived perennial with a small range in the United States restricted to southeastern San Diego County, with a few occurrences in Imperial County (Consortium of California Herbaria 2009). This species also occurs in Baja California, Mexico. The typical habitat of this species is openings in chaparral or desert transition scrub with deep, coarse, granitically derived, sandy soils often with finer material below. Sticky geræa occurs at elevations between 500 m–1250 m above msl in San Diego County and as low as approximately 150 m in Imperial County.

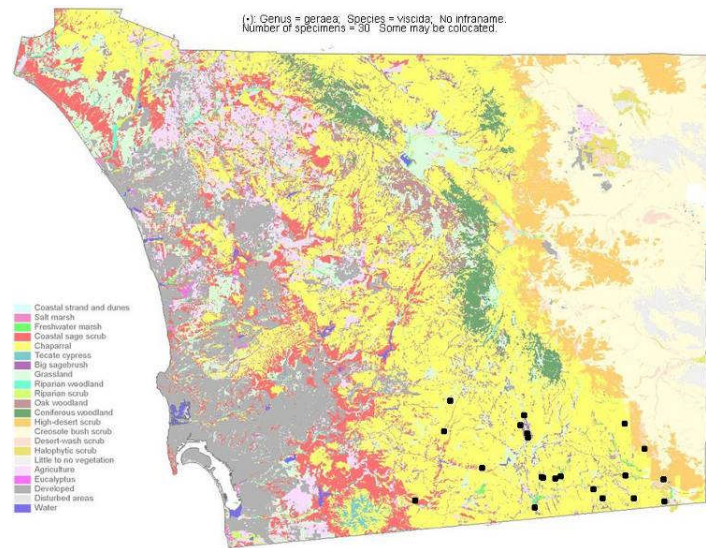
Sticky geræa was common in many locations within the survey area west of SP-95. No individuals were observed within the survey area east of SP-95.

Typically, sticky geraea was observed in patches of approximately 5 to 15 individuals, but populations of greater than 50 individuals were observed.

Reporting from the north end of the survey area to the south and east, sticky geraea was not found within the proposed new Boulevard substation area at the extreme north end of the survey area. Scattered, small clusters of individuals of sticky geraea were observed near SP-1 and the access road to the west. This species was not observed between SP-1 and SP-6. Just north of SP-7 is a large population of approximately 50 plants including an individual that is immediately adjacent to the proposed location for SP-7 (see photo above). The largest and most abundant population of sticky geraea within the survey area occurs from SP-7 south to SP-9, with hundreds of individuals scattered through this area on both sides of Tule Jim Road. At least 50 individuals occur just north of SP-9. A few individuals of this species also occur near SP-10. From SP-10 to approximately SP-32, occurrences of sticky geraea were much less frequent. Scattered, low density clusters (typically < 5 individuals) of sticky geraea were observed in the proposed fly yard open field near SP-12, near an access road between SP-19 and SP-20, and approximately 20 individuals were scattered between SP-32 and SP-34.

Sticky geraea was not observed from SP-34 to SP-48, but scattered individuals were found between SP-48 and SP-49 mixed in with the large Jacumba milkvetch population that also occurs here. This species was infrequent from SP-51 to SP-60, but there is a large loose population from SP-61 to near Highway 80. A population of approximately 50 individuals is scattered from just east of SP-72 to SP-73. Continuing east, sticky geraea was not observed again until a large scattered population east of SP-92 was observed that extends to near SP-94.

More common than Jacumba milkvetch, sticky geraea is a CNPS List 2.3 plant species. List 2.3 species are "rare, threatened, or endangered in California, but more common elsewhere." The 'threat code' 0.3 denotes that this species is "not very endangered in California." Based on our survey and understanding of the proposed project, it appears that most individuals of sticky geraea that we observed are likely outside of the proposed construction areas, but there are some individuals that occur immediately adjacent to a proposed pole location such as SP-7.



Map B. Documented distribution of sticky geraea (*Geraea viscida*) within San Diego County (San Diego Natural History Museum, July 2009).

Desert Beauty (*Linanthus bellus*)



Polemoniaceae – Phlox Family

CNPS List: 2.3

Federal Listing: None

State Listing: None

Small annual; flowers April - May

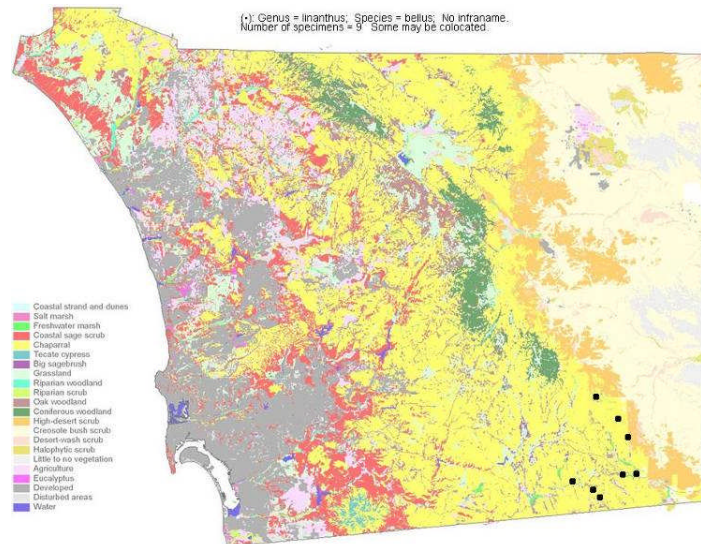
Desert beauty is a small, annual plant that occupies a small range within southeastern San Diego County at elevations of between 900 m to 1400 m above msl (Consortium of California Herbaria 2009). Desert beauty also occurs in Baja

California, Mexico. The typical habitat of this tiny annual is broad sandy openings often along, and within, ephemeral drainages.

Desert beauty was found in two locations within the survey area. A population of approximately 10-15 individuals was observed within a small, ephemeral drainage with fine sands just west of SP-70. It is likely that many more individuals are present in this area, but did not germinate this year due to drought conditions. Populations of desert beauty can be extensive during “wet” years when there is sufficient and timely rain.

A second occurrence of desert beauty was documented between SP-42 and SP-43. At least 30 individuals were observed, with possibly many more, but seasonal drought conditions may be limiting the population size.

Desert beauty is a CNPS List 2.3 plant species. List 2.3 species are “rare, threatened, or endangered in California, but more common elsewhere.” The threat code 0.3 denotes that this species is “not very endangered in California.” Based on our survey and understanding of the proposed project, it appears that desert beauty occurs between proposed pole locations where disturbance to vegetation is not likely to occur.



Map C. Documented distribution of desert beauty (*Linanthus bellus*) within San Diego County (San Diego Natural History Museum, July 2009).

Scarlet Gilia; Slender-Leaf Ipomopsis (*Ipomopsis tenuifolia*)



Photos © J. Rocks

Polemoniaceae – Phlox Family

CNPS List: 2.3

Federal Listing: None

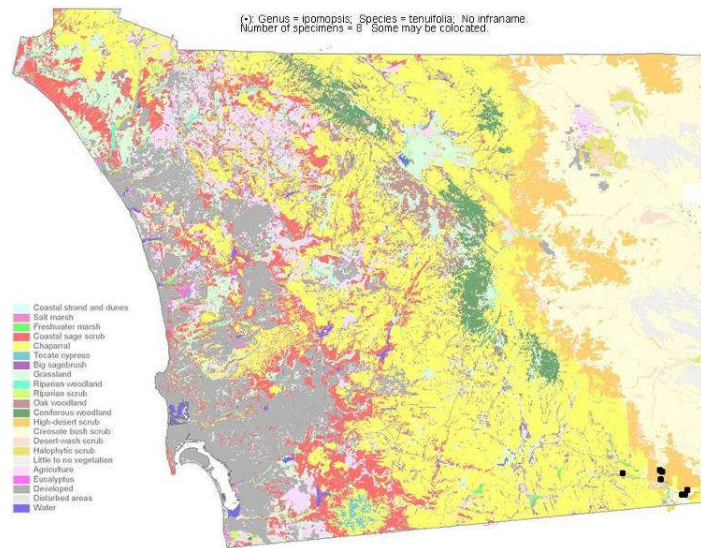
State Listing: None

Perennial shrub; flowers March - May

Scarlet gilia is a perennial sub-shrub that, within the United States, is restricted to the southern California counties of San Diego, Imperial, Riverside, and Los Angeles at elevations between 60 m and 1200 m above msl (Consortium of California Herbaria 2009). Scarlet gilia also occurs in Baja California, Mexico. The typical habitat of this species is dry granitic substrates in desert scrub vegetation, often within cracks or at the base of large boulder outcrops.

One population of scarlet gilia was found within the survey area. At least 25 individuals were observed in clusters of 2 to 5 individuals growing amongst the large boulders west and south of SP-99.

Scarlet gilia is a CNPS List 2.3 plant species. List 2.3 species are “rare, threatened, or endangered in California, but more common elsewhere.” The threat code 0.3 denotes that this species is “not very endangered in California.” Based on our survey and understanding of the proposed project, it appears that scarlet gilia occurs outside of the likely impact area in the rugged granite boulders between SP-98 and SP-99.



Map D. Documented distribution of scarlet gilia; slender-leaf ipomopsis (*Ipomopsis tenuifolia*) within San Diego County (San Diego Natural History Museum, July 2009).

Palmer's Grappling-hook (*Harpagonella palmeri*)



Boraginaceae – Borage Family

CNPS List: 4.2

Federal Listing: None

State Listing: None

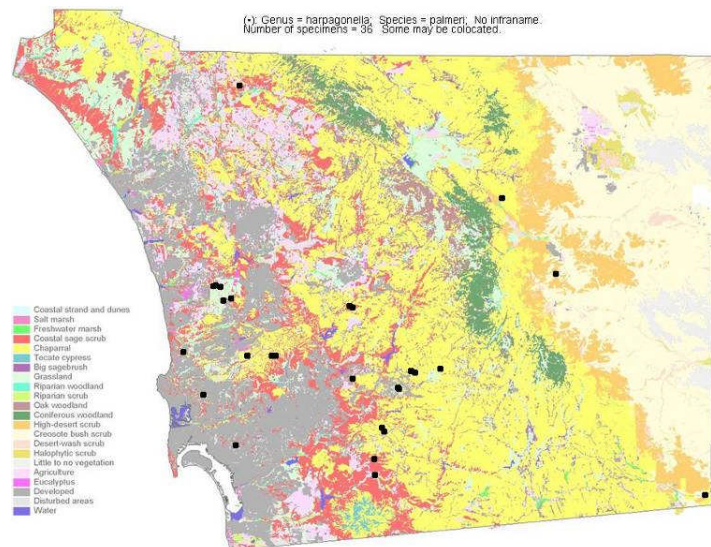
Small, sprawling annual; Flowers March – May

Photos © J. Rocks

Palmer’s grappling-hook is a sprawling annual that is restricted to southern California and Arizona within the United States at elevations between 20 m and 1000 m above msl (Consortium of California Herbaria 2009). Palmer’s grappling-hook also occurs in Baja California, Mexico. The typical habitat of this species is openings in grasslands, chaparral, and coastal and desert scrub with clay soils.

Palmer’s grappling-hook was found in several clay soil areas within the survey area. This species was not present along the north-south portion of the survey area or any area west of Old Highway 80 where it crosses under the line west of Jacumba as clay soils are largely absent. A large, scattered population (> 100 individuals) was observed between SP-73 and SP-75 as well as a population of more than a 1,000 plants was observed in the area of SP-76 and SP-77. Palmer’s grappling-hook also was observed in very low abundance between SP-78 and SP-83. Continuing east along the survey area, this species was not observed again until scattered individuals were seen near SP-100. Finally, a population of greater than 1,000 individuals was observed at the east end of the survey area near a proposed staging yard immediately north of the proposed ECO Substation near the base of Jade Mountain.

Palmer’s grappling-hook is a CNPS List 4.2 species and is still relatively common within its range. There are no known regulatory constraints associated with this species.



Map E. Documented distribution of Palmer’s grappling-hook (*Harpagonella palmeri*) within San Diego County (San Diego Natural History Museum, July 2009).

Pride-of-California; Campo Pea (*Lathyrus splendens*)



Photos © J. Rocks

Fabaceae - Pea Family

CNPS List: 4.3

Federal Listing: None

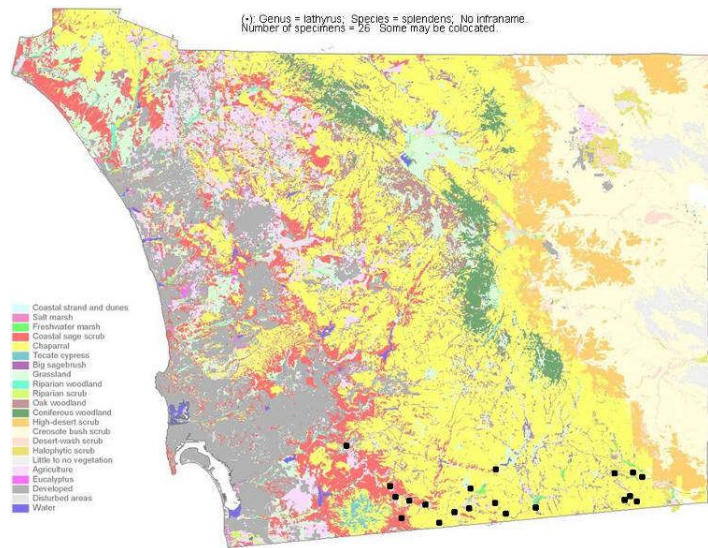
State Listing: None

Climbing perennial vine; flowers March - June

Pride-of-California is a climbing perennial vine that within the U. S. is restricted to San Diego County with one record reported from Los Angeles County (Consortium of California Herbaria 2009). Pride-of-California also occurs in Baja California, Mexico. The typical habitat of this species is chaparral. This vine is often observed climbing on woody plants such as chamise (*Adenostoma fasciculatum*), red shank (*A. sparsifolium*), and sugar bush (*Rhus ovata*) at elevations between 200 m and 1525 m above msl.

Individuals of Pride-of-California were found primarily along the north-south portion of the survey area with the exception of at least 4 individuals adjacent to the Oak Riparian Woodland between SP-48 and SP-49. This area also supports a large population of Jacumba milkvetch and several individuals of sticky geranium. Three occurrences of Pride-of-California occur along and immediately west of Tule Jim Road between SP-5 and SP-6. These plants are visible from the road and could be within the impact area if the road is widened here. Isolated occurrences of this species were also noted south of SP-17 and east of SP-22. As shown in the photo above, Pride-of-California climbs up through vegetation aided by its tendrils.

Pride-of-California is a CNPS List 4.3 species and is still relatively common within its range. There are no known regulatory constraints associated with this species.



Map F. Documented distribution of pride-of-California; Campo pea (*Lathyrus splendens*) within San Diego County (San Diego Natural History Museum, July 2009).

Jacumba Monkey Flower (*Mimulus aridus*)



Photos © J. Rocks

Phrymaceae – Hopseed Family

CNPS List: 4.3

Federal Listing: None

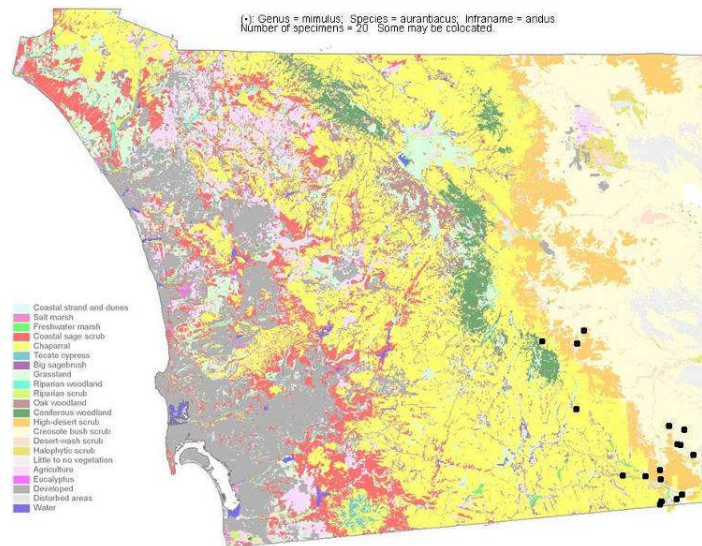
State Listing: None

Perennial shrub; flowers April – July

Jacumba monkey flower is a perennial shrub is restricted in range within the United States to San Diego and Imperial Counties (Consortium of California Herbaria 2009). Jacumba monkey flower also occurs in Baja California, Mexico. The typical habitat of this species is desert chaparral within large granitic boulders at elevations between 750 m and 1100 m above msl.

Reporting from the north to south and east end of the survey area, Jacumba monkey flower was not observed along the proposed north– south stretch because no suitable large granite boulder habitat is present along this portion of the survey area. In the east– west portion of the survey area, this species was observed growing in the cracks between and within large boulders from SP-41 to SP-42 and was very abundant in the rocks surrounding SP-43. A few individuals were scattered between SP-45 and SP-56 and a cluster of several plants was documented between SP-57 and SP-59. A few individuals were also noted near the proposed access road to SP-61. Continuing east, Jacumba monkey flower was not observed again until SP-99, where a few individuals were scattered in the rocks along with CNPS List 2.3 species, scarlet gilia.

Jacumba monkey flower is a CNPS List 4.3 species and is still relatively common within its range. There are no known regulatory constraints associated with this species.



Map G. Documented distribution of Jacumba monkey flower (*Mimulus aridus*) within San Diego County (San Diego Natural History Museum, July 2009).

Oceanblue Larkspur (*Delphinium parishii* ssp. *subglobosum*)



Ranunculaceae – Buttercup Family

CNPS List: 4.3

Federal Listing: None

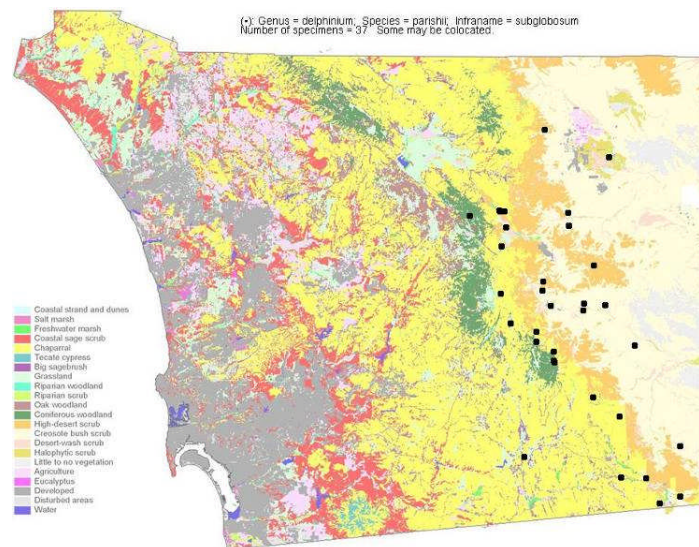
State Listing: None

Perennial; flowers March - June

Oceanblue larkspur is a perennial herb with a range within the United States that is restricted to the southern California counties of San Diego, Riverside and Imperial (Consortium of California Herbaria 2009). Oceanblue larkspur also occurs in Baja California, Mexico. The typical habitat of this species is desert chaparral and scrub often associated with rocky soils at elevations between 600 m and 1800 m above msl.

Reporting from the north to the south and east end of the survey area, this species was present in low numbers from SP-3 to SP-7 with a couple of individuals also present near SP-20. A small population occurs near SP-53 and this species was encountered frequently from SP-61 to SP-63 and again from SP-72 to SP-77. Finally, from approximately SP-95 to the ECO Substation, oceanblue larkspur was infrequent in small clusters typically less than 5 individuals.

Oceanblue larkspur is a CNPS List 4.3 species and is still relatively common within its range. There are no known regulatory constraints associated with this species.



Map H. Documented distribution of oceanblue larkspur (*Delphinium parishii* ssp. *subglobosum*) within San Diego County (San Diego Natural History Museum, July 2009).

VI. Conclusion

Eight sensitive plant species were documented in the survey area during the 2009 surveys. Of these eight, four species are ranked as List 1B or 2 by CNPS, and four are List 4.

Rare plants of varying sensitivity occur in many areas, in part, because a large portion of the survey area supports undeveloped, native plant communities. Most of these native communities and the sensitive plants they support will not be affected by the proposed project as ground disturbance will occur in limited areas within the survey area.

Several specific locations within the survey area can be considered local “hot spots” for sensitive plants. These areas are as follows:

SP-5 to SP-9 – The Red-Shank, Mixed Chaparral, and inland Coastal Sage Scrub communities that occur on the coarse granite soils here support scattered individuals of Jacumba Milkvetch (List 1B) and a very large population of Sticky Geraea (List 2.3). Hundreds of individuals of this plant occur between SP-7 and SP-9. Pride-of-California (List 4.3) and Oceanblue Larkspur (List 4.3) are also present here in very low numbers.

SP-42 to SP-43 – A population of approximately 30 individuals of Desert Beauty (CNPS List 2.3) was documented between these two proposed pole locations. During a more robust rain year than 2009, many more individuals may be present throughout suitable habitat in this area.

SP-48 to SP-49 – The Oak Riparian Woodland and Chaparral communities here support a high diversity of plant species including a population of over 100 individuals of Jacumba Milkvetch (List 1B.2), scattered individuals of Sticky Geraea (List 2.3), and Pride-of-California (List 4.3).

Ephemeral Drainage West of SP-70 – Desert Beauty (List 2.3) occurs in a small, ephemeral drainage here. Approximately 15 individuals of this plant were observed scattered in the fine sands. During a more robust rain year than 2009, many more individuals may be present throughout suitable habitat in this area.

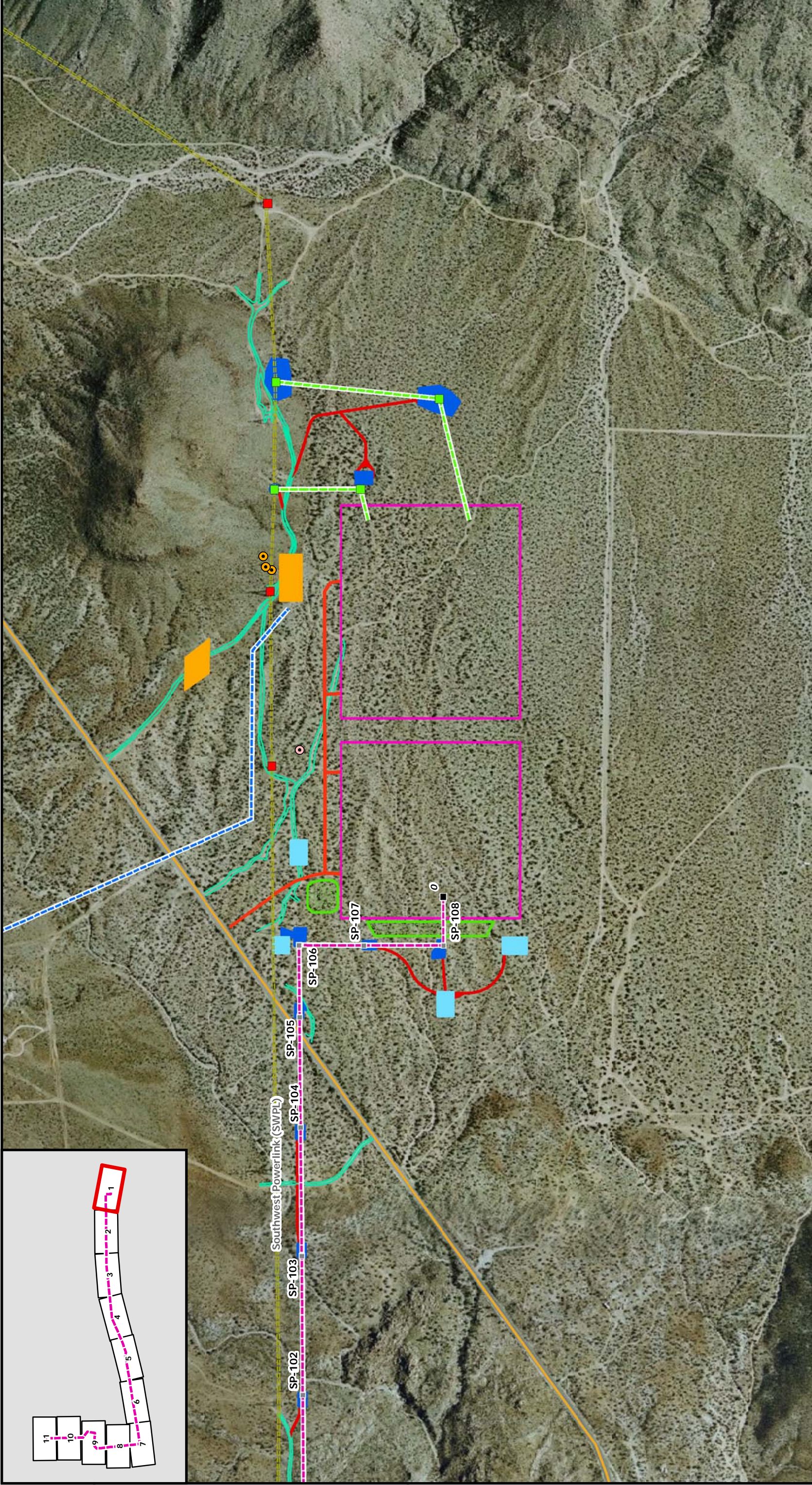
Near SP-99 – A population of at least 25 individuals of Scarlet Gilia (List 2.3) was found in one discrete location near SP-99. This species and Jacumba Monkey Flower (List 4.3) were growing amongst the large boulders west and south of SP-99.

VII. References

- California Native Plant Society. 2009. Online Inventory of Rare and Endangered Plants. <http://cnps.web.aplus.net/cgi-bin/inv/inventory.cgi>
- Consortium of California Herbaria. 2009. Data provided by the participants of the Consortium of California Herbaria (ucjeps.berkeley.edu/consortium/).
- Hickman, J. C. 1993. The Jepson manual: higher plants of California. University of California Press, Berkeley, California. 1400 pp.
- Rebman, J. and M.S. Simpson. 2006. Checklist of the Vascular Plants of San Diego County. 4th edition.
- Reiser, C. 1994. Rare Plants of San Diego County.
<http://sandiego.sierraclub.org/rareplants/>
- San Diego Natural History Museum. 2009. Department of Botany Plant Distribution Maps. <http://www.sdplantatlas.org/>

Attachment A

Rare Plant Species Occurrences Maps

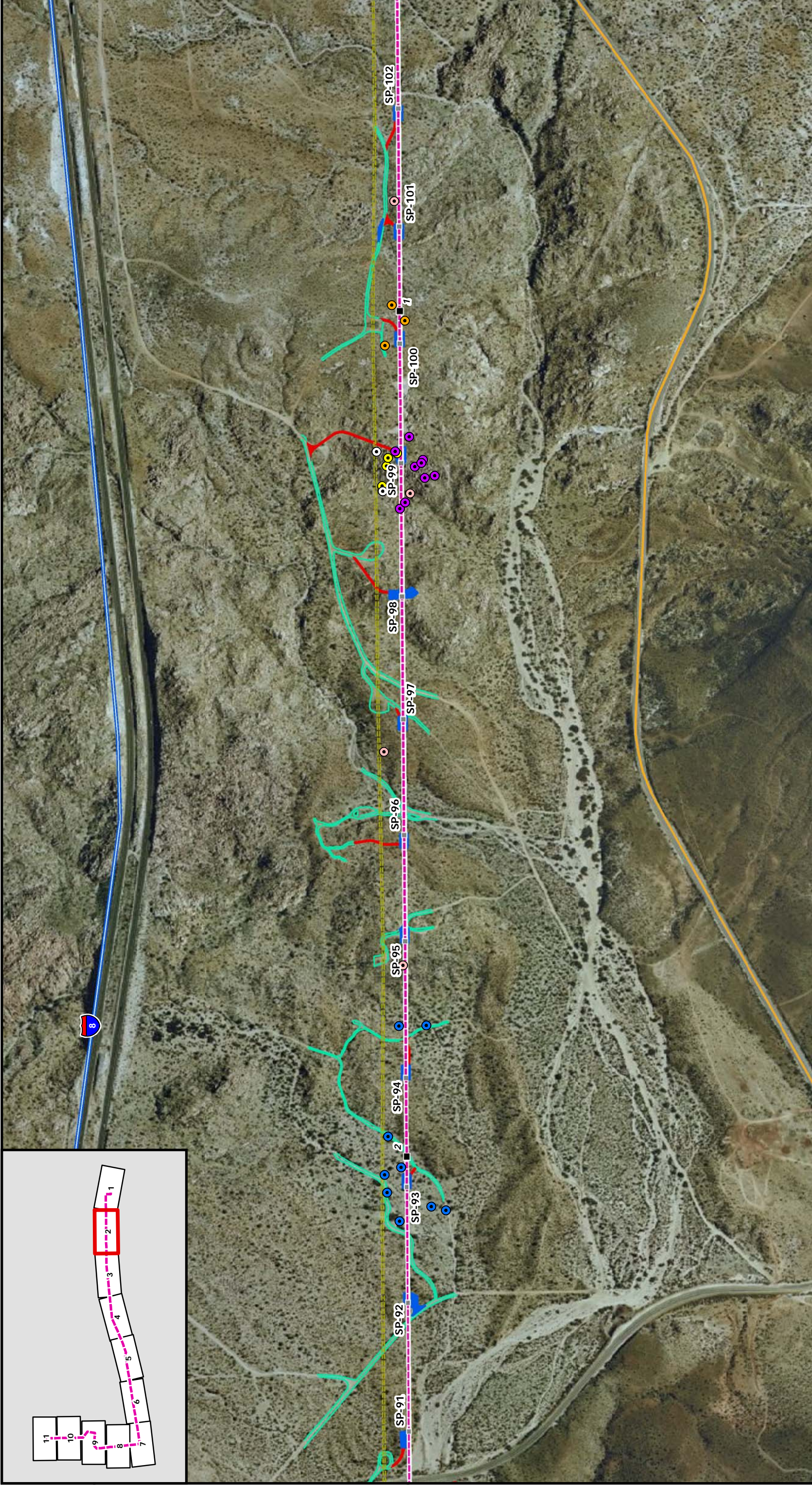


Attachment A: Rare Plant Species Occurrences Map 1 of 11

East County Substation Project

<ul style="list-style-type: none"> Proposed SWPL Loop-In Proposed 138 kV Line Proposed 12 kV Temporary Distribution Tap 445 Circuit Collocated with 138 kV Line Existing Transmission Line Existing Access Road 	<ul style="list-style-type: none"> Proposed ECO Substation Boulevard Substation Rebuild Proposed 138 kV Line Milepost Proposed 138 kV Tower Existing SWPL Structure Proposed SWPL Loop-In Structure 	<ul style="list-style-type: none"> Retention Pond New Access Road Fly Yard Pull Site Temporary Work Area Staging Yard 	<ul style="list-style-type: none"> Jacumba Milkvetch (CNPS List 1B.2) Sticky Geranium (CNPS List 2.3) Desert Beauty (CNPS List 2.3) Scarlet Gilia (CNPS List 2.3) 	<ul style="list-style-type: none"> Palmer's Grapplinghook (CNPS List 4.2) Pride-of-California: Campo Pea (CNPS List 4.3) Jacumba Monkey Flower (CNPS List 4.3) Oceanblue Larkspur (CNPS List 4.3)
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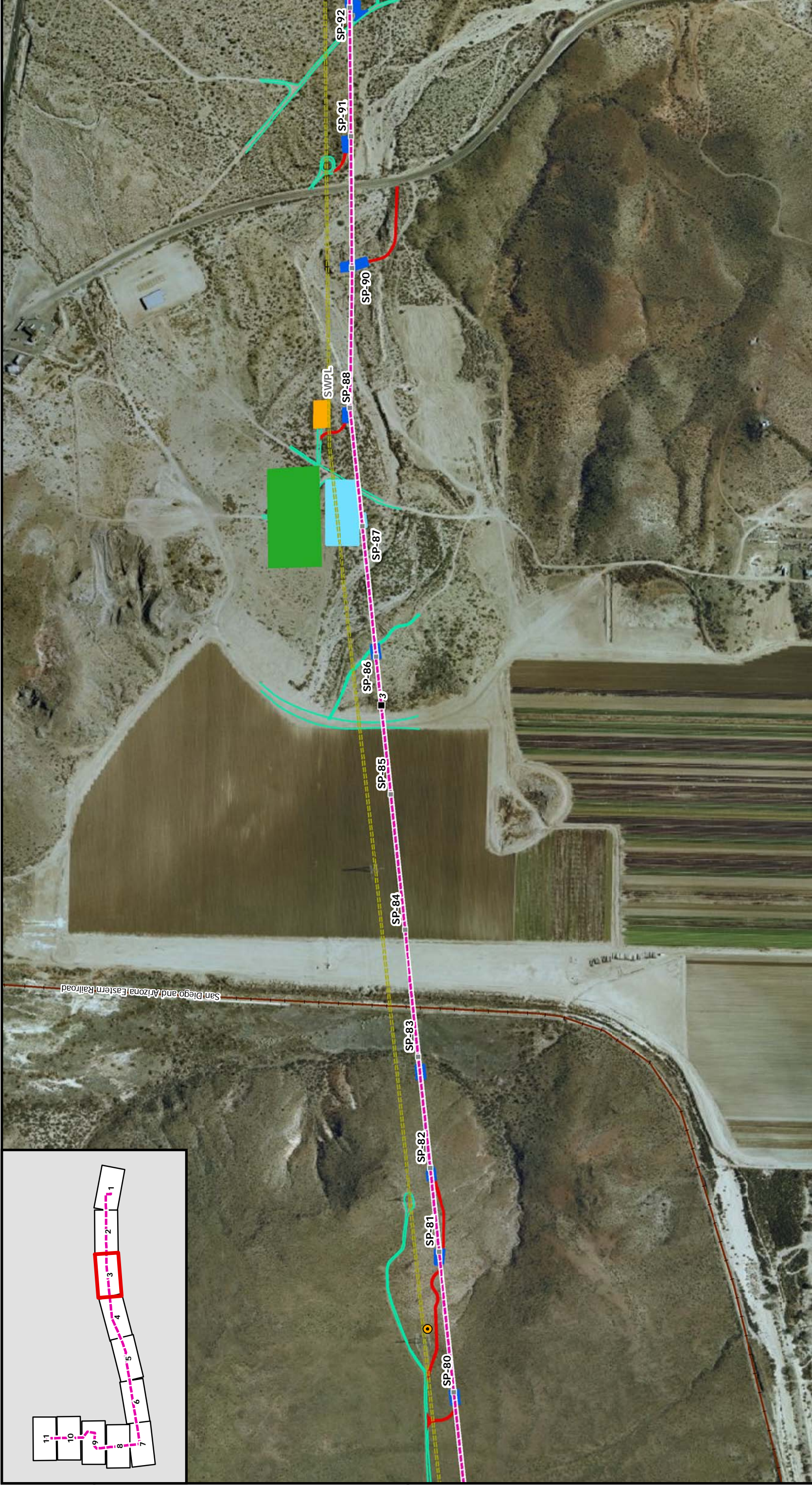


Attachment A: Rare Plant Species Occurrences Map 2 of 11

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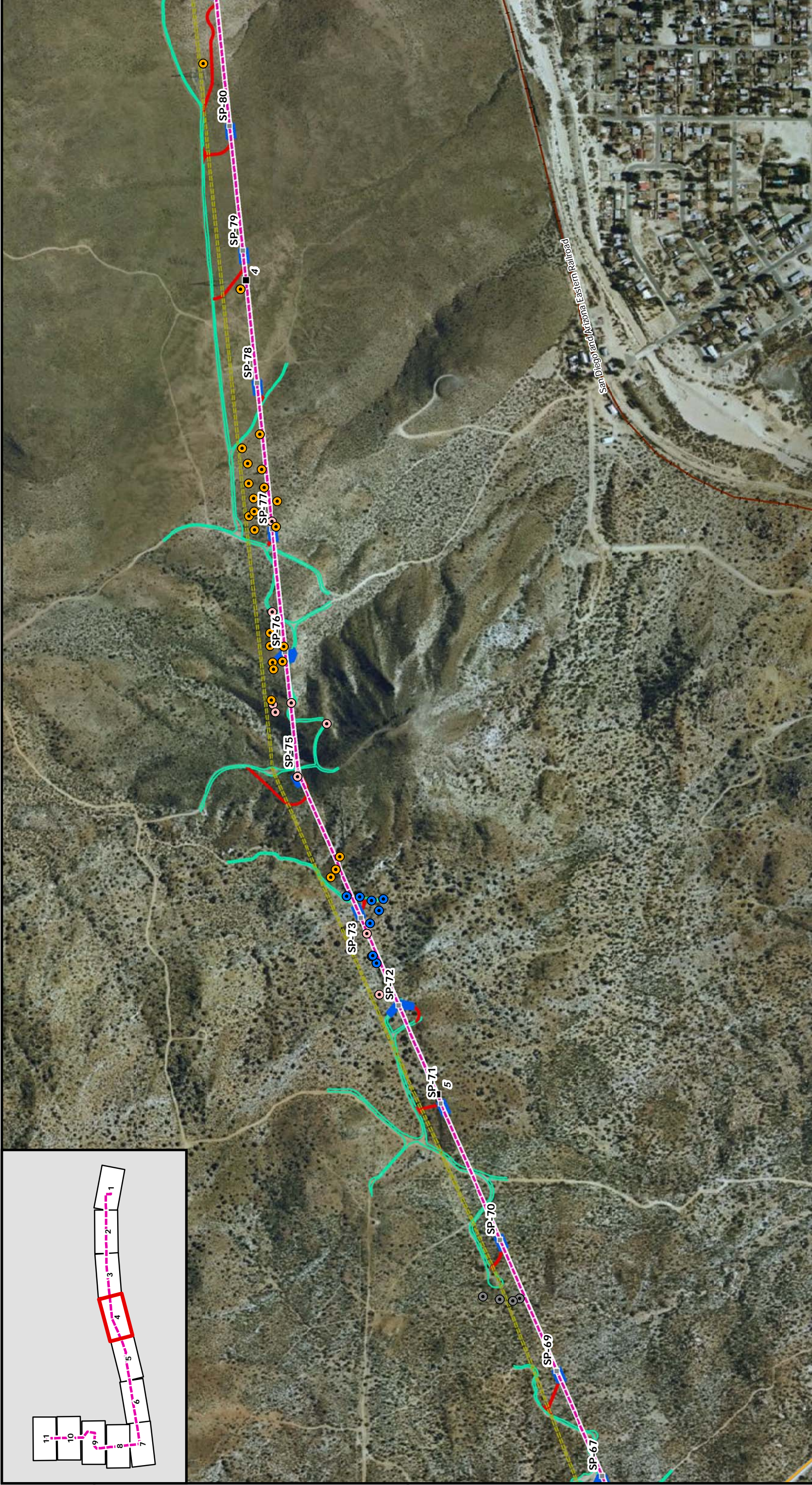


Attachment A: Rare Plant Species Occurrences Map 3 of 11

East County Substation Project

<ul style="list-style-type: none"> Proposed SWPL Loop-In Proposed 138 kV Line Proposed 12 kV Temporary Distribution Tap 445 Circuit Collocated with 138 kV Line Existing Transmission Line Existing Access Road 	<ul style="list-style-type: none"> Proposed ECO Substation Boulevard Substation Rebuild Proposed 138 kV Line Milepost Proposed 138 kV Tower Existing SWPL Structure Proposed SWPL Loop-In Structure 	<ul style="list-style-type: none"> Retention Pond New Access Road Fly Yard Pull Site Temporary Work Area Staging Yard 	<ul style="list-style-type: none"> Jacumba Milkvetch (CNPS List 1B.2) Sticky Geranium (CNPS List 2.3) Desert Beauty (CNPS List 2.3) Scarlet Gilia (CNPS List 2.3) Palmer's Grapplinghook (CNPS List 4.2) Pride-of-California: Campo Pea (CNPS List 4.3) Jacumba Monkey Flower (CNPS List 4.3) Oceanblue Larkspur (CNPS List 4.3)
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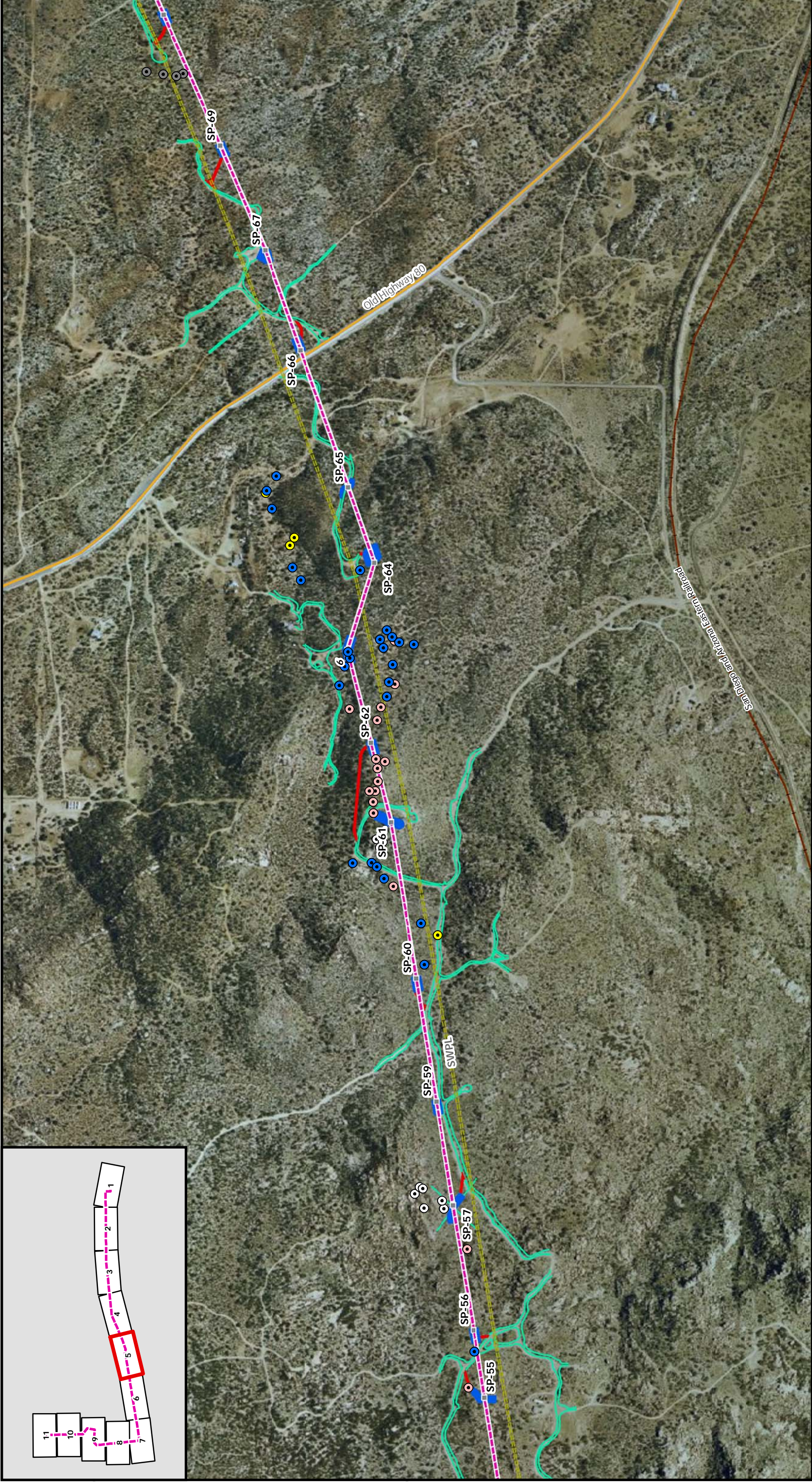
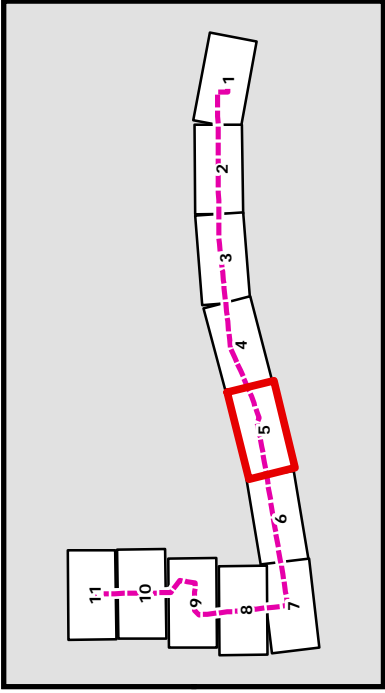
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Attachment A: Rare Plant Species Occurrences Map 4 of 11

East County Substation Project

<ul style="list-style-type: none"> Proposed SWPL Loop-In Proposed 138 kV Line Proposed 12 kV Temporary Distribution Tap 445 Circuit Collocated with 138 kV Line Existing Transmission Line Existing Access Road 	<ul style="list-style-type: none"> Proposed ECO Substation Boulevard Substation Rebuild Proposed 138 kV Line Milepost Proposed 138 kV Tower Existing SWPL Structure Proposed SWPL Loop-In Structure 	<ul style="list-style-type: none"> Retention Pond New Access Road Fly Yard Pull Site Temporary Work Area Staging Yard 	<ul style="list-style-type: none"> Jacumba Milkvetch (CNPS List 1B.2) Sticky Geranium (CNPS List 2.3) Desert Beauty (CNPS List 2.3) Scarlet Gilia (CNPS List 2.3) Palmer's Grapplinghook (CNPS List 4.2) Pride-of-California: Campo Pea (CNPS List 4.3) Jacumba Monkey Flower (CNPS List 4.3) Oceanblue Larkspur (CNPS List 4.3) 	<p>San Diego and Atroma Eastern Railroad</p>	<p>1:7,000</p>
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Attachment A: Rare Plant Species Occurrences Map 5 of 11

East County Substation Project

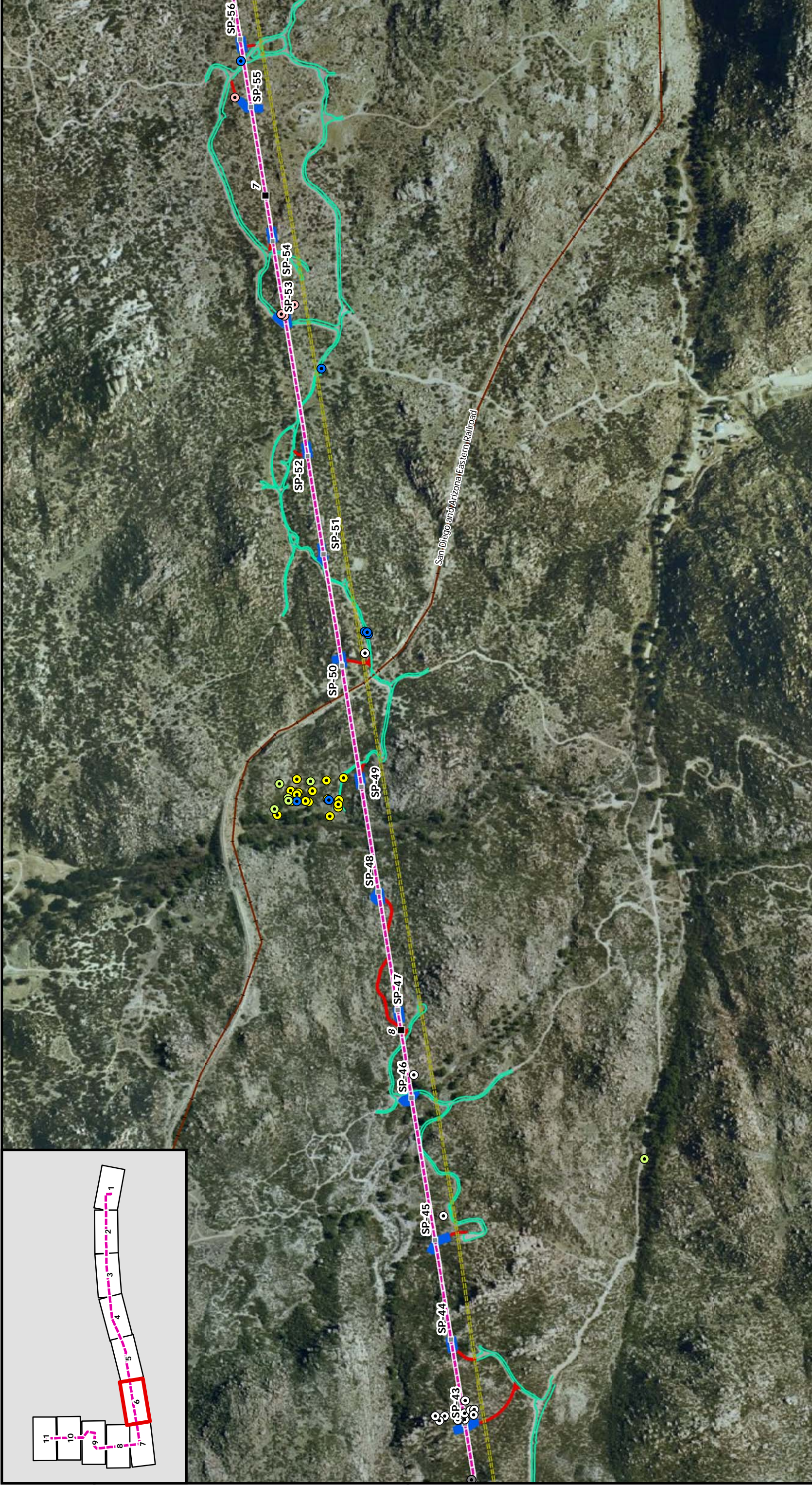
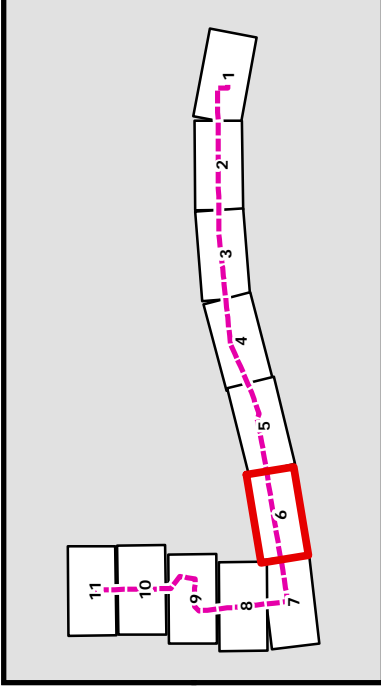
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Attachment A: Rare Plant Species Occurrences Map 6 of 11

East County Substation Project

Proposed SWPL Loop-In	Proposed ECO Substation	Retention Pond	Jacumba Milkvetch (CNPS List 1B.2)	Palmer's Grapplinghook (CNPS List 4.2)
Proposed 138 kV Line	Boulevard Substation Rebuild	New Access Road	Sticky Gerarea (CNPS List 2.3)	Pride-of-California; Campo Pea (CNPS List 4.3)
Proposed 12 kV Temporary Distribution Tap	Proposed 138 kV Line Milepost	Fly Yard	Desert Beauty (CNPS List 2.3)	Jacumba Monkey Flower (CNPS List 4.3)
445 Circuit Collocated with 138 kV Line	Proposed 138 kV Tower	Pull Site	Scarlet Gilia (CNPS List 2.3)	Oceanblue Larkspur (CNPS List 4.3)
Existing Transmission Line	Existing SWPL Structure	Temporary Work Area		
Existing Access Road	Proposed SWPL Loop-In Structure	Staging Yard		

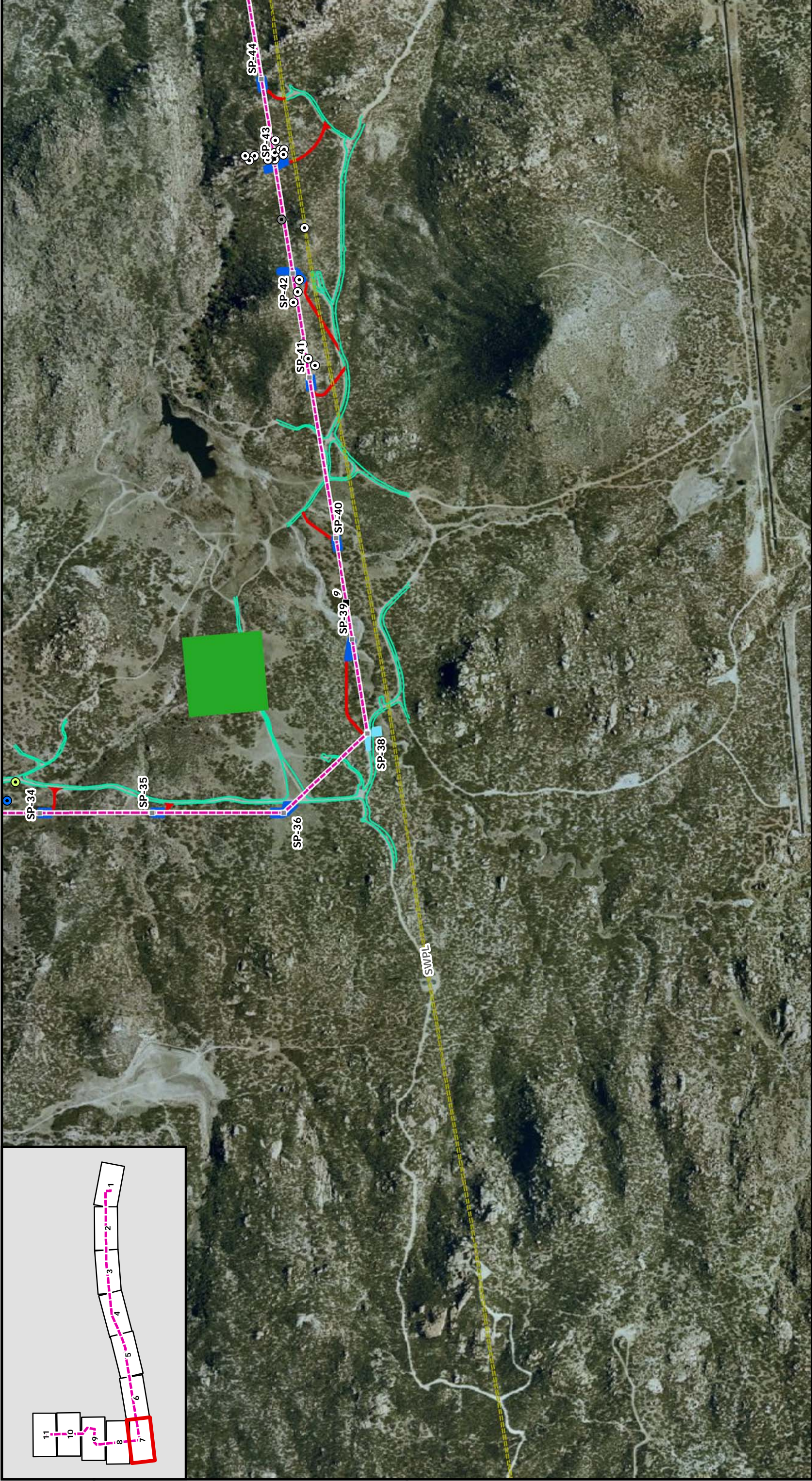
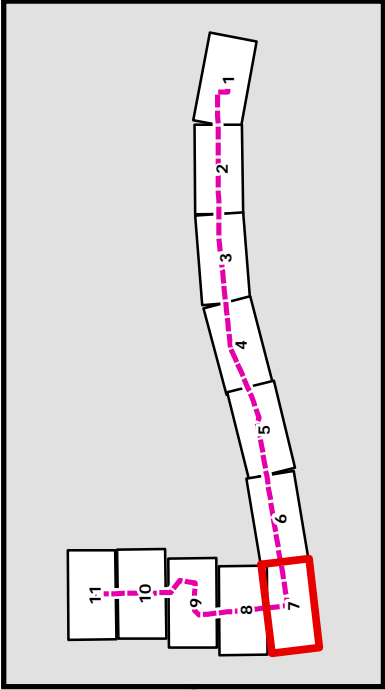
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Attachment A: Rare Plant Species Occurrences Map 7 of 11

East County Substation Project

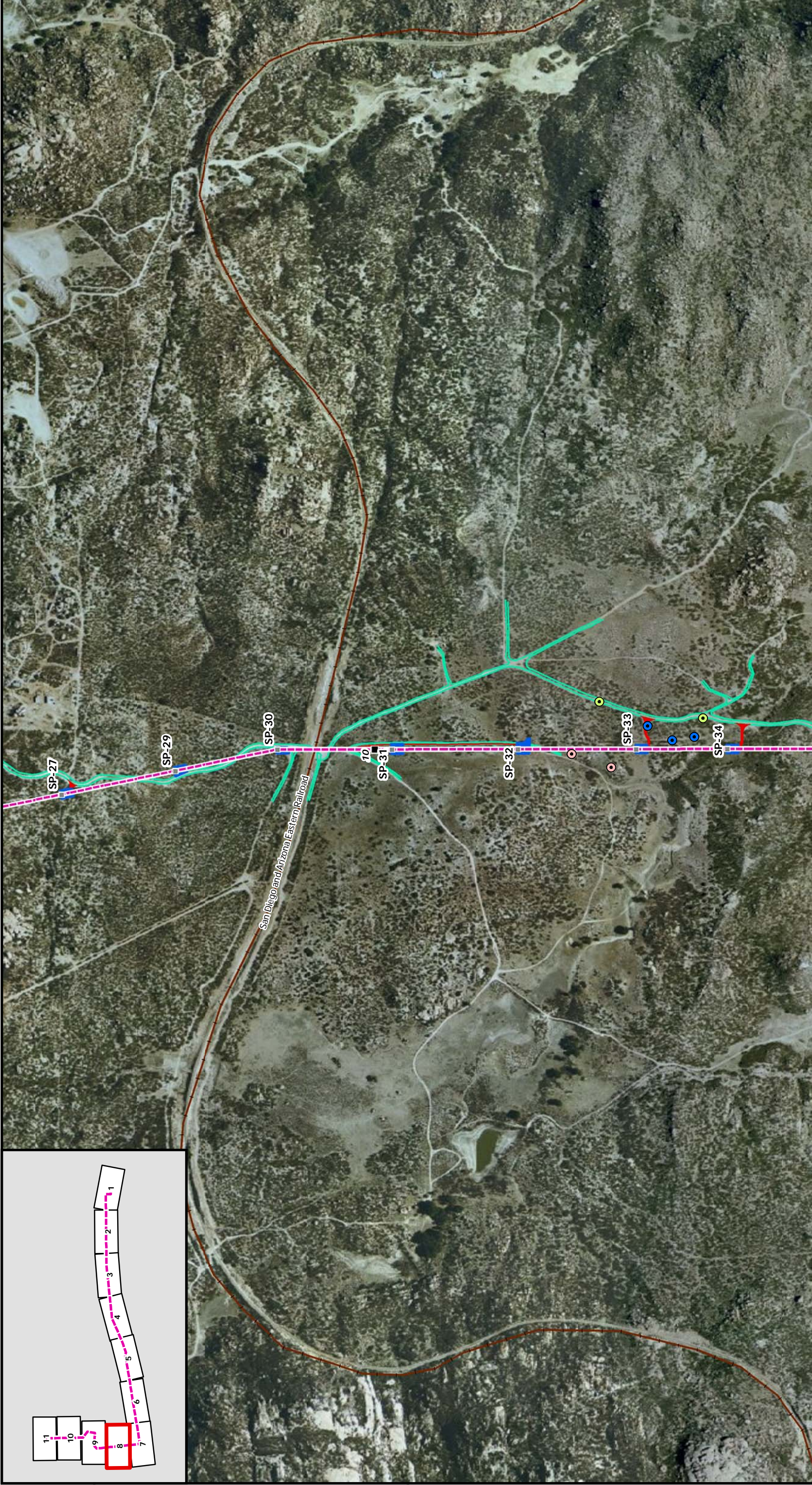
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Attachment A: Rare Plant Species Occurrences Map 8 of 11

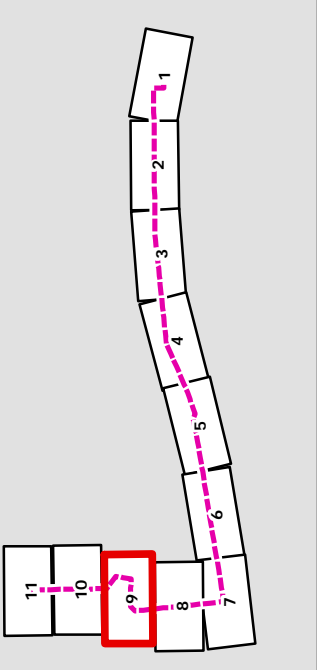
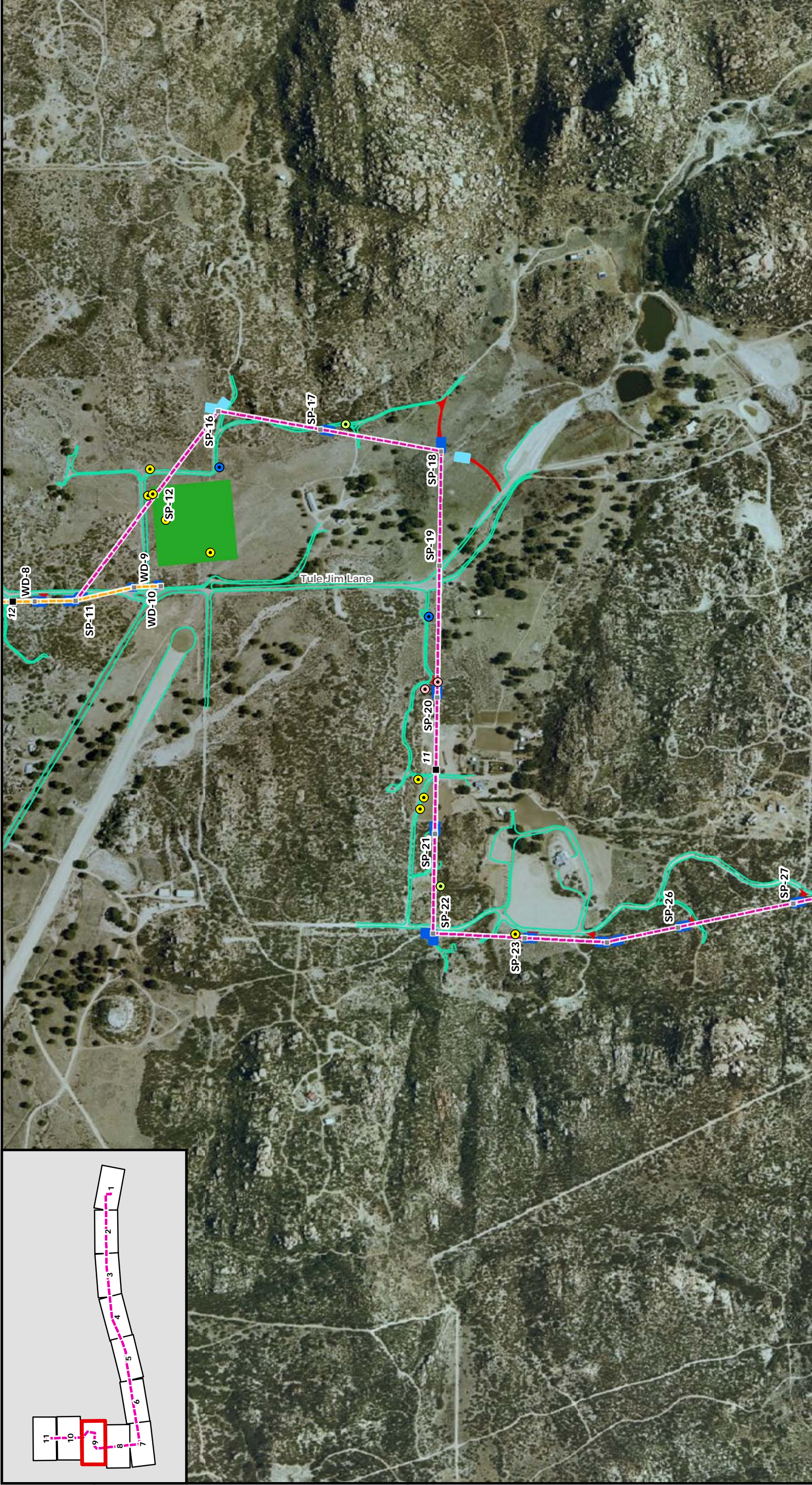
East County Substation Project

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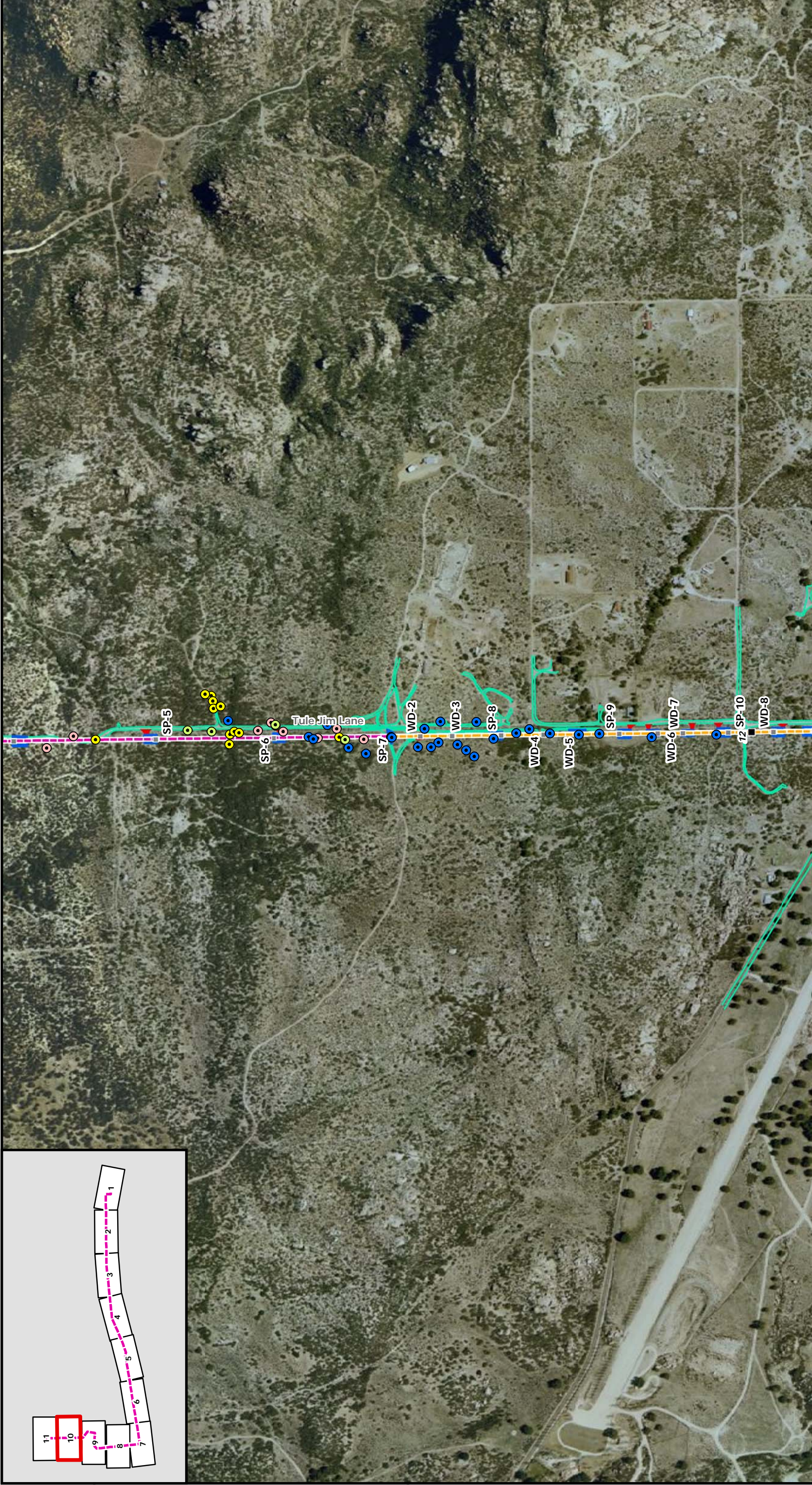
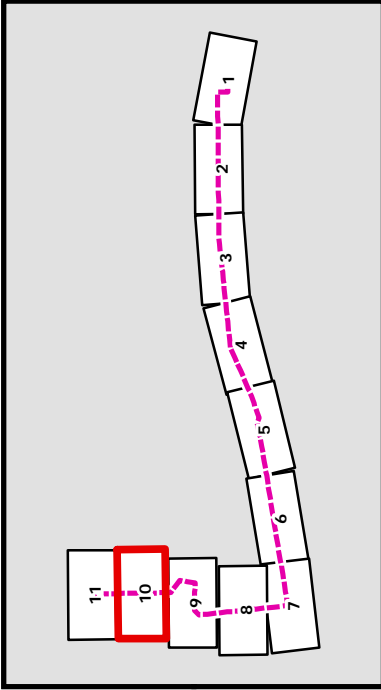
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Attachment A: Rare Plant Species Occurrences Map 9 of 11

East County Substation Project

<ul style="list-style-type: none"> Proposed SWPL Loop-In Proposed 138 kV Line Proposed 12 kV Temporary Distribution Tap 445 Circuit Collocated with 138 kV Line Existing Transmission Line Existing Access Road 	<ul style="list-style-type: none"> Proposed ECO Substation Boulevard Substation Rebuild Proposed 138 kV Line Milepost Proposed 138 kV Tower Existing SWPL Structure Proposed SWPL Loop-In Structure 	<ul style="list-style-type: none"> Retention Pond New Access Road Fly Yard Pull Site Temporary Work Area Staging Yard 	<ul style="list-style-type: none"> Jacumba Milkvetch (CNPS List 1B.2) Sticky Gerarea (CNPS List 2.3) Desert Beauty (CNPS List 2.3) Scarlet Gilla (CNPS List 2.3) Palmer's Grapplinghook (CNPS List 4.2) Pride-of-California; Campo Pea (CNPS List 4.3) Jacumba Monkey Flower (CNPS List 4.3) Oceanblue Larkspur (CNPS List 4.3) 	 	
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Attachment A: Rare Plant Species Occurrences Map 10 of 11

East County Substation Project

<ul style="list-style-type: none"> Proposed SWPL Loop-In Proposed 138 kV Line Proposed 12 kV Temporary Distribution Tap 445 Circuit Collocated with 138 kV Line Existing Transmission Line Existing Access Road 	<ul style="list-style-type: none"> Proposed ECO Substation Boulevard Substation Rebuild Proposed 138 kV Line Milepost Proposed 138 kV Tower Existing SWPL Structure Proposed SWPL Loop-In Structure 	<ul style="list-style-type: none"> Retention Pond New Access Road Fly Yard Pull Site Temporary Work Area Staging Yard 	<ul style="list-style-type: none"> Jacumba Milkvetch (CNPS List 1B.2) Sticky Geranium (CNPS List 2.3) Desert Beauty (CNPS List 2.3) Scarlet Gilia (CNPS List 2.3) 	<ul style="list-style-type: none"> Palmer's Grapplinghook (CNPS List 4.2) Pride-of-California: Campo Pea (CNPS List 4.3) Jacumba Monkey Flower (CNPS List 4.3) Oceanblue Larkspur (CNPS List 4.3)
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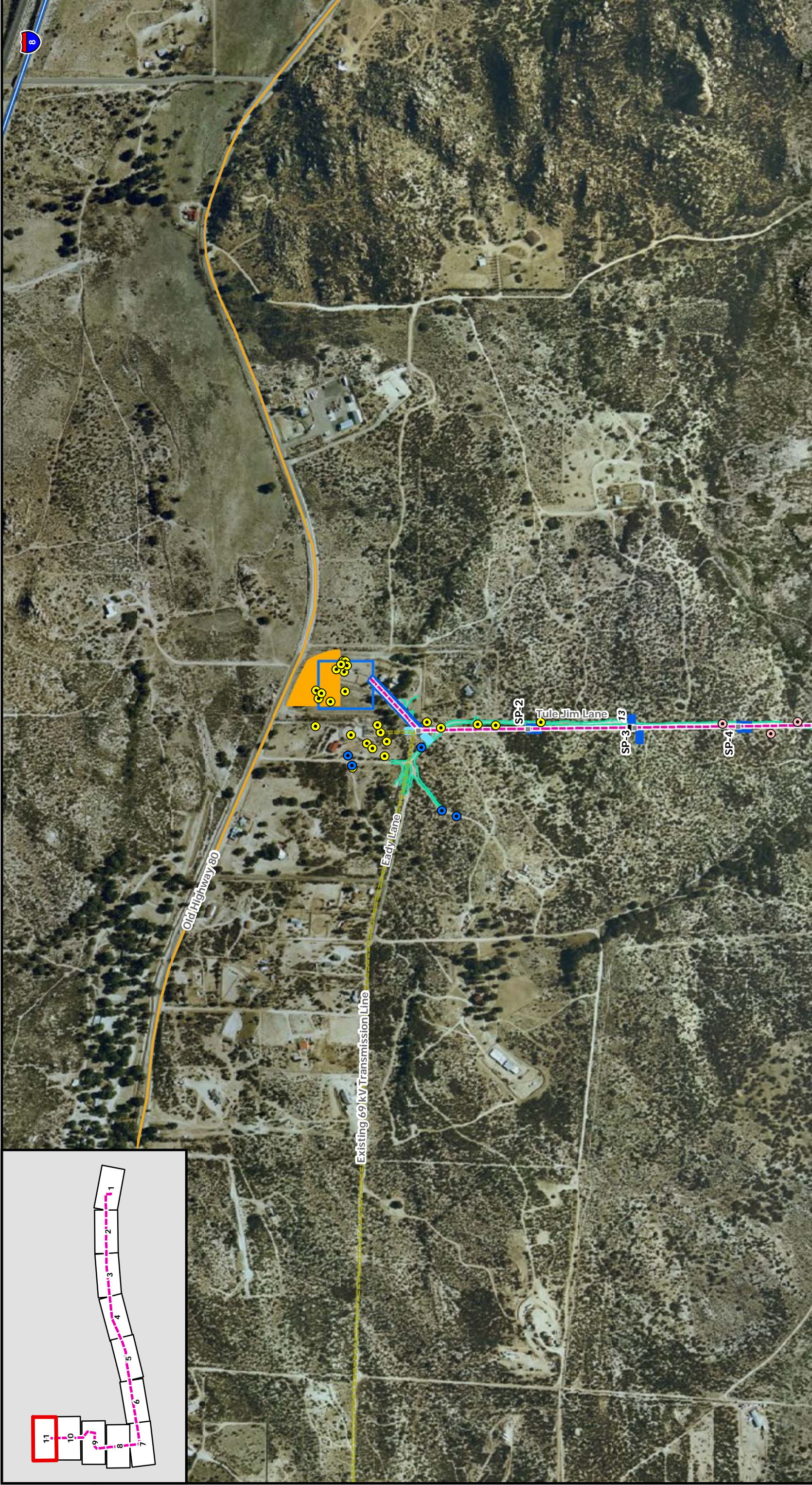
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Attachment A: Rare Plant Species Occurrences Map 11 of 11

East County Substation Project

<ul style="list-style-type: none"> Proposed SWPL Loop-In Proposed 138 kV Line Proposed 12 kV Temporary Distribution Tap 445 Circuit Collocated with 138 kV Line Existing Transmission Line Existing Access Road 	<ul style="list-style-type: none"> Proposed ECO Substation Boulevard Substation Rebuild Proposed 138 kV Line Milepost Proposed 138 kV Tower Existing SWPL Structure Proposed SWPL Loop-In Structure 	<ul style="list-style-type: none"> Retention Pond New Access Road Fly Yard Pull Site Temporary Work Area Staging Yard 	<ul style="list-style-type: none"> Jacumba Milkvetch (CNPS List 1B.2) Sticky Gerarea (CNPS List 2.3) Desert Beauty (CNPS List 2.3) Scarlet Gilla (CNPS List 2.3) Palmer's Grapplinghook (CNPS List 4.2) Pride-of-California: Campo Pea (CNPS List 4.3) Jacumba Monkey Flower (CNPS List 4.3) Oceanblue Larkspur (CNPS List 4.3)
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Attachment B

East County Substation Project Survey Area Plant Species List

<u>Family</u>	<u>Scientific Name</u>	<u>Common Name</u>
Adoxaceae	<i>Sambucus mexicana</i>	Blue Elderberry
Agavaceae	<i>Agave deserti</i> var. <i>deserti</i>	Desert Agave
	<i>Hesperoyucca whipplei</i>	Chaparral Candle
	<i>Yucca shidigera</i>	Mojave Yucca
Alliaceae	<i>Allium fimbriatum</i> var. <i>f</i>	Desert Onion
Amaranthaceae	<i>Atriplex canescens</i> var. <i>c</i>	Shadscale, Four- Wing Saltbush
	<i>Chenopodium californicum</i>	California Goosefoot
Anacardiaceae	<i>Rhus ovata</i>	Sugar Bush
	<i>Rhus trilobata</i>	Skunkbrush
Apiaceae	<i>Bowlesia incana</i>	American Bowlesia
	<i>Lomatium mohavense</i>	Mohave Lomatium
	<i>Tauschia arguta</i>	Southern Tauschia
	<i>Yabea microcarpa</i>	California Hedge- Parsley
Apocynaceae	<i>Asclepias californica</i>	California milkweed
Asteraceae	<i>Acourtia microcephala</i>	Sacapellote
	<i>Adenophyllum porophylloides</i>	San Felipe Dyssodia
	<i>Ambrosia acanthicarpa</i>	Annual Bur-Sage
	<i>Ambrosia confertiflora</i>	Weak-Leaf Bur-Sage
	<i>Ambrosia psilostachya</i>	Western Ragweed
	<i>Ambrosia salsola</i> var. <i>s</i>	Cheesebush, Burrobrush
	<i>Anisocoma acaulis</i>	Scale-Bud
	<i>Artemisia dracunculus</i>	Terragon
	<i>Artemisia tridentata</i>	Great Basin Sagebrush
	<i>Bahiopsis parishii</i>	Parish's Golden-Eyes
	<i>Baccharis brachyphylla</i>	Short-Leaf Baccharis
	<i>Baccharis sergiloides</i>	Desert Baccharis
	<i>Brickellia desertorum</i>	Desert Brickellia
<i>Chaenactis fremontii</i>	Desert Pincushion	
<i>Chaenactis glabriuscula</i> var. <i>g</i>	Yellow Pincushion	
<i>Cirsium occidentale</i> var. <i>californicum</i>	California Thistle	

Family	Scientific Name	Common Name
	<i>Corethrogyne filaginifolia</i> var. <i>f</i>	Common Sand-Aster
	<i>Coreopsis californica</i> var. <i>c</i>	California Coreopsis
	<i>Encelia actoni</i>	Acton's Encelia
	<i>Encelia farinosa</i>	Brittlebush
	<i>Ericameria brachylepis</i>	Boundary Goldenbush
	<i>Ericameria cuneata</i> var. <i>spathulata</i>	Wedge-leaf Goldenbush
	<i>Ericameria linearifolia</i>	Interior Goldenbush
	<i>Eriophyllum confertiflorum</i> var. <i>c</i>	Long-Stem Golden-Yarrow
	<i>Eriophyllum wallacei</i>	Wallace's Woolly Daisy
	<i>Filago</i> sp.	Filago
	<i>Geraea canescens</i>	Desert Sunflower
	<i>Geraea viscida</i>	Sticky Geraea
	<i>Isocoma acradenia</i> var. <i>eremophila</i>	Desert Alkali Goldenbush
	<i>Lasthenia gracilis</i>	Common Goldfields
	<i>Layia glandulosa</i>	White Layia
	<i>Layia platyglossa</i>	Tidy Tips
	<i>Malacothrix glabrata</i>	Desert Dandelion
	<i>Malacothrix stebbinsi</i>	Stebbins's Malacothrix
	<i>Porophyllum gracile</i>	Odora
	<i>Pseudognaphalium canescens</i>	Everlasting Cudweed
	<i>Rafinesquia californica</i>	California Chicory
	<i>Senecio californicus</i>	California Butterweed
	<i>Senecio vulgaris</i>	Common Groundsel
	<i>Stephanomeria pauciflora</i>	Few-Flowered Wreathplant
	<i>Stylocline gnaphaloides</i>	Everlasting Nest-Straw
	<i>Tetradymia canescens</i>	Spineless Horsebrush
	<i>Uropappus lindleyi</i>	Silver Puffs
Bignoniaceae	<i>Chilopsis linearis</i>	Desert Willow
Boraginaceae	<i>Amsinckia menziesii</i> var. <i>intermedia</i>	Rancher's Fiddleneck
	<i>Cryptantha decepiens</i>	Gravel Cryptantha
	<i>Cryptantha intermedia</i>	Nievitas Cryptantha
	<i>Cryptantha evadensis</i>	Nevada Cryptantha
	<i>Cryptantha pterocarya</i> var. <i>p</i>	Wing-Nut Cryptantha
	<i>Harpagonella palmeri</i>	Palmer's Grappling-hook

Family	Scientific Name	Common Name	
	<i>Pectocarya linearis</i> ssp. <i>ferocula</i>	Slender Pectocarya	
	<i>Pectocarya penicillata</i>	Winged Pectocarya	
	<i>Pectocarya setosa</i>	Bristly Pectocarya	
	<i>Plagiobothrys arizonicus</i>	Arizona Popcornflower	
	<i>Plagiobothrys tenellus</i>	Slender Popcornflower	
Brassicaceae	<i>Brassica tournefortii</i>	Sahara Mustard	
	<i>Caulanthus heterophyllus</i> var. <i>h</i>	San Diego Jewelflower	
	<i>Descurainia pinnata</i> ssp. <i>halictorum</i>	Alkali Western Tansy-Mustard	
	<i>Guillenia lasiophylla</i>	California Mustard	
	<i>Lepidium</i> sp.	Peppergrass	
	<i>Sisymbrium altissimum</i>	Tumble Mustard	
	<i>Sisymbrium irio</i>	London Rocket	
	<i>Sisymbrium orientale</i>	Hare's-Ear Cabbage	
	<i>Thysanocarpus curvipes</i>	Lacepod, Fringepod	
	Cactaceae	<i>Cylindropuntia californica</i> var. <i>parkeri</i>	Cane Cholla
<i>Cylindropuntia ganderi</i> var. <i>g</i>		Gander's Cholla	
<i>Echinocereus engelmannii</i>		Engelmann's Hedgehog Cactus	
<i>Ferocactus cylindraceus</i>		California Barrel Cactus	
<i>Mammillaria dioica</i>		Fishhook Cactus	
<i>Opuntia chlorotica</i>		Pancake Cactus	
<i>Opuntia phaeacantha</i>		Desert Prickly Pear	
Cucurbitaceae		<i>Marah macrocarpus</i> var. <i>m</i>	Manroot, Wild- Cucumber
Cupressaceae		<i>Juniperus californica</i>	California Juniper
Ephedraceae	<i>Ephedra californica</i>	California Ephedra	
	<i>Ephedra nevadensis</i>	Nevada Ephedra	
	<i>Ephedra viridis</i>	Green Ephedra	
Ericaceae	<i>Arctostaphylos glauca</i>	Big-Berry Manzanita	
	<i>Arctostaphylos pungens</i>	Point-Leaf Manzanita	
Euphorbiaceae	<i>Chamaesyce albomarginata</i>	White-Margin Sandmat	
	<i>Chamaesyce melanadenia</i>	Rattlesnake Spurge	
Fabaceae	<i>Stillingia linearifolia</i>	Linear-Leaf Stillingia	
	<i>Acacia greggii</i>	Catclaw Acacia	
	<i>Astragalus didymocarpus</i> var. <i>dispermus</i>	Desert Dwarf Locoweed	
	<i>Astragalus douglasii</i> var. <i>perstrictus</i>	Jacumba Milkvetch	
	<i>Astragalus palmeri</i>	Palmer's Locoweed	

Family	Scientific Name	Common Name
	<i>Lathyrus splendens</i>	Pride-of-California, Campo Pea
	<i>Lotus argophyllus</i> var. <i>a</i>	Silver-Leaf Lotus
	<i>Lotus scoparius</i> var. <i>brevialatus</i>	Short-Wing Deerweed
	<i>Lotus strigosus</i>	Strigose Lotus
	<i>Lupinus andersonii</i>	Anderson's Lupine
	<i>Lupinus bicolor</i>	Miniature Lupine
	<i>Lupinus concinnus</i>	Bajada Lupine
	<i>Lupinus truncatus</i>	Collar Lupine
	<i>Melilotus indicus</i>	Indian Sweetclover
	<i>Pediomelum californicum</i>	Indian Breadroot
	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	Honey Mesquite
	<i>Trifolium willdenovii</i>	Valley Clover
Fagaceae	<i>Quercus x acutidens</i>	Torrey's Scrub Oak
	<i>Quercus agrifolia</i> var. <i>oxydenia</i>	Interior Coast Live Oak
Garryaceae	<i>Garrya veatchii</i>	Canyon Silk Tassel
Geraniaceae	<i>Erodium cicutarium</i>	Red-Stem Filaree/Storksbill
Grossulariaceae	<i>Ribes quercetorum</i>	Oak Gooseberry
Hydrophyllaceae	<i>Emmenanthe penduliflora</i> var. <i>p</i>	Whispering Bells
	<i>Eriodictyon trichocalyx</i> var. <i>lanatum</i>	Wild-Heliotrope
	<i>Eucrypta chrysanthemifolia</i> var. <i>c</i>	Common Eucrypta
	<i>Phacelia cicutaria</i> var. <i>hispida</i>	Caterpillar Phacelia
	<i>Phacelia distans</i>	Wild-Heliotrope
	<i>Phacelia minor</i> x <i>P. parryi</i>	None Listed
	<i>Pholistoma membranaceum</i>	White Fiesta Flower
Lamiaceae	<i>Salvia apiana</i>	White Sage
	<i>Salvia carduacea</i>	Thistle Sage
	<i>Salvia columbariae</i>	Chia
Liliaceae	<i>Calochortus splendens</i>	Splendid Mariposa Lily
Loasaceae	<i>Mentzelia montana</i>	Montane Mentzelia
Malvaceae	<i>Sphaeralcea ambigua</i> var. <i>rosacea</i>	Rose Desert/Mallow
	<i>Sphaeralcea ambigua</i> var. <i>a</i>	Desert/Apricot Mallow
Nyctaginaceae	<i>Mirabilis laevis</i> var. <i>villosa</i>	Hairy Wishbone
	<i>Mirabilis laevis</i> var. <i>crassifolia</i>	Coastal Wishbone
Oleaceae	<i>Menodora scabra</i> var. <i>glabrescens</i>	Rough Menodora
Onagraceae	<i>Camissonia californica</i>	False-Mustard
	<i>Camissonia strigulosa</i>	Sandysoil Sun Cup
	<i>Epilobium canum</i>	California Fuchsia
	<i>Oenothera californica</i> ssp. <i>c</i>	California Evening- Primrose

Family	Scientific Name	Common Name	
Orobanchaceae	<i>Castilleja exserta</i> ssp. <i>e</i>	Purple Owl's-Clover	
	<i>Castilleja</i> sp.	Indian Paintbrush	
	<i>Orobanche californica</i> ssp. <i>feudgei</i>	Sagebrush Broom-Rape	
Paeoniaceae	<i>Paeonia californica</i>	California Peony	
Papaveraceae	<i>Argemone munita</i>	Prickly Poppy	
	<i>Eschscholzia californica</i>	California Poppy	
	<i>Platystemon californicus</i>	Cream Cups	
Phrymaceae	<i>Mimulus aridus</i>	Jacumba Monkey Flower	
	<i>Mimulus guttatus</i>	Seep Monkey Flower	
	<i>Mimulus pilosus</i>	Downy Monkey Flower	
Pinaceae	<i>Pinus quadrifolia</i>	Parry Pinyon	
Plantaginaceae	<i>Antirrhinum nuttallianum</i> ssp. <i>n</i>	Nuttall's Snapdragon	
	<i>Collinsia concolor</i>	So. Chinese Houses	
	<i>Keckiella antirrhinoides</i> var. <i>a</i>	Yellow Bush Penstemon	
	<i>Keckiella ternata</i> var. <i>t</i>	Summer Bush Penstemon	
	<i>Penstemon centranthifolius</i>	Scarlet Bugler	
	<i>Penstemon clevelandii</i> var. <i>c</i>	Cleveland's Beardtongue	
	<i>Penstemon spectabilis</i> var. <i>s</i>	Showy Penstemon	
	<i>Plantago erecta</i>	Dot-seed Plantain	
	Poaceae	<i>Achnatherum coronatum</i>	Giant Stipa
		<i>Achnatherum speciosum</i>	Desert Needlegrass
<i>Avena barbata</i>		Slender Wild Oat	
<i>Avena fatua</i>		Wild Oat	
<i>Bromus diandrus</i>		Ripgut Grass	
<i>Bromus rubens</i>		Red Brome	
<i>Bromus tectorum</i>		Cheat Grass	
<i>Hordeum murinum</i> ssp. <i>glaucum</i>		Glaucous Barley	
<i>Melica frutescens</i>		Tall Melic	
<i>Melica imperfecta</i>		Coast Range Melic	
<i>Poa secunda</i> ssp. <i>s</i>		One-Sided Bluegrass	
<i>Schismus barbatus</i>		Arabian Schismus	
<i>Vulpia microstachys</i> var. <i>pauciflora</i>	Pacific Fescue		
<i>Vulpia octoflora</i> var. <i>hirtella</i>	Tufted Fescue		
Polemoniaceae	<i>Eriastrum densifolium</i> var. <i>elongatum</i>	Chaparral Woolly-Star	
	<i>Eriastrum eremicum</i>	Desert Woolly-Star	
	<i>Eriastrum sapphirinum</i>	Sapphire Eriastrum	
	<i>Gilia diegensis</i>	San Diego Gilia	

Family	Scientific Name	Common Name
	<i>Ipomopsis tenuifolia</i>	Scarlet Gilia
	<i>Leptosiphon lemmonii</i>	Lemmon's Linanthus
	<i>Linanthus bellus</i>	Desert Beauty
	<i>Saltugilia australis</i>	Southern Gilia
Polygonaceae	<i>Chorizanthe brevicornu</i> var. <i>b</i>	Brittle Spineflower
	<i>Chorizanthe fimbriata</i> var. <i>f</i>	Fringed Spineflower
	<i>Eriogonum elongatum</i> var. <i>e</i>	Tall Buckwheat
	<i>Eriogonum fasciculatum</i> var. <i>foliolosum</i>	Inland California
Buckwheat	<i>Eriogonum fasciculatum</i> var. <i>polifolium</i>	Mt. Buckwheat
	<i>Eriogonum gracile</i> var. <i>g</i>	Slender Buckwheat
	<i>Eriogonum wrightii</i> var. <i>membranaceum</i>	Foothill Buckwheat
	<i>Loeseliastrum schottii</i>	Schott's Calico
	<i>Pterostegia drymarioides</i>	Granny's Hairnet, G. C. P.
	<i>Sidothea trilobata</i>	Three-Lobe Starry Puncturebract
Portulacaceae	<i>Calandrinia ciliata</i>	Red Maids
	<i>Calyptridium monandrum</i>	Common
Calyptridium	<i>Claytonia parviflora</i> ssp. <i>parviflora</i>	Utah Miner's-Lettuce
	<i>Claytonia perfoliata</i> ssp. <i>p</i>	Miner's-Lettuce
Pteridaceae	<i>Notholaena californica</i>	California Cloak Fern
	<i>Pellaea mucronata</i> ssp. <i>mucronata</i>	Bird's Foot Cliff-
Brake	<i>Pentagramma triangularis</i> ssp. <i>rebmanii</i>	Rebman's Silverback Fern
Ranunculaceae	<i>Clematis pauciflora</i>	Ropevine Clematis
	<i>Delphinium parishii</i> ssp. <i>subglobosum</i>	Oceanblue Larkspur
Rhamnaceae	<i>Ceanothus greggii</i> var. <i>perplexans</i>	Cup-Leaf-Lilac
	<i>Ceanothus leucodermis</i>	Chaparral Whitethorn
	<i>Rhamnus ilicifolia</i>	Holly-Leaf Redberry
	<i>Ziziphus parryi</i> var. <i>parryi</i>	Lotebush
Rosaceae	<i>Adenostoma fasciculatum</i>	Chamise
	<i>Adenostoma sparsifolium</i>	Red Shank
	<i>Cercocarpus betuloides</i>	Mountain Mahogany
	<i>Prunus fremontii</i>	Desert Apricot
	<i>Prunus ilicifolia</i>	Holly-Leaf Cherry
	<i>Purshia tridentata</i> var. <i>tridentata</i>	Antelope Bitterbrush
Rubiaceae	<i>Galium andrewsii</i> ssp. <i>andrewsii</i>	Phlox-Leaf Bedstraw
	<i>Galium aparine</i>	Common Bedstraw
Rutaceae	<i>Thamnosma montana</i>	Turpentine-Broom
Salicaceae	<i>Salix laevigata</i>	Red Willow

Family	Scientific Name	Common Name
Simmondsiaceae	<i>Simmondsia chinensis</i>	Jojoba
Solanaceae	<i>Datura wrightii</i>	W. Jimson Weed
	<i>Lycium andersonii</i>	Waterjacket
	<i>Nicotiana obtusifolia</i>	Desert Tobacco
	<i>Physalis crassifolia</i>	Greene's Ground-Cherry
	<i>Solanum umbelliferum</i>	Blue Witch
Tamaricaceae	<i>Solanum xanti</i>	Chap. Nightshade
	<i>Tamarix ramosissima</i>	Tamarisk, Salt Cedar
Themidaceae	<i>Dichelostemma capitatum</i> ssp. <i>c</i>	Blue Dicks
	<i>Dichelostemma capitatum</i> ssp. <i>pauciflorum</i>	Few-Flower Blue Dicks
Urticaceae	<i>Parietaria hespera</i> var. <i>h</i>	Western Pellitory
Viscaceae	<i>Phoradendron californicum</i>	Desert Mistletoe
Zygophyllaceae	<i>Larrea tridentata</i>	Creosote

