

SAN DIEGO GAS & ELECTRIC (SDG&E) TL 6931 FIRE HARDENING / WIND INTERCONNECT PROJECT

Biological Resources Technical Report

Prepared for
San Diego Gas & Electric Company

March 2013



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SAN DIEGO GAS & ELECTRIC COMPANY (SDG&E) TL 6931 FIRE HARDENING / WIND INTERCONNECT PROJECT

Biological Resources Technical Report

Executive Summary

Several focused biological studies were conducted for the San Diego Gas & Electric Company (SDG&E) TL 6931 Fire Hardening / Wind Interconnect Project (project) to gather baseline data within and adjacent to the project site. Focused studies included: rare plant surveys, U.S. Fish and Wildlife Service (USFWS) protocol arroyo toad (*Anaxyrus californicus*) surveys, USFWS-protocol Quino checkerspot butterfly (QCB; *Euphydryas editha quino*) surveys, and an assessment of wetlands, creeks and ephemeral drainages in the project area. Additional biological data was also gathered for the nearby proposed Manzanita Wind Energy Project, which at one point was associated with the project, but is no longer included. However, some of the data collected for the Manzanita Wind Energy Project is relevant and is referenced in this report, because much of the survey area associated with the Manzanita Wind Energy Project overlapped with the project. Initial general biological reconnaissance surveys were conducted by AECOM in support of the Feasibility Study and Constraints Analysis (FSCA) for the Manzanita Wind Energy Project, which included portions of the proposed project area. Vegetation mapping, wetlands assessment, and rare plant surveys were performed by Environmental Science Associates (ESA) in 2011 and 2012, and ESA biologists were involved in the field siting of transmission poles and stringing sites to address any potential biological resources issues as the project plans were being formulated.

The project site contains seven dominant plant communities: big sagebrush scrub, chamise chaparral, redshank chaparral, upper Sonoran subshrub scrub, non-native grassland, southern willow scrub, and coast live oak woodland. Portions of the project site were also characterized as disturbed and/or developed. The project would temporarily impact 26.12 acres and permanently impact 14.20 acres of vegetation. Reseeding and restoration of temporarily disturbed vegetation would help minimize impacts to native vegetation communities and habitats.

Rare plant surveys conducted in 2011 and 2012 found no special-status plants occurring in the project area; however, a number of special-status plant species including sticky geraea (*Geraea viscida*) and Jacumba milk-vetch (*Astragalus douglasii* var. *perstrictus*) have been previously recorded in the vicinity and have a high potential to occur. Spring rare plant surveys are recommended for the Boulevard and TBO South 1 staging yards, as these areas have the potential to support special-status plant species, to minimize the potential for impacts to special-status

botanical resources. Spring rare plant surveys are not recommended for the Motocross staging yard, as this area is disturbed and has minimal potential to support special-status plant species.

Many common wildlife species typical of the region were observed during reconnaissance and focused surveys conducted for the project. Four special-status wildlife species were observed by biologists within the project area: QCB, coast (San Diego) horned lizard (*Phrynosoma coronatum blainvillii*), Cooper's hawk (*Accipiter cooperii*), and San Diego black-tailed jackrabbit (*Lepus californicus bennettii*). Five other special-status species were determined to have a high potential to occur in the project area: coastal whiptail (*Aspidoscelis tigris stejnegeri*), rosy boa (*Charina trivirgata*), red-diamond rattlesnake (*Crotalus ruber*), prairie falcon (*Falco mexicanus*), and San Diego desert woodrat (*Neotoma lepida intermedia*). Mitigation measures are recommended to avoid and reduce potential impacts to wildlife species that includes the restoration of temporarily disturbed habitats, preconstruction clearance surveys, and construction monitoring by a qualified biologist.

QCB surveys identified five occurrences within suitable habitat in the southeastern portion of the project site. The project would temporarily impact 9.75 acres and permanently impact 3.46 acres of occupied QCB habitat. Because the QCB is a federally endangered species, impacts to individuals or their habitat is considered significant. Mitigation measures including preconstruction surveys, acquisition and management of mitigation habitat pursuant to Section 7 negotiations with USFWS, and biological monitoring would reduce impacts to QCB and their habitat.

A jurisdictional assessment of potentially jurisdictional features was conducted through a review of topographic maps, aerial photographs, and field surveys to map the extent of potential jurisdictional resources (i.e., creeks and ephemeral drainages) within the vicinity of project impacts. Based on the assessment, several features within the vicinity of the project impacts are potentially subject to the jurisdiction of the U.S. Army Corps of Engineers (USACE), California Department of Fish & Game (CDFG), and the Regional Water Quality Control Board (RWQCB). Potentially jurisdictional features within the vicinity project impacts under the USACE's jurisdiction are limited to unvegetated channels, which are characterized as drainage features that have a defined bed and bank and a distinguishable Ordinary High Water Mark (OHWM), but lack hydrophytic vegetation, and are connected to a Traditional Navigable Water (TNW). Areas of CDFG jurisdiction refer to streambeds and associated riparian scrub habitats. All areas mapped as USACE-jurisdictional waters fall within the Section 401 authority of the RWQCB, specifically the unvegetated channels. Several of these potentially jurisdictional features cross existing or proposed project access roads. Impacts to these areas would be avoided through temporarily spanning steel plates over the drainages for equipment and vehicle access. Potential impacts to 0.069 acre (approximately 3,023 square feet) of areas under the jurisdiction of the USACE, CDFG, and RWQCB would be associated with using the open trench method proposed for undergrounding the 138 kV to the Boulevard Substation. Additional avoidance, minimization, and mitigation measures may be necessary to avoid impacts. The Jurisdictional Analysis Memorandum can be found in Attachment A.

The interconnection power line would cross one sensitive natural community – southern willow scrub – within the vicinity of Campo Creek. However, the power line would span over the portion of the creek that includes this riparian vegetation and no construction-related activities are proposed within the creek or the southern willow scrub community.

The project area does not cross into any designated critical habitat areas, although designated critical habitat for the QCB is located approximately 3.5 miles west of the project area.

No major terrestrial migration corridors were identified in the project area, and the project would not create barriers that would impede the local or regional movement of wildlife in the area.

The project is subject to compliance with a number of local policies and plans including the San Diego County General Plan, San Diego County Draft East County Multiple Species Conservation Program (MSCP), and SDG&E's existing Natural Community Conservation Plan (NCCP). With project implementation of SDG&E's NCCP, as well as adoption of the recommended mitigation measures described in this report, the project would not conflict with any of these local plans and policies.

1.0 Introduction

This report has been prepared to document biological resources that could be affected within the limits of project. This report describes the environmental setting of the project area, including plant communities, habitats, and sensitive biological resources determined to be present, as well as those that have a potential to be present; and the applicable regulatory framework. Impacts to sensitive biological resources are categorized based on biological resource issues that are required to be analyzed in accordance with the California Environmental Quality Act (CEQA), including sensitive plants, wildlife, and natural communities, wetland resources, local policies and ordinances, wildlife movement corridors, and Habitat Conservation Areas.

2.0 Project Description

The proposed project is located in the Boulevard area of southeastern San Diego County, California, approximately 10 miles north of the United States (U.S.)-Mexico border, 15 miles west of the Imperial County border, and 50 miles east of downtown San Diego, as shown on Figure 1. The proposed project consists of the following primary components:

1. On the west end of the project, at the Campo Reservation boundary on private property, a double circuit steel pole deadend structure (Pole 1) will be installed.
2. Approximately 5.2 miles of TL 6931 from the Campo Reservation boundary to the Boulevard Substation will be fire hardened by replacing or modifying approximately 49 existing wood, single-circuit 69 kV poles with approximately 53 double-circuit dull galvanized steel poles. Additionally, two temporary wood poles will be installed for the interconnection of TL 6931 to the Boulevard East Substation until the existing Boulevard Substation is demolished at which time the two temporary wood poles would be removed. The proposed new steel poles will include 138 kV class insulators and vertical spacing and will provide for a second circuit on the rebuilt TL 6931. The new second

circuit would be either a 138 kV generation interconnection circuit for the proposed Shu'luuk Wind Project (in the event that project is constructed) or a vacant position for a second circuit to be installed as needed in the future.

3. On the east end of the project, a new double circuit steel cable pole (Pole 52) will be installed. From Pole 52 to the Boulevard East Substation the 138 kV line will be constructed underground and the 69 kV line will be constructed overhead. The approximately 750 foot underground 138 kV line will be generally constructed under existing roads, while a temporary 730 foot long 69 kV line will be built overhead and used as the interconnection to the Boulevard East Substation until the Boulevard Substation is demolished. Once the Boulevard East Substation is constructed, a new right-of-way (ROW) for the permanent 550 foot long 69 kV overhead line will be required.
4. Other ancillary facilities required to implement the proposed project, including 13 new permanent access roads for access and 3 permanent helicopter landing zones to facilitate on-going maintenance of the proposed project, and any temporary facilities required for construction (e.g., staging areas, guard structures, and temporary wood poles to accommodate TL 6931 interconnection to the Boulevard East Substation).

The proposed project will also result in modifications to existing 12 kV distribution facilities including the installation of one new steel distribution pole between Pole 22 and 23.

SDG&E notes that the project description may continue to evolve after the proposed project has been approved and construction has commenced. The proposed project will be constructed in compliance with the SDG&E NCCP. The NCCP requires SDG&E to avoid and minimize impacts to biological resources. Under the NCCP, SDG&E is not required to stay within specific work areas identified prior to construction; rather, SDG&E may modify construction work areas as necessary in the field. The actual impacts of construction are documented and mitigated after construction is complete.

2.1 Transmission Line 6931 Fire Hardening and Generation Interconnection to Boulevard Substation

The interconnection power line is located south of Interstate 8 (I-8) and Old Highway 80 and traverses the Live Oak Springs and the Boulevard community areas in southeast San Diego County (see Figure 1 and Figures 2A through 2U). The route of the interconnection power line is primarily an expansion of the existing 69 kV ROW which is adjacent to and comprised of undeveloped rural land with an occasional nearby residence. The route generally parallels Old Highway 80 to the north and crosses Highway 94 roughly 2,000 feet west of Tierra del Sol Road.

The existing TL 6931 will be rebuilt for approximately 5.2 miles with double circuit structures between Pole 1 and the new Boulevard East Substation in order to accommodate the existing 69 kV power line and the new 138 kV generation interconnection circuit for the Shu'luuk Wind Project. TL 6931 will be rebuilt in a double circuit configuration from Pole 1 adjacent to the Campo Reservation boundary to the Boulevard East Substation with TL 6931 on one side and the new 138 kV generation interconnection circuit on the other. In the event the Shu'luuk Wind Project is not constructed, then only one 69 kV circuit will be built at this time, leaving an open

position for a future second circuit. For ease of reference and in order to provide a conservative analysis of potential impacts, this document assumes that the Shu'luuk Wind Project is constructed and that the installation of the 138 kV generation interconnection circuit occurs concurrent with the fire hardening of TL 6931.

More specifically, the proposed project will include the following activities. An approximately 5.2-mile-long power line will be constructed from Pole 1. The line will travel southeast from Pole 1 in a double circuit 69/138 kV configuration with the rebuilt TL 6931 on one side of the poles and the new 138 kV circuit on the other side of the steel poles. The 138 kV circuit will transition from overhead to underground via a cable pole (Pole 52) then terminate at the Boulevard East Substation, while the 69 kV circuit (TL 6931) will terminate overhead at the Boulevard East Substation. See Figures 2A through 2U for a depiction of the route.

In addition, the proposed project includes construction of three approximately 30 feet by 30 feet permanent helicopter landing zones and 13 access roads ranging from approximately 15 to 810 feet-long by approximately 14 feet-wide. These facilities will remain in place following construction of the proposed project.

The new 69/138 kV power line will require an approximately 100-foot-wide permanent ROW (50 feet on either side of the centerline) for approximately 5.2 miles, generally along the same alignment as the existing TL 6931 69 kV line. TL 6931 is currently located on privately owned land that is generally undeveloped except for the existing power line and adjacent residences owned by 15 different land owners. The parcels range in size between 0.3 acre and 80 acres. The majority of the properties are vacant and those that are used are occupied by small single-family residences or mobile homes. The geographical location, general land use, and property description of the existing TL 6931 power line is identical to that of the proposed interconnection power line.

3.0 Methodology

3.1 Literature and Database Review

Preliminary investigations were conducted by ESA and included a review of aerial photographs, United States Geological Survey (USGS) topographic maps, National Wetland Inventory (NWI) maps; and literature and database searches that included a review of the San Diego County General Plan, the Mountain Empire Subregional Plan, SDG&E's Subregional NCCP, and the San Diego County Draft East County MSCP.

Databases queried included the California Native Plant Society (CNPS) Inventory of Rare and Endangered Vascular Plants of California and the CDFG California Natural Diversity Database (CNDDB). These databases were queried for special-status species records in the Live Oak Springs USGS 7.5-minute quadrangle and included the seven surrounding quadrangles (Sombrero Peak, Sweeney Pass, Jacumba, Tierra Del Sol, Campo, Cameron Corners, and Mount Laguna). From these queries a list of target special-status species was developed for the project area. Target special-status species were defined as having a geographic range and habitat similar to those found within the project and thus have potential to occur on the project.

Additionally, the USFWS's recovery plans for the federally endangered arroyo toad, peninsular bighorn sheep (*Ovis canadensis* spp. *nelsonii*), southwestern willow flycatcher (*Empidonax traillii extimus*), and QCB were included in the review.

A number of focused studies were conducted for the Manzanita Wind Energy Project located near the project on the Manzanita Band of the Kumeyaay Nation Reservation. These field studies also covered the majority of the project area and therefore were reviewed and analyzed. These studies included the following.

- Proponent's Environmental Assessment for the SDG&E Fire Hardening / Wind Interconnect Project (ESA, 2012);
- 2011 Survey Results, Quino Checkerspot Butterfly, Manzanita Wind Energy Project (Forde Biological Consultants, 2011)
- 45-Day Summary Report of Focused Surveys for the Quino Checkerspot Butterfly for the Manzanita Wind Energy Project. (AECOM, 2010a);
- 30-Day Summary Report of 2010 Focused Surveys for the Arroyo Toad for the Manzanita Energy Project. (AECOM, 2010b);
- Feasibility Study and Constraints Analysis for the Manzanita Wind Energy Project. (AECOM, 2010d);
- Golden Eagle Surveys Surrounding Manzanita Wind Project. (Wildlife Research Institute, 2010);
- Draft Baseline Avian Use and Risk Assessment for the Manzanita Wind Project. (Bloom Biological, 2012), and;
- Draft Bat Use of Manzanita Wind Energy Project Area Interim Report. (BioResource Consultants, Inc., 2011).

3.2 General Biological Resource Surveys

General biological reconnaissance surveys were conducted by AECOM in support of the FSCA for the Manzanita Wind Energy Project submitted to SDG&E in October 2010 (AECOM, 2010d). These surveys also included the project area. The FSCA was prepared to identify potential environmental and regulatory constraints associated with development of wind turbines and associated facilities including access roads, substation sites, and the interconnection power line to Boulevard East Substation. The FSCA included methodology discussion and results of field surveys, record searches, and examinations of previous studies and technical reports.

In 2011 and 2012, ESA attended several field meetings at the project site, which included documentation of wildlife species observed. Many of the field meetings were to assist SDG&E in siting the project to avoid sensitive biological resources to the greatest extent feasible, which included siting the project to avoid native oak trees, jurisdictional waters, and native plant communities (e.g., chamise scrub, coast live oak woodland).

3.3 Vegetation Mapping

ESA biologists Darren Burton and Jon West characterized and mapped plant communities within and adjacent to the project area in June 2011. All staging yards within the project were mapped separately by ESA biologists Joe Henry and Dallas Pugh in August 2012. AECOM also mapped portions of the vegetation on the project site in 2010. Plant communities were characterized based on the *List of California Terrestrial Natural Communities* (CDFG, 2010) and common plant names were taken from *The Jepson Manual: Higher Plants of California* (Hickman, 1993). Plant communities were mapped within and surrounding the project area in the field, and field maps were later digitized accordingly in ArcGIS.

3.4 Rare Plant Surveys

Survey methods for rare plants were based on the CDFG Guidelines and CNPS Botanical Survey Guidelines (CDFG, 2009; CNPS, 2001). Survey dates were based on the typical blooming periods of the target annual species, since perennial species, such as shrubs and trees, can generally be located and positively identified at any time of year. The average blooming periods for most of the target species identified as having a potential to occur was March through May; however, surveys were initiated as early as April and as late as June to ensure surveys coincided with the abnormally late blooming periods that occurred in 2011, due to late season snowpack in the project area. Sources utilized for identification of rare plant species included *The Jepson Manual: Higher Plants of California* (Hickman, 1993), the *Checklist of Vascular Plants of San Diego County* (Simpson and Rebnan, 2006), and the Calflora wild California plants database (Calflora, 2012); the online database for identification of plants of California.

Rare plant surveys were conducted by Mr. Burton and Mr. West between April and June, 2011. Multiple visits were made in order to maximize coverage. Plant surveys were focused within and adjacent to the project's interconnection alignments (as well as within portions of the Manzanita Wind Energy Project). An additional fall rare plant survey was conducted in September 2011 by Mr. West and ESA senior biologist Greg Ainsworth in search of Tecate tarplant (*Deinandra floribunda*), which has a typical blooming period from August to November. The staging yards were also surveyed for Tecate tarplant in August 2012 by Mr. Henry and Mr. Pugh. As previously indicated, AECOM also conducted rare plant surveys on the project site in 2010.

Plant surveys were conducted on foot, with surveyors walking transects within suitable habitat areas to achieve 100 percent visual coverage, which included the 100-foot corridor along both sides of the interconnection alignment, the existing pole locations, proposed access roads, spur roads, stringing sites, staging yards, and other areas of proposed (permanent and temporary) construction identified by SDG&E.

3.5 Jurisdictional Assessment

To identify potential jurisdiction resource areas, ESA conducted a review of available background information pertaining to the project layout and geography prior to conducting site visits. Site maps were generated on aerial photographs and potentially jurisdictional features were highlighted in ArcGIS to assist in field verification. The project area was assessed for potentially

jurisdictional wetlands or waters of the U.S./State based on the presence of hydrophytic vegetation, stream geomorphology, OHWM, connectivity to traditionally navigable waters, and other appropriate hydrologic indicators. ESA biologists Joseph Henry and Dallas Pugh conducted a site visit on February 7, 2013, to evaluate potentially jurisdictional features within the study area, defined as within 50 feet of project impacts. The jurisdictional analysis was conducted consistent with *U.S. Army Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987). The definition of growing season and the basis of determining and recording indicators for hydrophytic vegetation, hydric soils, and wetland hydrology was based on the *Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Arid West Region (Version 2.0)*, as well as the *Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE, 2008a; USACE, 2008b). The 1987 USACE Manual, Arid West Supplement, and Field Guide to the OHWM were used for the analysis and evaluation of any normal circumstances, atypical situations, and problem areas, as needed. The limits of potential jurisdictional features were recorded in the field with a hand-held Trimble™ GeoXH GPS with sub-foot accuracy.

Areas of CDFG jurisdiction refer to streambeds and associated riparian scrub habitats. All areas mapped as USACE-jurisdictional waters fall within the Section 401 authority of the RWQCB, specifically the unvegetated channels. Several of these potentially jurisdictional features cross existing or proposed project access roads.

3.6 Quino Checkerspot Butterfly Surveys

A focused habitat assessment for QCB was conducted for the project area on March 17, 18 and 19, 2010 by AECOM permitted biologists (AECOM, 2010a). During the habitat assessment, most areas were mapped as suitable, with the exception of developed areas completely devoid of vegetation, closed canopy forests or riparian areas, and dense areas of chaparral (i.e., chamise chaparral). AECOM's QCB habitat assessment was conducted in accordance with the most current protocol "*Quino Checkerspot Butterfly, (Euphydryas editha quino), Survey Protocol Information*" prepared and published by the USFWS, February 2002 (USFWS, 2002). The survey protocol recommends excluding "dense chaparral" and "small openings (less than an acre) completely enclosed within dense chaparral." It further defines "dense chaparral" as "vegetation so thick that it is inaccessible to humans except by destruction of woody vegetation for at least 100 meters." The habitat assessment found that the majority of the project area contained suitable habitat for QCB. Areas of suitable habitat, as well as the locations of QCB host plants, were mapped during the habitat assessment.

USFWS protocol-level surveys for QCB were subsequently conducted in the spring of 2010 by AECOM biologists. As per USFWS protocol, AECOM submitted a letter to the USFWS Carlsbad Field Office notifying the agency of the 2010 habitat assessment before proceeding with focused QCB surveys. The habitat assessments and surveys were conducted using the methodology described in protocol (USFWS, 2002). Surveys were performed by qualified, permitted biologists approved by the USFWS to conduct QCB habitat assessments and protocol-level surveys.

The start date for focused adult QCB surveys was determined based on the following: (1) the first detection of QCB during surveys conducted the previous year for another project on the Campo

Indian Reservation in the vicinity of the project area; (2) conditions in the project area relative to the previous year; and (3) conditions at the Jacumba reference site monitored by USFWS. Based on these conditions, protocol-level QCB surveys were initiated on March 24, 2010. In accordance with USFWS protocol, a total of five surveys were conducted throughout the flight season on non-consecutive days within non-excluded areas. Surveys were conducted at an average rate of 10 to 15 acres per hour using parallel transects along transmission line corridors and roughly parallel meandering transects in other areas. Surveyors walked within five meters of excluded areas such as closed-canopy shrublands. All surveys were conducted in periods without inclement weather and with sustained winds less than 15 miles per hour measured at four to six feet above ground level. Temperature conditions were above 60 degrees Fahrenheit on clear days and above 70 degrees Fahrenheit on overcast or cloudy days. A written report based on the terms and conditions of the QCB recovery permit and signed by the permitted biologists who conducted the surveys was submitted to the USFWS within 45 days of survey completion. The complete methodology and results of QCB studies conducted are included in: 45-Day Summary Report of Focused Surveys for the Quino Checkerspot Butterfly (AECOM, 2010a).

3.7 Arroyo Toad Surveys

Reconnaissance surveys conducted for the project found several areas containing potentially suitable habitat for the federally endangered arroyo toad. A focused habitat assessment for arroyo toad was therefore conducted by AECOM in April 2010 (AECOM, 2010b). Prior to field site visits, biologists reviewed aerial photos to identify riparian areas with potentially suitable arroyo toad habitat. The riparian areas within the project area were characterized based on presence of predominantly sandy substrates in the channel, flat sandy terraces adjacent to the channel (upland habitat), and a watercourse of braided channels. Water was present within some stream channels; however, characterization of habitat was not contingent on the amount of water present in the channel. After field verification of these potential habitat areas, biologists determined that there was 0.42 acre of potential arroyo toad breeding habitat within Campo Creek, which crosses the interconnection alignment adjacent to Live Oak Springs Road, approximately 0.15 mile southwest of Old Highway 80 (See 30-Day Summary Report of 2010 Focused Surveys for the Arroyo Toad for the Manzanita Energy Project (AECOM, 2010b): Figure 1).

Protocol-level arroyo toad presence/absence surveys were performed by AECOM biologists in accordance with the 1999 USFWS survey protocol for conducting arroyo toad surveys. Surveys were conducted over six survey sessions, each including one day and one night survey component. At least seven days separated each survey session. Surveys occurred from April 25 through June 10, 2010. Visual surveys were based on the area of known suitable habitat to detect arroyo toad.

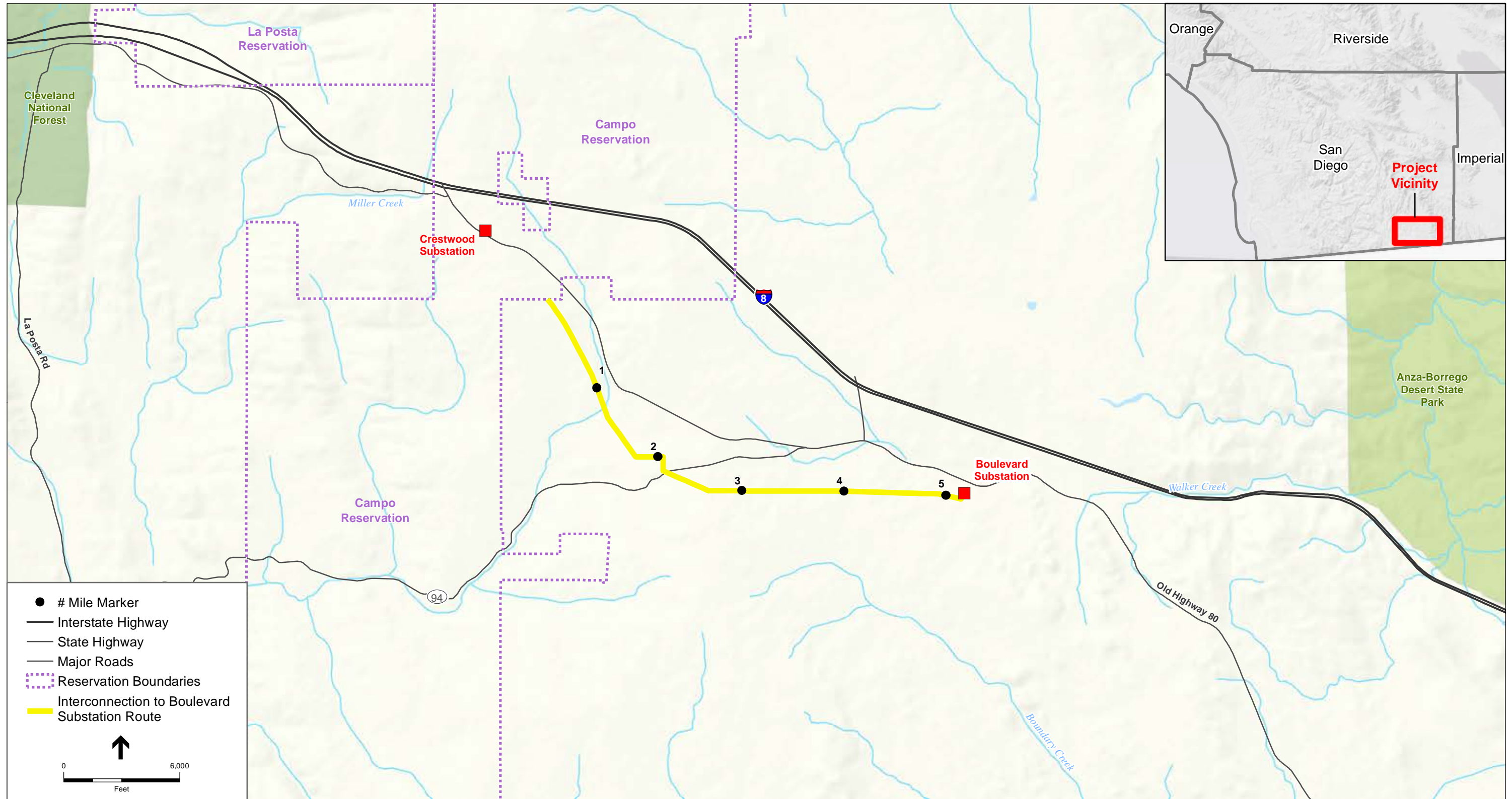
During diurnal surveys, pools and still eddies at the water's edge were surveyed closely for the presence of egg strands or tadpoles. Surveys included walking slowly along stretches of potentially suitable habitat. Headlamps and flashlights were used during nocturnal surveys to slowly scan the ground within potentially suitable habitat. All nocturnal surveys were conducted between one hour after dusk and midnight, and were conducted when temperature at dusk was 55 degrees Fahrenheit or greater. Riparian and adjacent upland trails were surveyed at night

within the floodplain. Surveyors periodically stopped and remained still and silent for up to approximately 15 minutes to wait for arroyo toad calling, as per USFWS protocol. The complete methodology and results for arroyo toad surveys conducted for the project area were submitted to the USFWS and are included in: 30-Day Summary Report of 2010 Focused Surveys for the Arroyo Toad (AECOM, 2010b).

4.0 Environmental Setting

4.1 Regional Setting

The project components, including the interconnection power line to the Boulevard East Substation, associated staging yards, access roads, helicopter landing zones, and TL 6931 are located in the southeastern portion of San Diego County, approximately 10 miles north of the United States (U.S.)-Mexico border, 15 miles west of the Imperial County border, and 50 miles east of downtown San Diego (Figure 1).



SOURCE: Sempra Utilities (2011), ESRI (2010), USGS (2010)

SDG&E Wind Interconnect Project . 210582

Figure 1
Project Location Map

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San Diego County occupies more than 4,500 square miles within southwestern California, and is bounded on the north by Orange and Riverside counties, on the south by Mexico, on the west by the Pacific Ocean, and on the east by Imperial County. The county is bisected by the southern Peninsular Ranges, with the eastern portion of the county dominated by the western extent of the Colorado Desert. Elevation in the project area ranges from approximately 4,000 feet above mean sea level (amsl) at Pole 1 to approximately 3,400 feet amsl at the Boulevard East Substation (Google Earth, 2012).

The climate in the region can be characterized as Mediterranean, and receives an average of 17.51 inches of precipitation per year, with the majority of precipitation accumulated between the months of November and May (WRCC, 2011). The project area lies within the Tijuana River and Anza-Borrego watersheds. The Tijuana River watershed originates in the southern extent of the Peninsular Ranges, and follows the Tijuana River through San Diego County and Baja California Norte to its terminus in the Pacific Ocean. The Anza-Borrego watershed occupies much of the Colorado Desert Basin within eastern San Diego, southern Riverside, and Imperial counties, and terminates at the Salton Sea.

4.2 Plant Communities and Habitats

Seven dominant plant communities occur within the project area: big sagebrush scrub, chamise chaparral, redshank chaparral, upper Sonoran subshrub scrub, non-native grassland, southern willow scrub, and coast live oak woodland. Also found within the project area are disturbed and developed areas. Descriptions of each community found within the project area and the local variances observed onsite are discussed below. A set of maps depicting all onsite plant communities is provided in Figures 2A through 2U.

4.2.1 Big Sagebrush Scrub

Big sagebrush scrub is a low-growing scrub community of soft, woody shrubs and subshrubs, and is generally dominated by big sagebrush (*Artemisia tridentata*). Within the project area it is secondarily dominated by rubber rabbitbrush (*Ericameria nauseosa*) and interior goldenbush (*Ericameria linearifolia*), and to a lesser extent by California buckwheat (*Eriogonum fasciculatum* var. *polifolium*).

4.2.2 Chamise Chaparral

Chamise chaparral is a dense aggregation of tall, sclerophyllous shrubs and subshrubs typically growing on well-drained foothills, coastal areas, and north-facing slopes at lower elevations, dominated by chamise (*Adenostoma fasciculatum*). Other notable species found within this community within the project area include yerba buena (*Eriodictyon trichocalyx*), coast monkey flower (*Mimulus aurantiacus*), manzanita (*Arctostaphylos* spp.), toyon (*Heteromeles arbutifolia*), California buckwheat, broom baccharis (*Baccharis sarothroides*), coyotebush (*Baccharis pilularis*), and occasional open patches of smaller, more herbaceous perennials such as bedstraw (*Galium angustifolium*), foothill needlegrass (*Nassella pulchra*), sand aster (*Corethrogyne filaginifolia*), and peony (*Paeonia californica*). Annuals observed in these communities include goldfields (*Lasthenia californica*), tidy tips (*Layia* spp.), chia (*Salvia columbarae*), and desert pincushion (*Ceanactis fremontii*).

4.2.3 Redshank Chaparral

Within the project area, redshank chaparral is most common on south and west-facing slopes with superficial soils and low accumulation of organic material. This vegetation community is typically found in Mediterranean-type climates with annual precipitation averaging between 12 and 15 inches per year and less than 20 percent of total precipitation occurring in summer. Typical dominant species include redshank (*Adenostoma sparsifolium*), chamise, whitebark ceanothus (*Ceanothus leucodermus*), manzanita, sugarbush (*Rhus ovata*), laurel sumac (*Rhus laurina*), and scrub oak (*Quercus* spp.).

4.2.4 Upper Sonoran Subshrub Scrub

Within the project area this community is a low-growing, moderately open scrub of soft-wooded, summer-dormant, drought-tolerant shrubs. Dominance varies highly among regions, but common dominant species include interior goldenbush, California buckwheat, bladderpod (*Isomeris arborea*), desert tea (*Ephedra californica*), and big sagebrush.

4.2.5 Non-Native Grassland

Non-native grassland with the project area is generally dominated by invasive, non-native annual herbaceous species, including wild oats (*Avena fatua*) and several brome species (*Bromus* spp.), and may contain remnant patches of native scrub species. This community usually occurs in areas of previous disturbance, sometimes associated with grazing and fallow agricultural fields, located on fine-textured, well-drained soils that are moist in winter but very dry during the summer months and frequently intermediates with disturbed habitats or native scrubs.

4.2.6 Southern Willow Scrub

Southern willow scrub is a deciduous, riparian community dominated by dense thickets of one or more willow (*Salix* spp.) tree species and various other scattered shrubs and larger emergent trees. Dominance can vary highly across the range of this community, but common dominant species include arroyo willow (*S. lasiolepis*), yellow willow (*S. lutea*), red willow (*S. laevigata*), and Goodding's willow (*S. gooddingii*), often intermixed with stands of mule fat (*Baccharis salicifolia*) and arrowleaf (*Pluchea sericea*). Within the project site this community is dominated by arroyo willow, and occurs only where the interconnection line crosses Campo Creek.

4.2.7 Coast Live Oak Woodland

Coast live oak woodland is dominated by coast live oak (*Quercus agrifolia*), which can grow to over 60 feet in height. This community generally occurs on north-facing slopes and within shaded ravines, valleys, and stream terraces. This plant community often has an underdeveloped shrub component and a minimal herbaceous layer, primarily in areas of dense canopy cover where excessive leaf litter is present. Within the project area, woodland areas with an open canopy often have a well developed herbaceous layer of non-native grasses (e.g. *Bromus* spp.).

4.2.8 Disturbed Areas

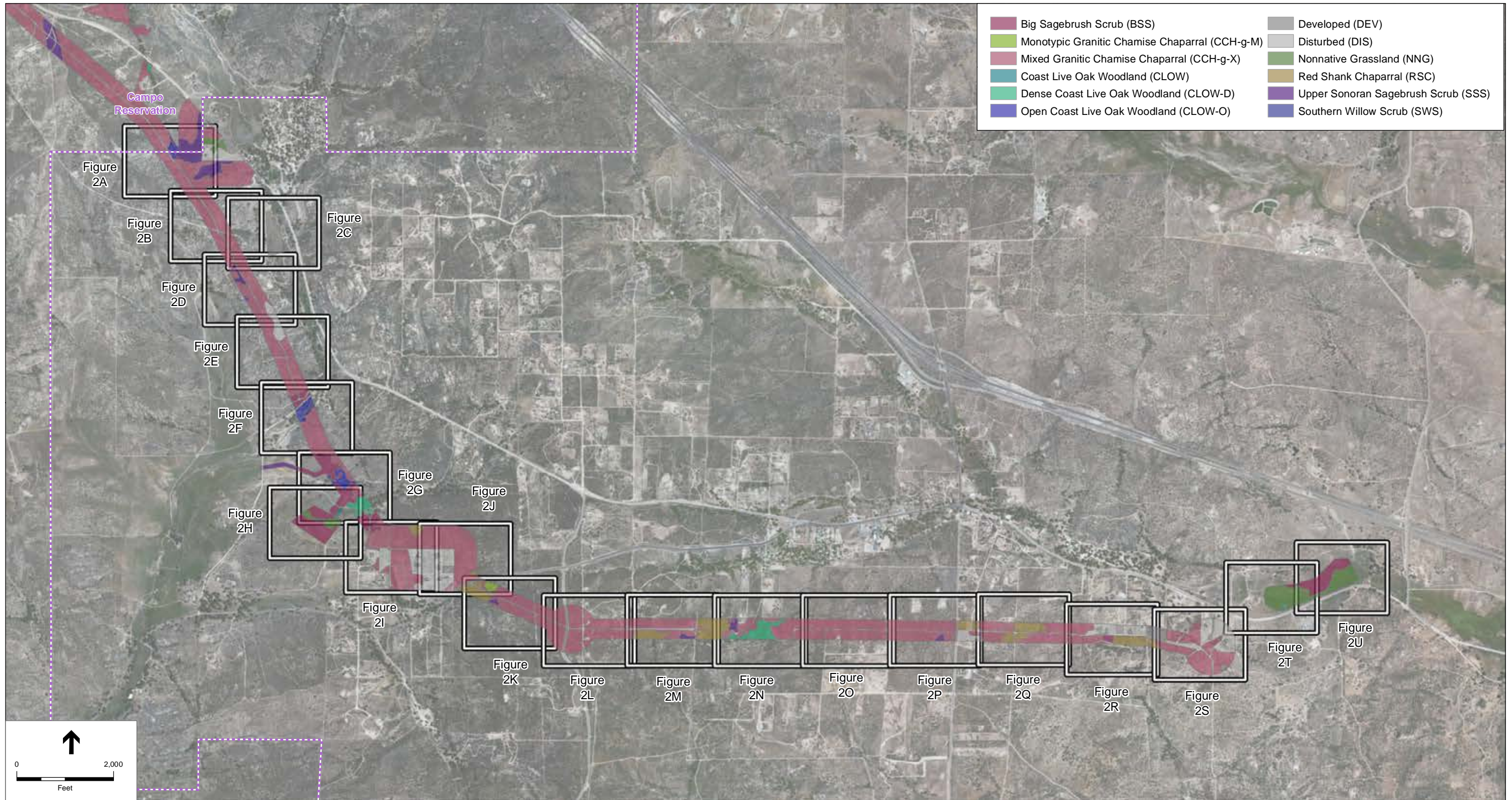
Disturbed areas generally include lands on which the native vegetation has been significantly altered by human activities, which have directly or indirectly resulted in a non-native dominated species composition. Within the project area disturbed habitat often occurs as graded patches of

bare or sparsely vegetated footpaths, unpaved access roads, margins surrounding development, and regions affected by recreational Off-Highway Vehicle (OHV) disturbance. Vegetation found associated with disturbed habitats or in their margins within the project area consists of non-native species such as wild mustards (*Brassica nigra* and *Hirshfeldia incana*), tocolote (*Centaurea melitensis*), yellow star-thistle (*C. solstitialis*), redstem filaree (*Eroidium cicutarium*), and Mediterranean schismus (*Schismus barbatus*).

4.2.10 Developed Areas

Developed areas contain commercial or residential buildings, paved roads and landscaped surfaces, and generally do not support natural plant or wildlife species.

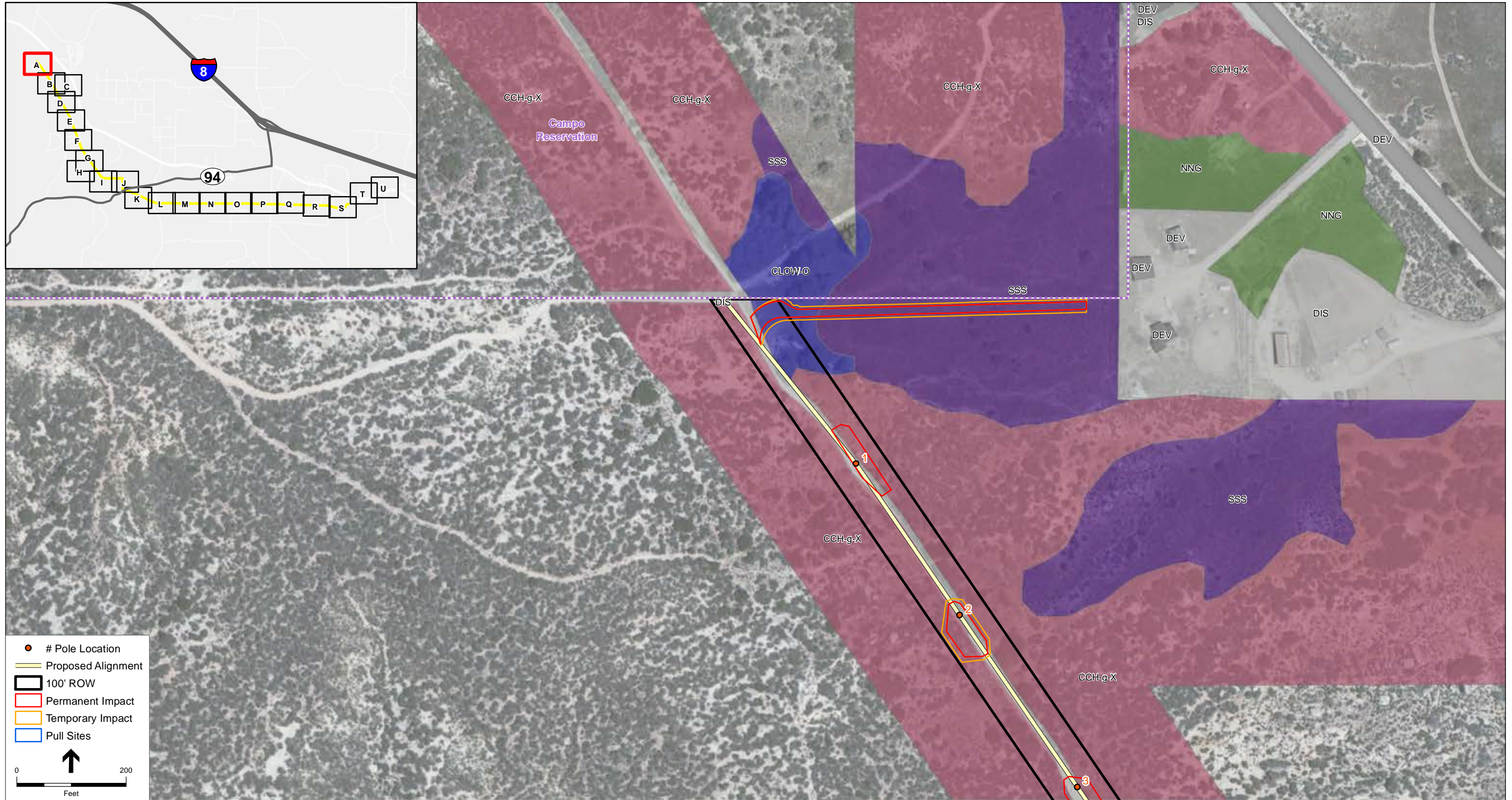
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SOURCE: Sempra Utilities (2011), ESRI (2010), Landiscor Aerial (2010)

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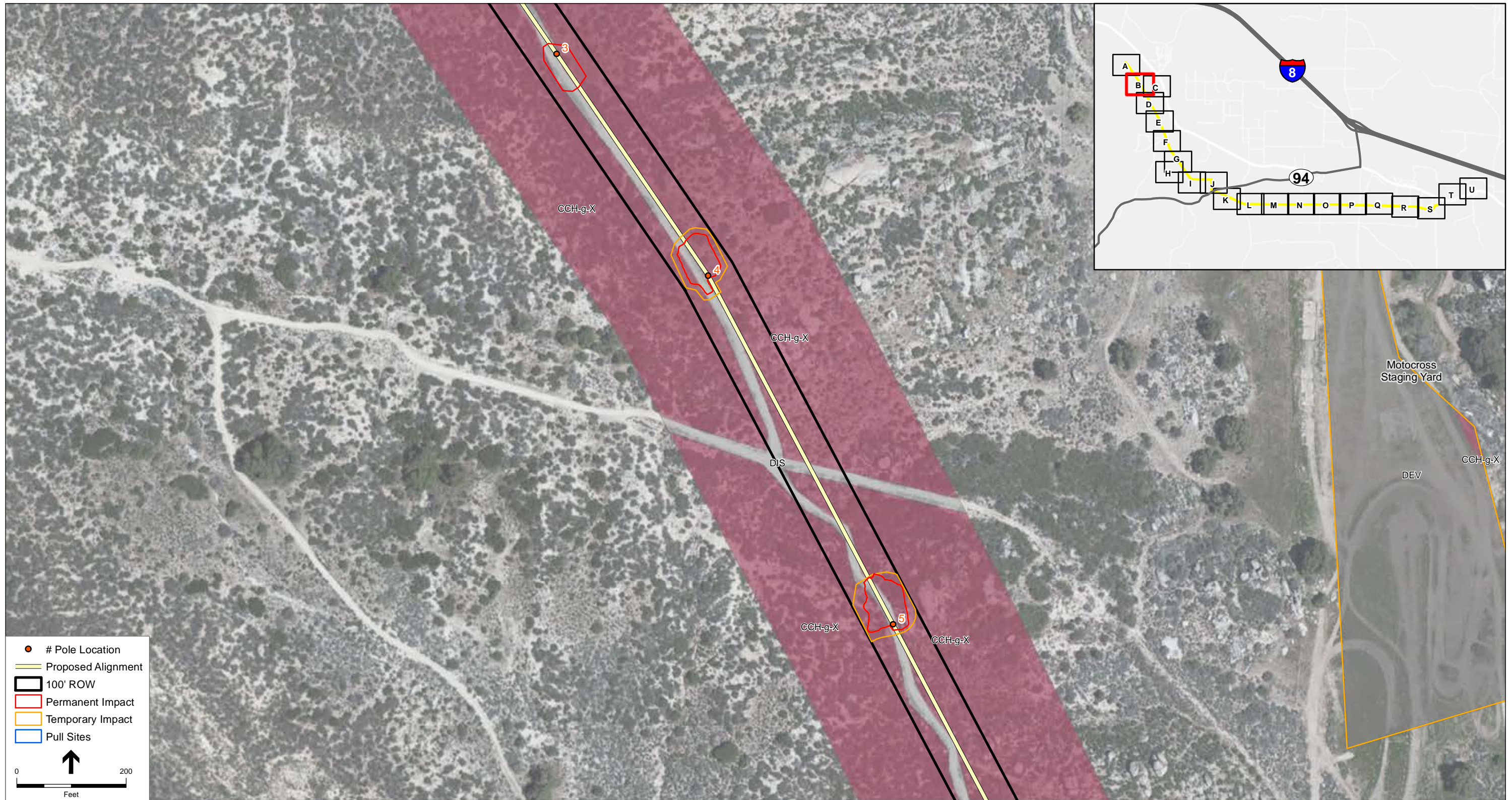
Figure 2
Plant Communities



SOURCE: Sempra Utilities (2011), ESRI (2010), LandisCor Aerial (2010)

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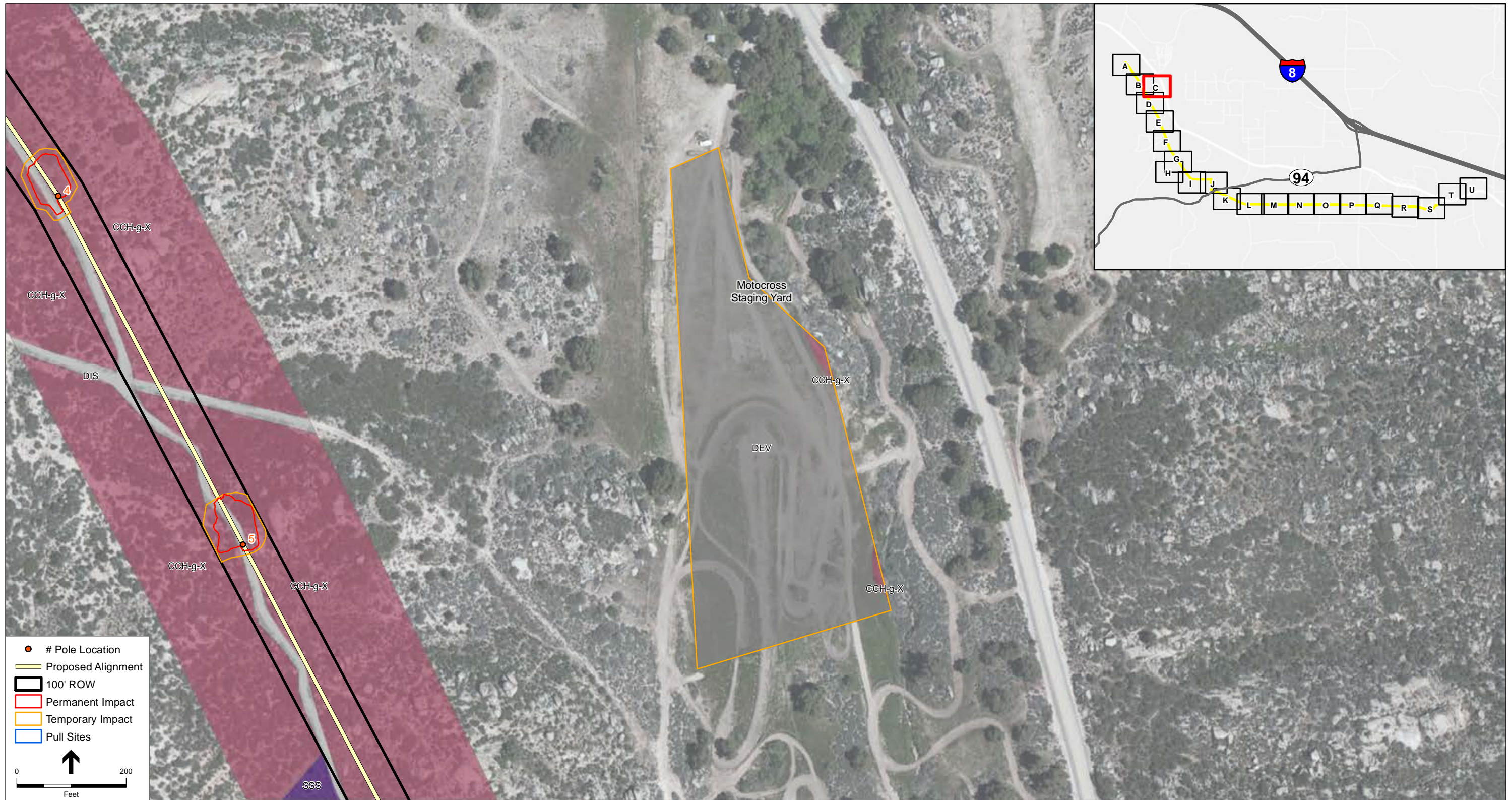
Figure 2A
Plant Communities



SOURCE: Sempra Utilities (2011), ESRI (2010), Landiscor Aerial (2010)

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Figure 2B
Plant Communities



SOURCE: Sempra Utilities (2011), ESRI (2010), LandisCor Aerial (2010)

SDG&E Wind Interconnect Project . 210582

Figure 2C
Plant Communities



SOURCE: Sempra Utilities (2011), ESRI (2010), Landiscor Aerial (2010)

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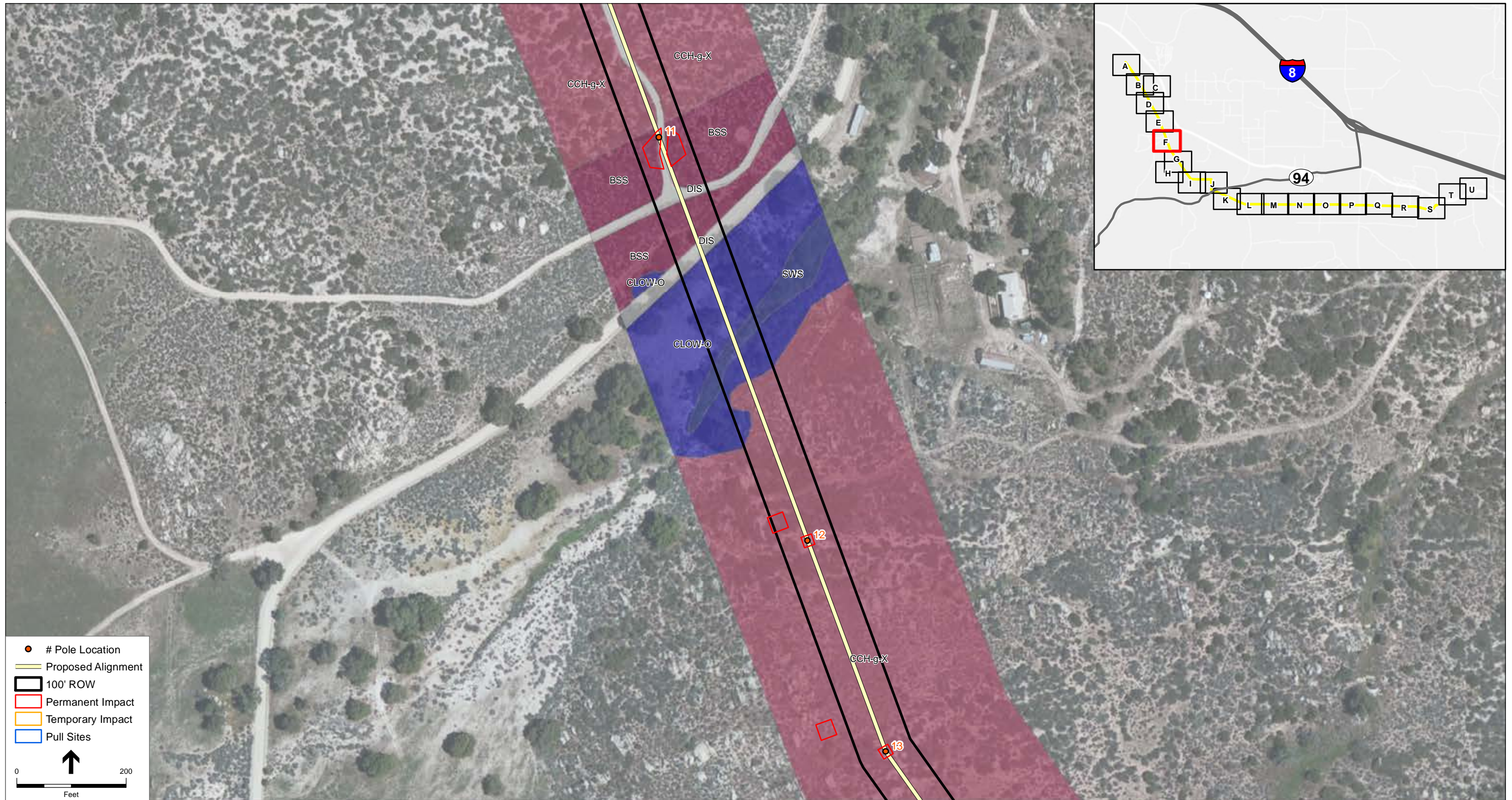
Figure 2D
Plant Communities



SOURCE: Sempra Utilities (2011), ESRI (2010), Landiscor Aerial (2010)

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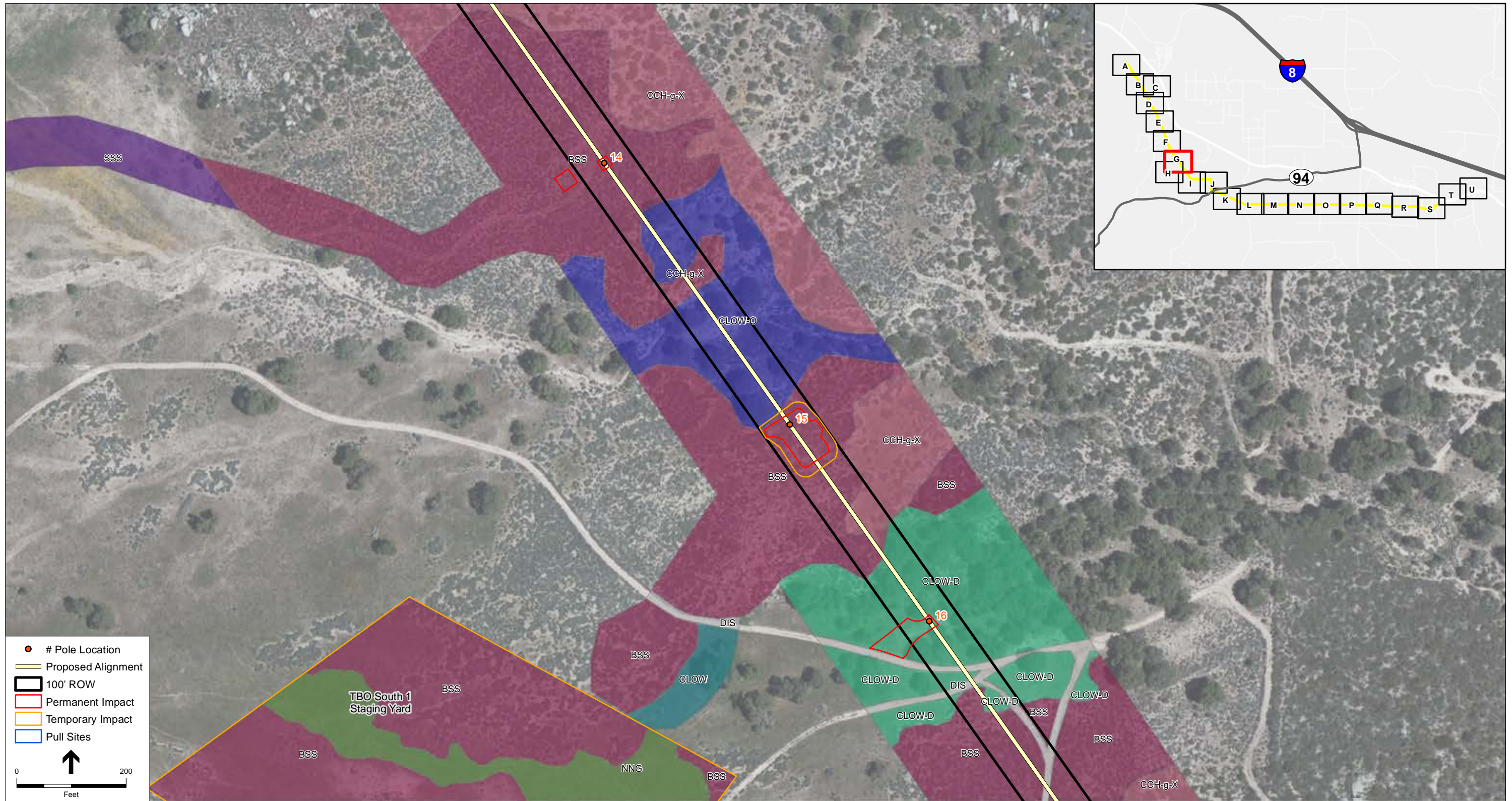
Figure 2 E
Plant Communities



SOURCE: Sempra Utilities (2011), ESRI (2010), Landiscor Aerial (2010)

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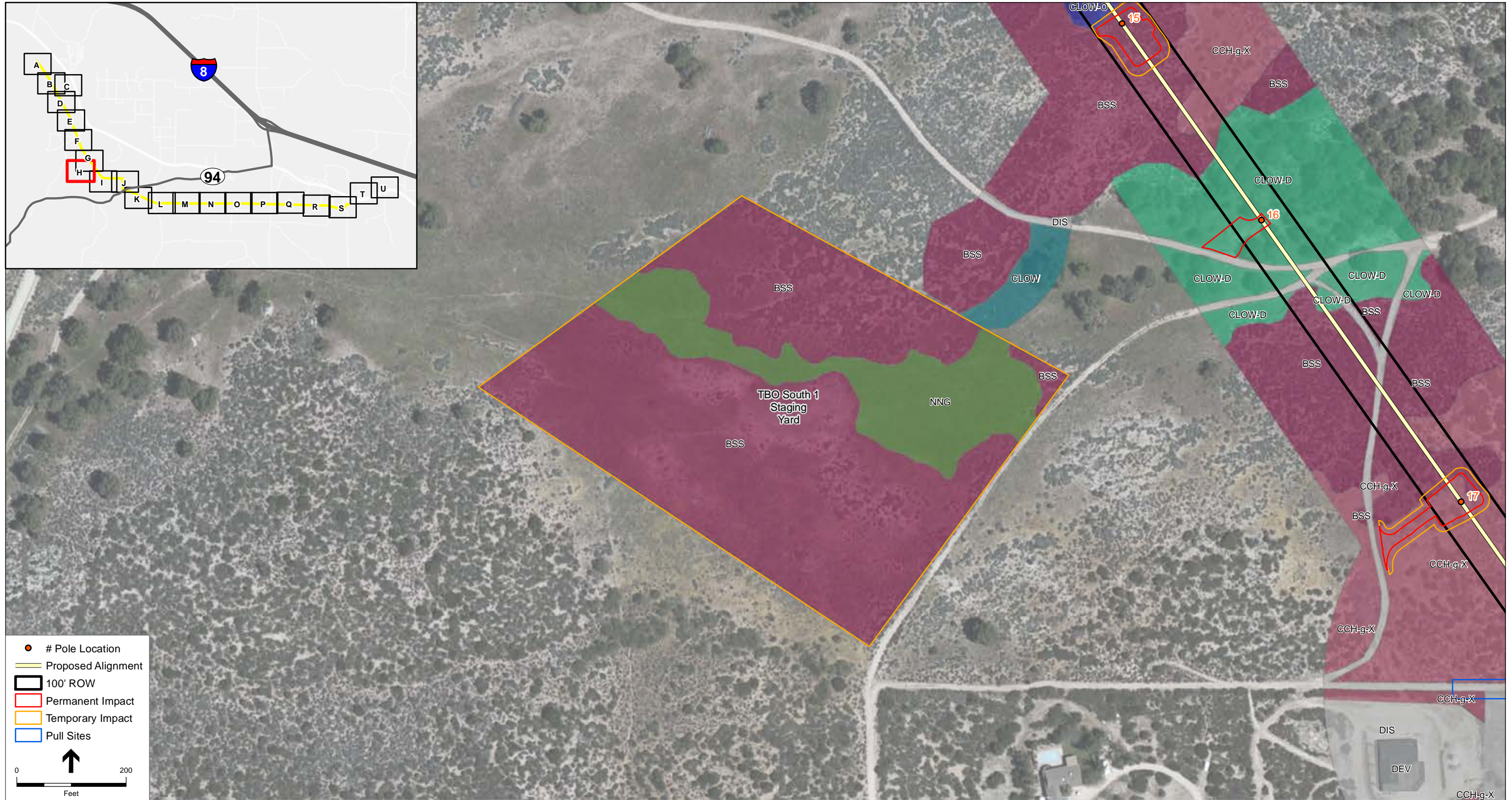
Figure 2F
Plant Communities



SOURCE: Sempra Utilities (2011), ESRI (2010), Landiscor Aerial (2010)

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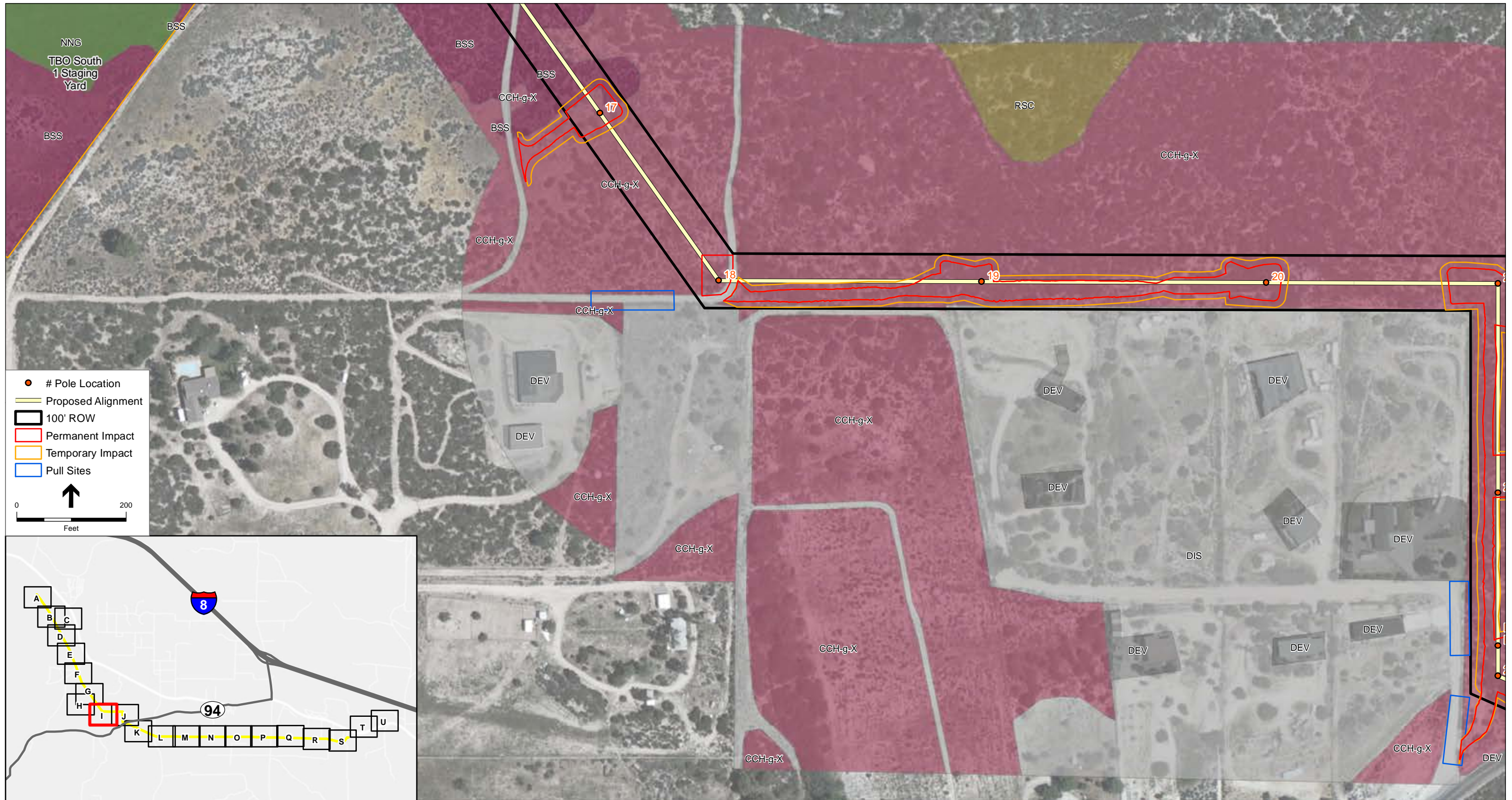
Figure 2G
Plant Communities



SOURCE: Sempra Utilities (2011), ESRI (2010), Landiscor Aerial (2010)

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Figure 2H
Plant Communities



SOURCE: Sempra Utilities (2011), ESRI (2010), LandisCor Aerial (2010)

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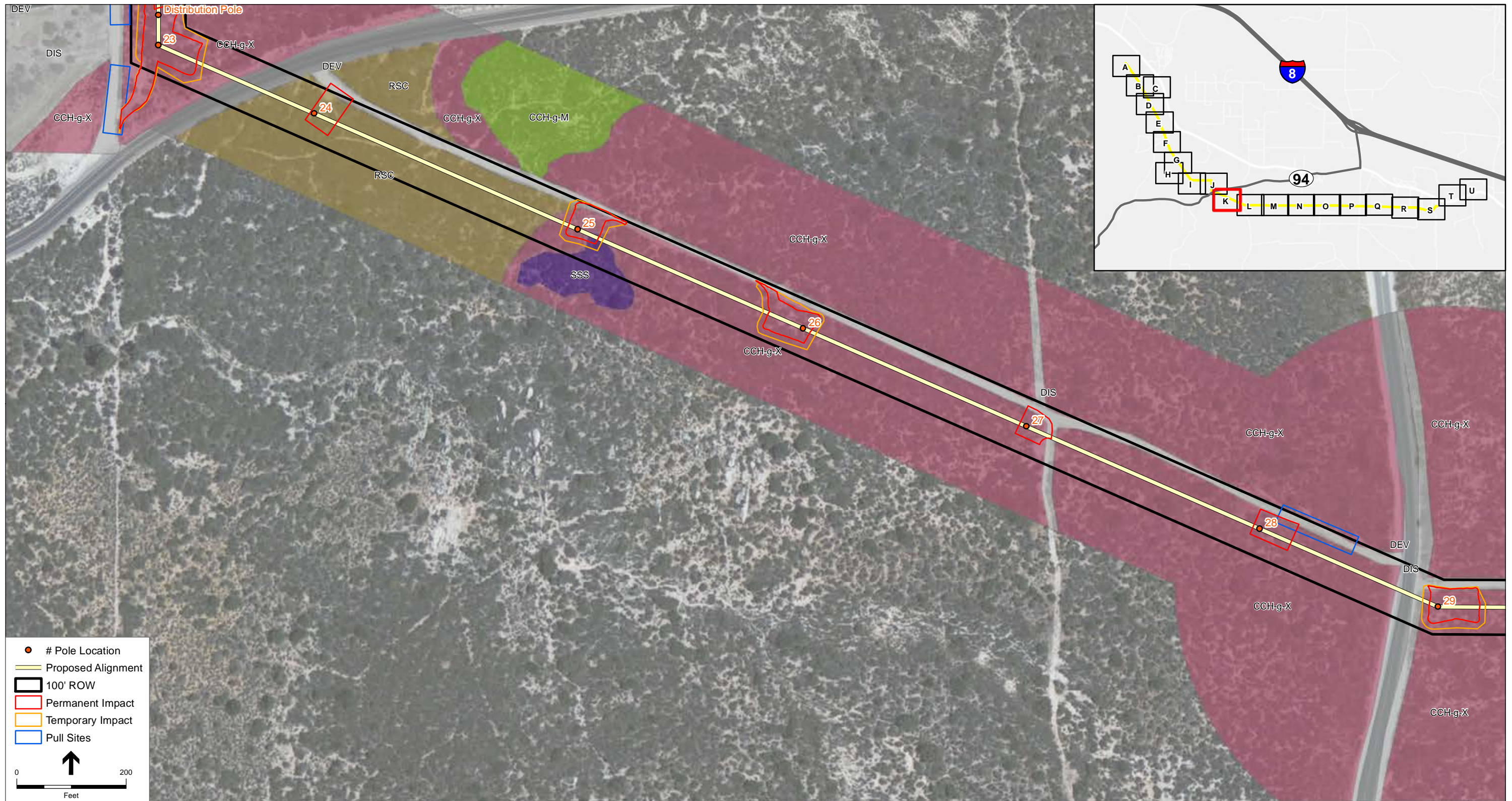
Figure 21
Plant Communities



SOURCE: Sempra Utilities (2011), ESRI (2010), Landiscor Aerial (2010)

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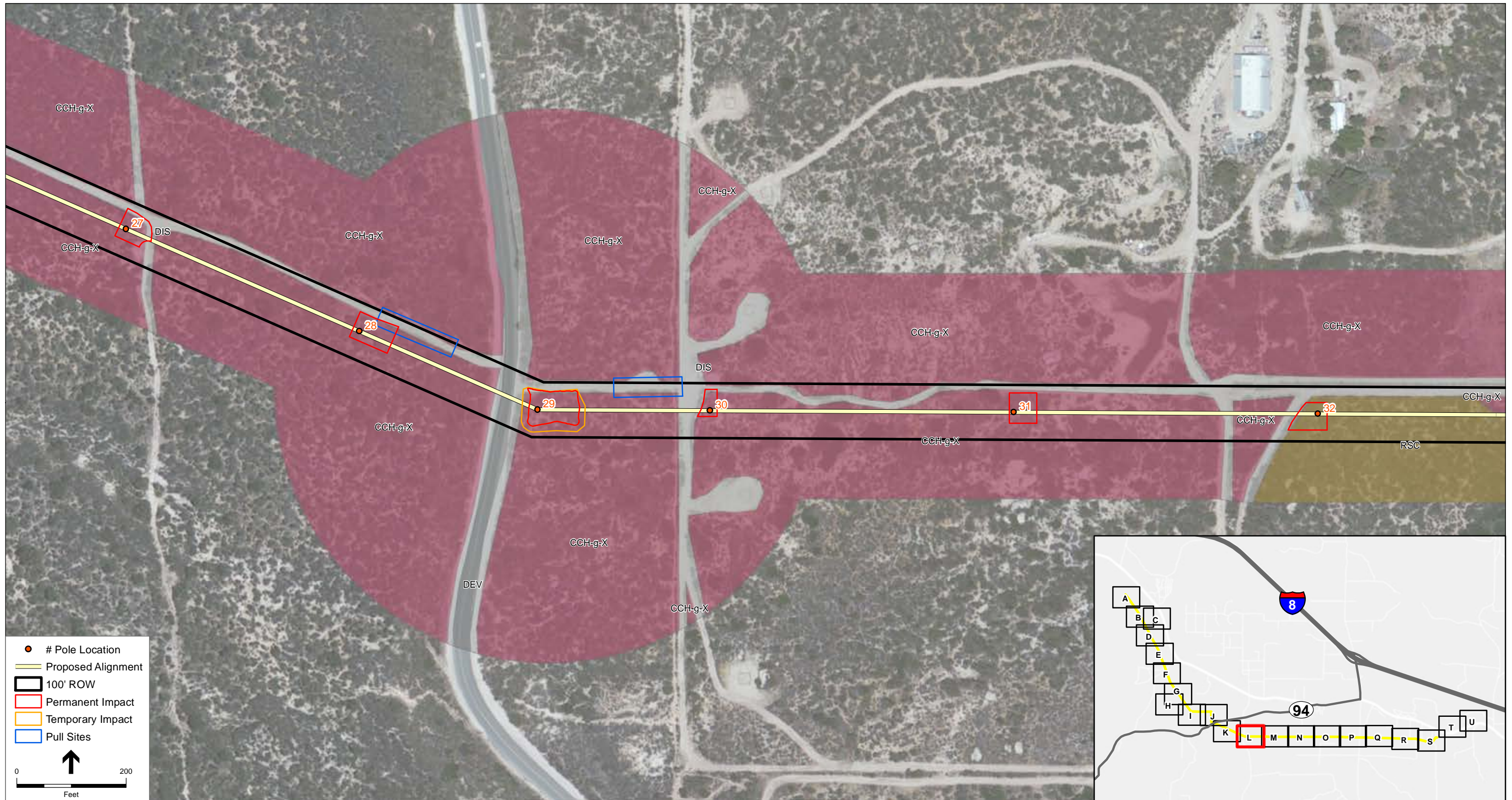
Figure 2J
Plant Communities



SOURCE: Sempra Utilities (2011), ESRI (2010), Landiscor Aerial (2010)

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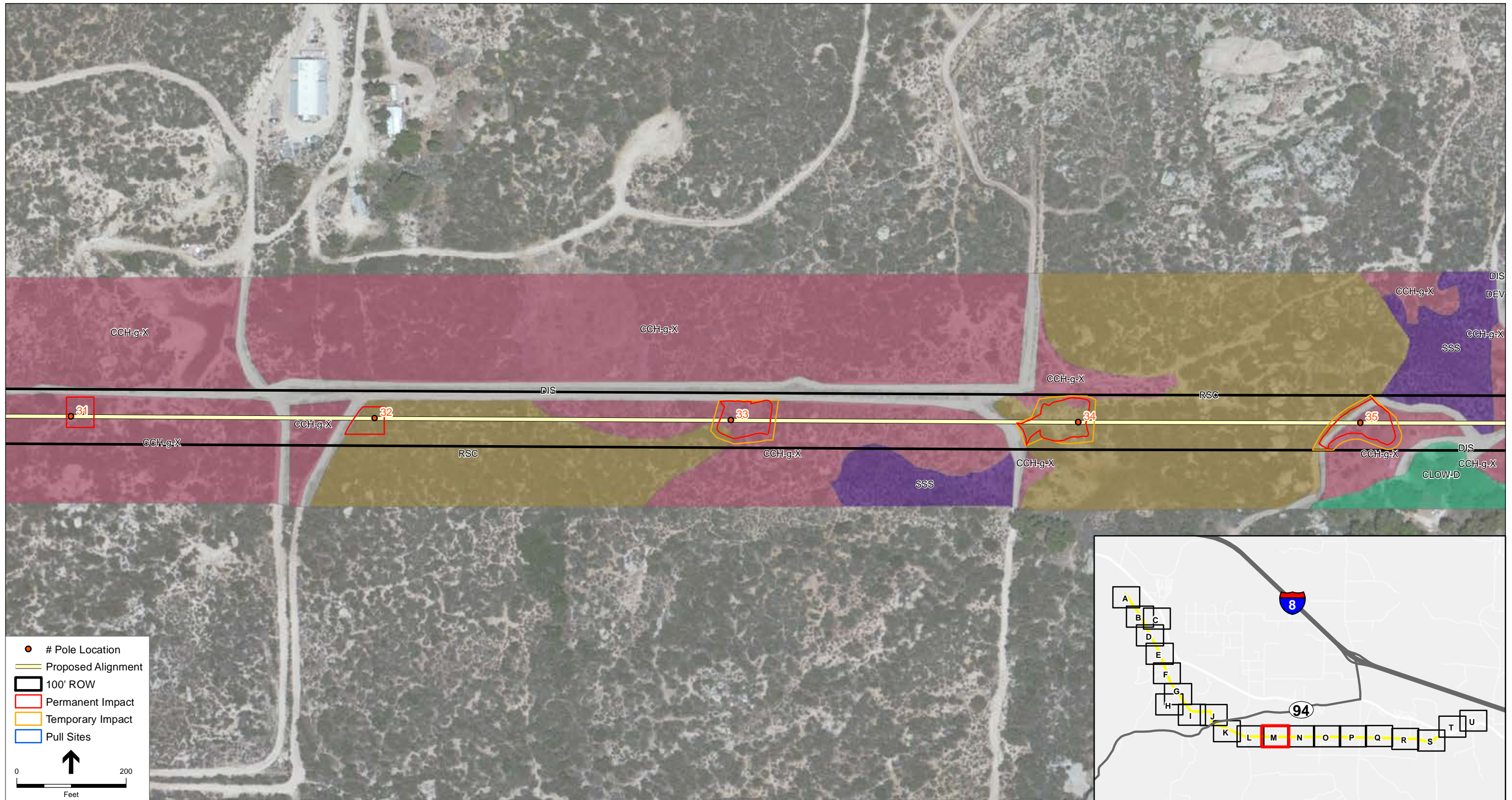
Figure 2K
Plant Communities



SOURCE: Sempra Utilities (2011), ESRI (2010), Landiscor Aerial (2010)

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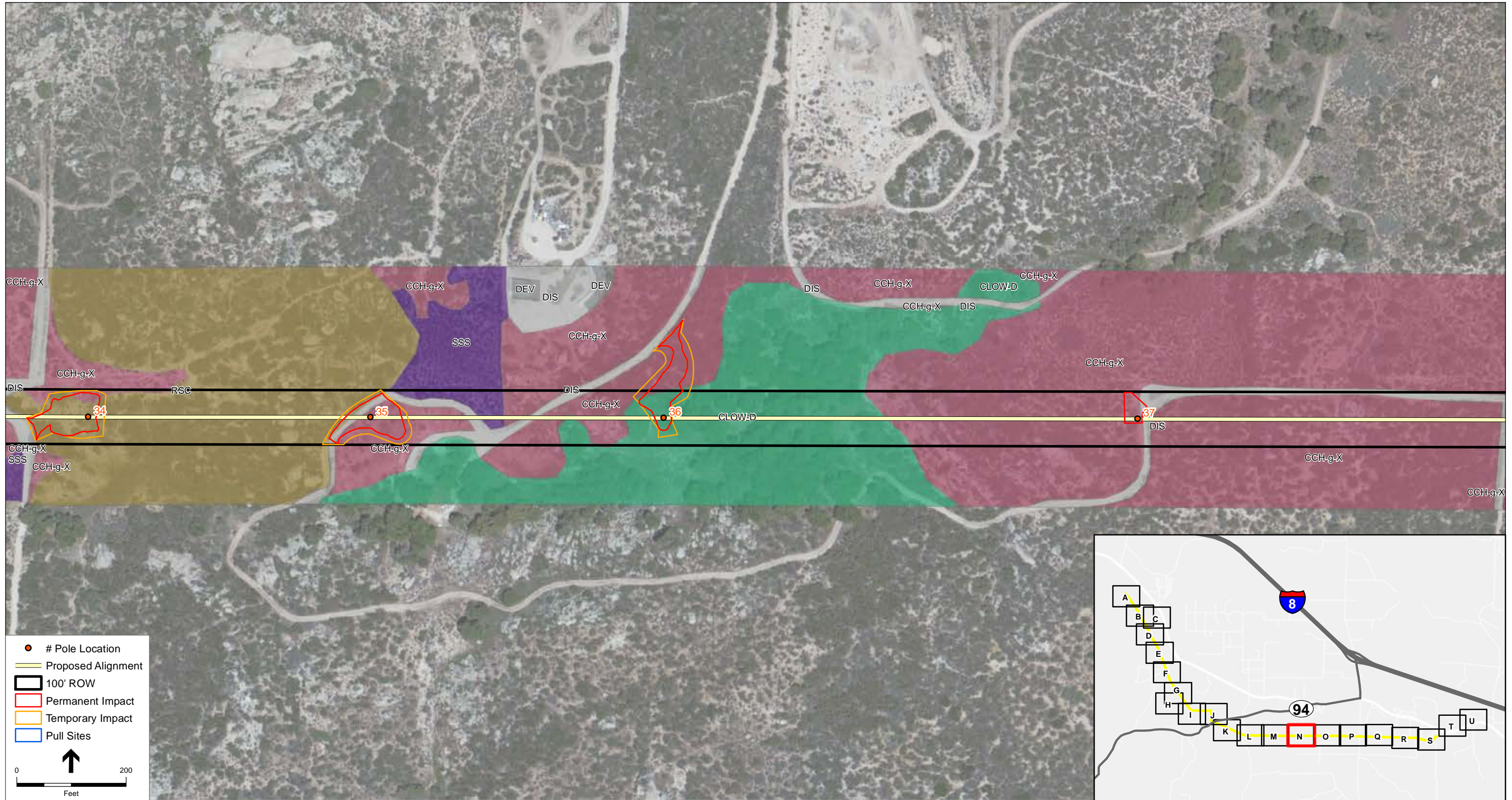
Figure 2L
Plant Communities



SOURCE: Sempra Utilities (2011), ESRI (2010), Landiscor Aerial (2010)

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Figure 2M
Plant Communities



SOURCE: Sempra Utilities (2011), ESRI (2010), Landiscor Aerial (2010)

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Figure 2N
Plant Communities



SOURCE: Sempra Utilities (2011), ESRI (2010), Landiscor Aerial (2010)

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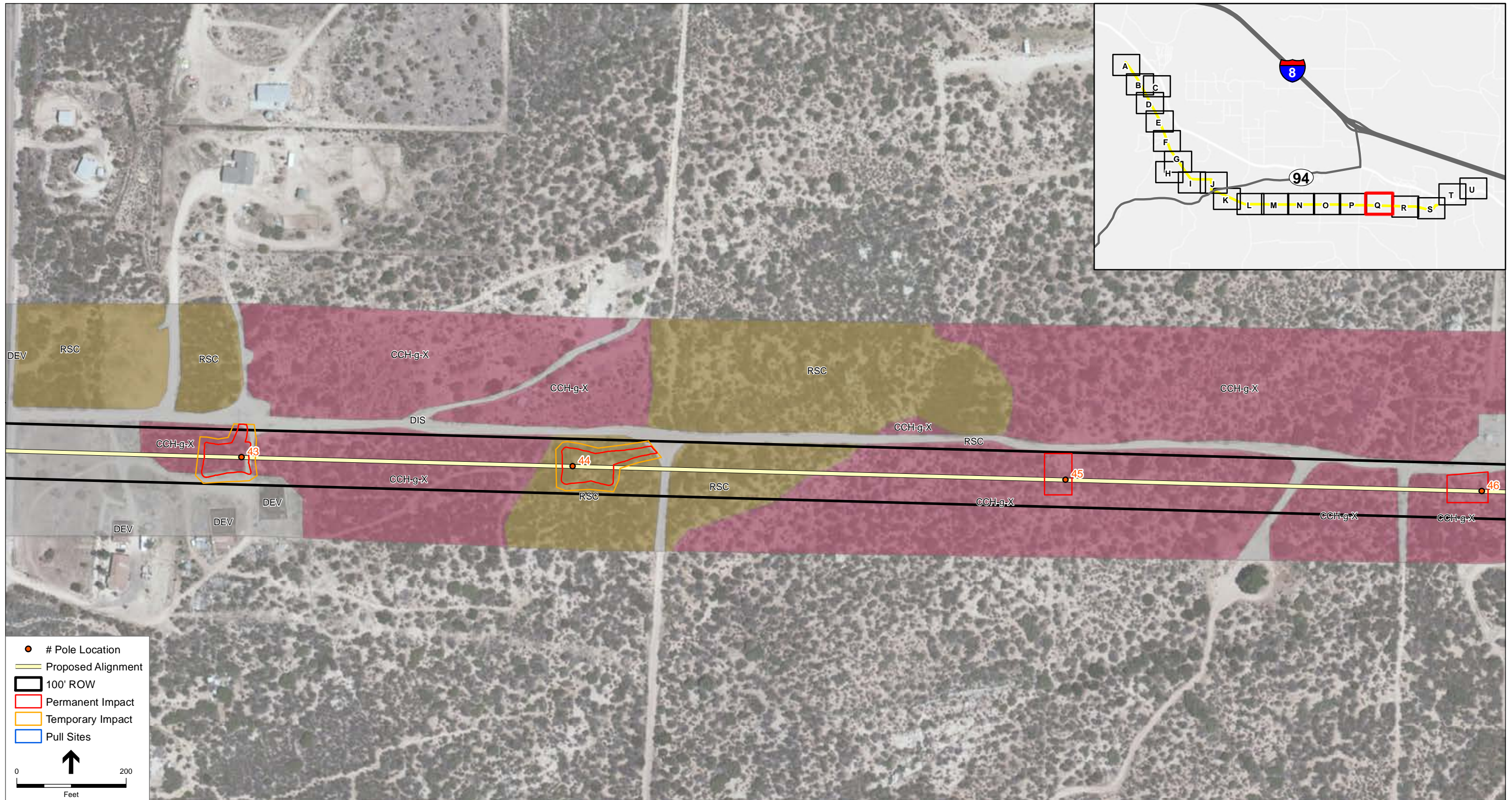
Figure 20
Plant Communities



SOURCE: Sempra Utilities (2011), ESRI (2010), Landiscor Aerial (2010)

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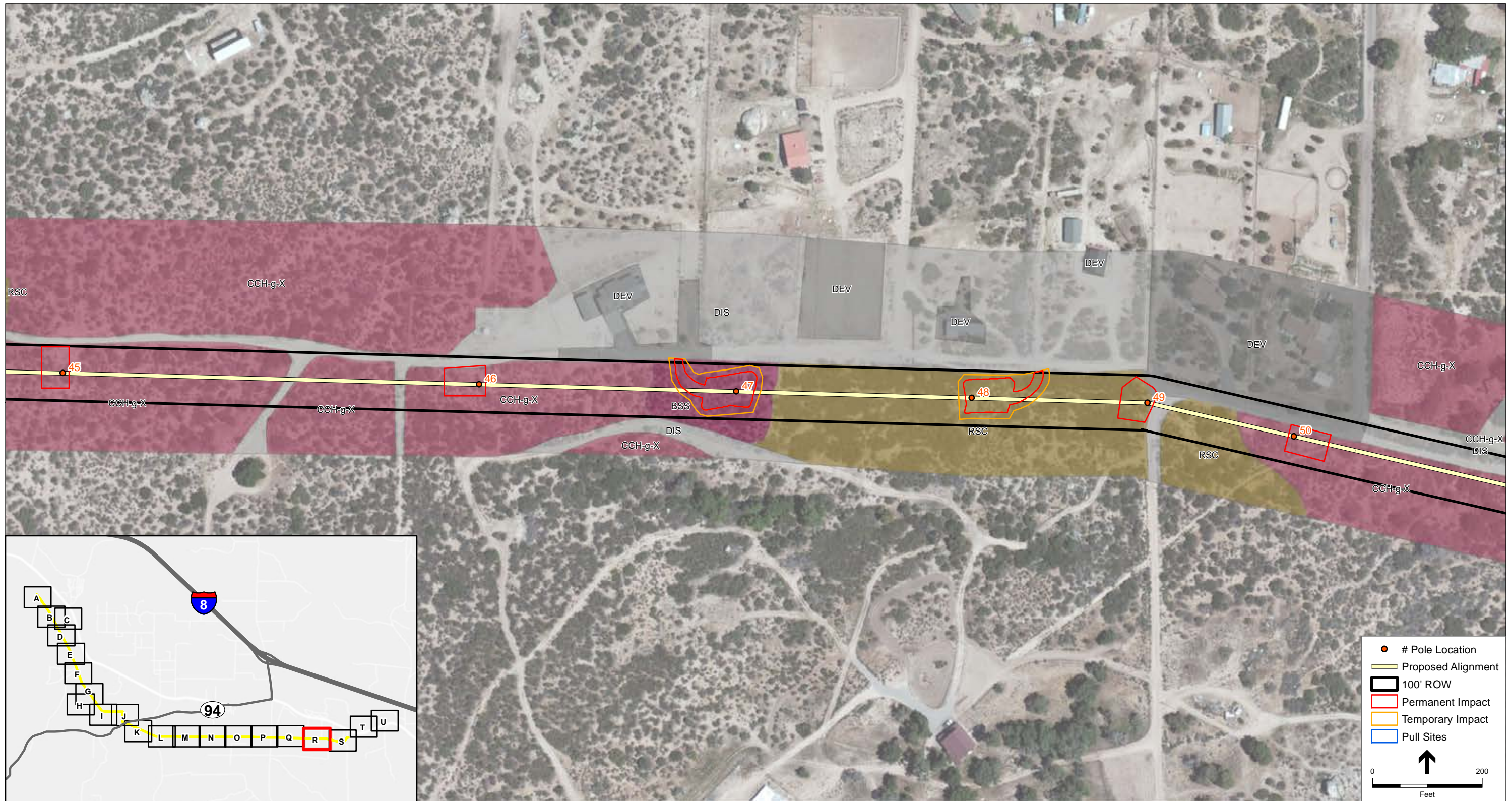
Figure 2P
Plant Communities



SOURCE: Sempra Utilities (2011), ESRI (2010), Landiscor Aerial (2010)

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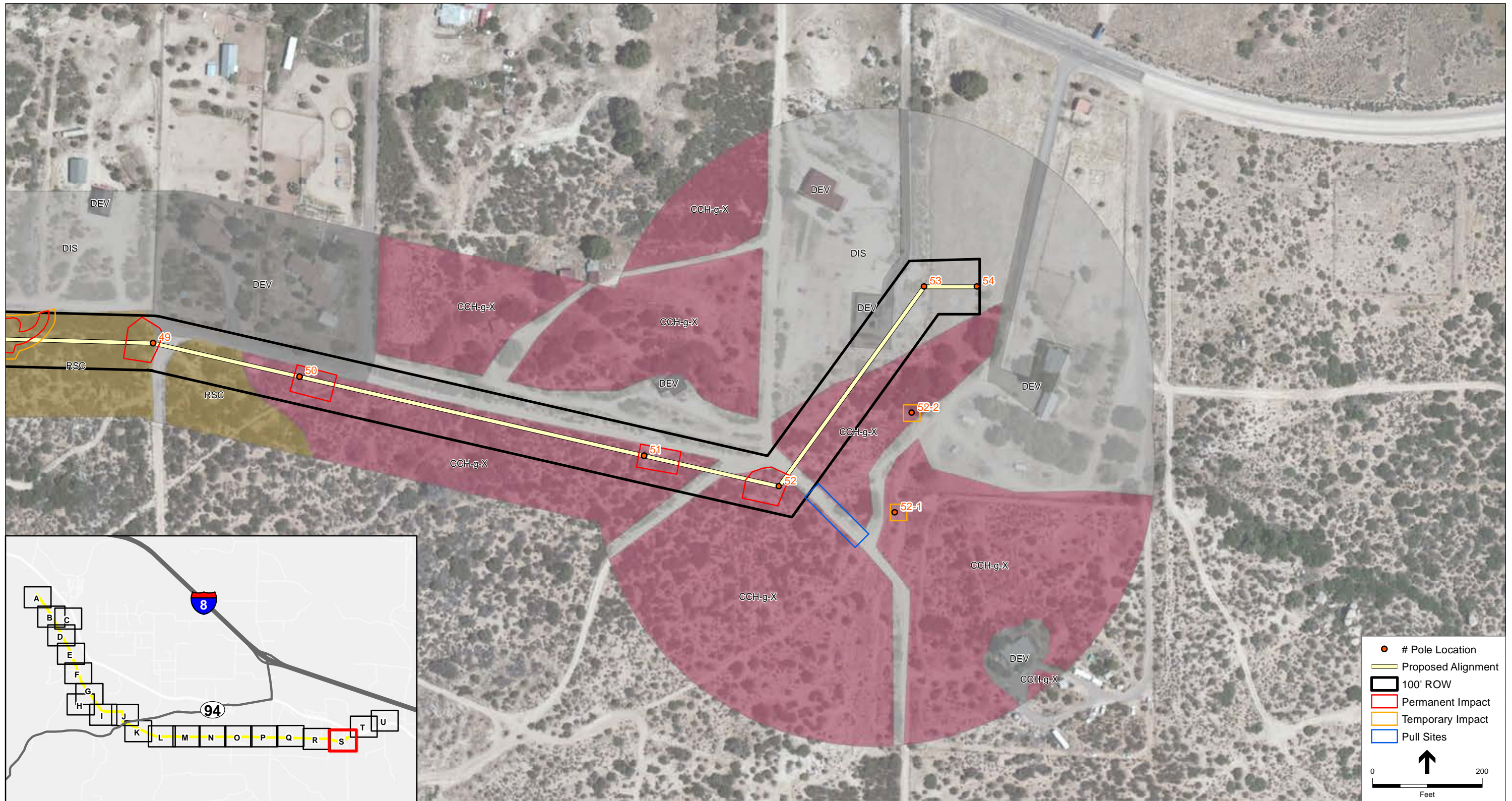
Figure 2Q
Plant Communities



SOURCE: Sempra Utilities (2011), ESRI (2010), LandisCor Aerial (2010)

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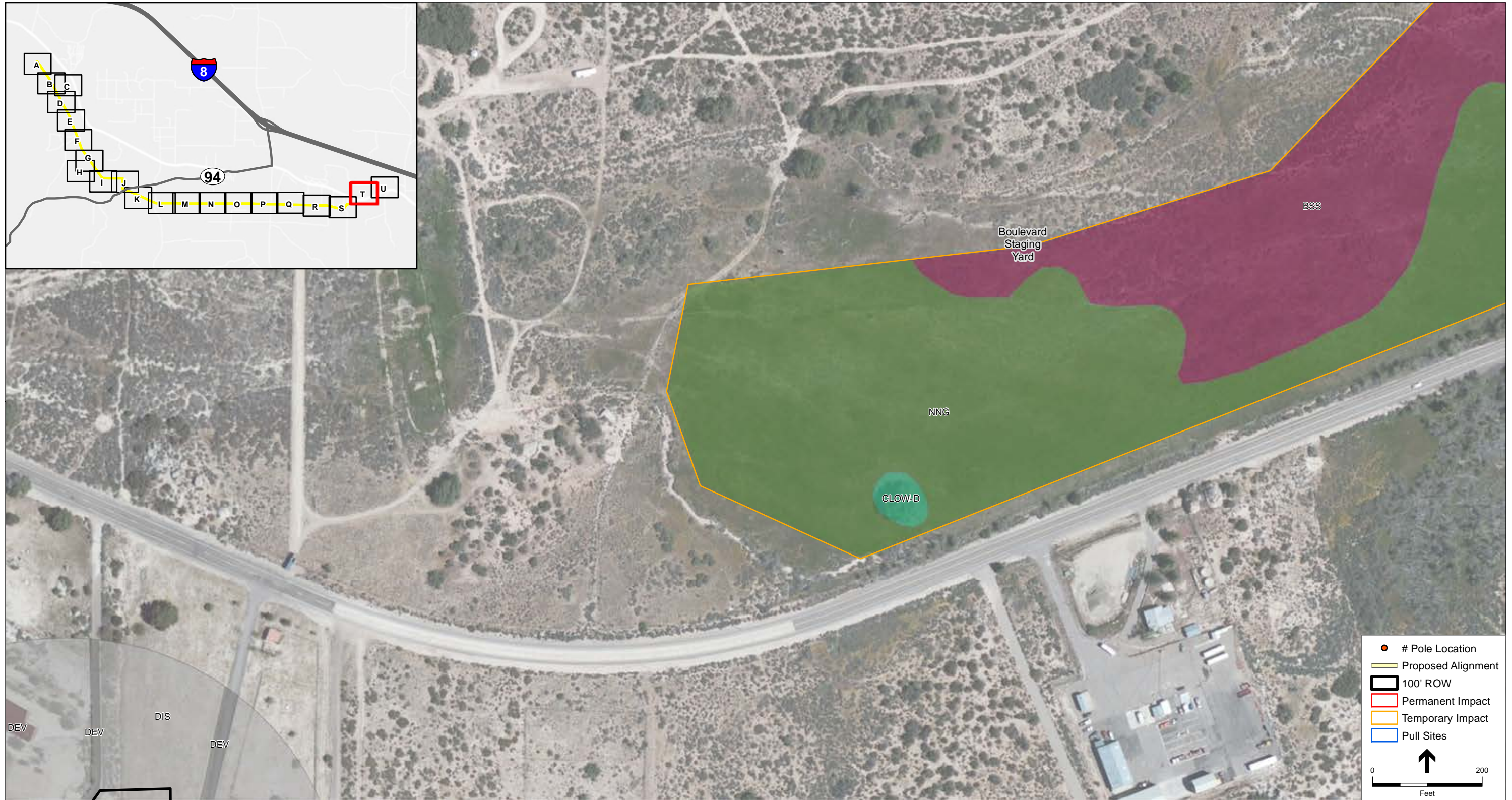
Figure 2R
Plant Communities



SOURCE: Sempra Utilities (2011), ESRI (2010), Landiscor Aerial (2010)

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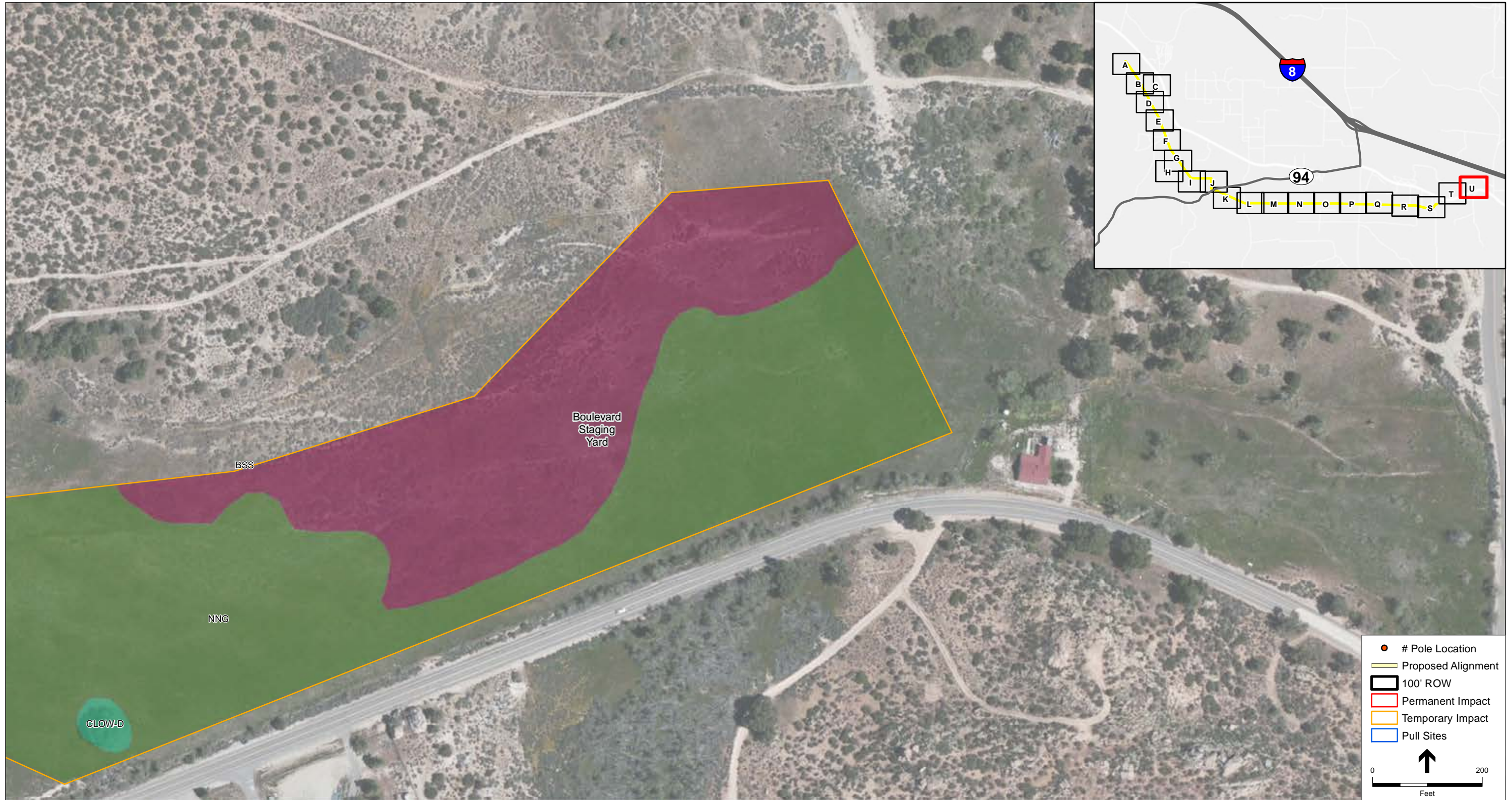
Figure 2S
Plant Communities



SOURCE: Sempra Utilities (2011), ESRI (2010), Landiscor Aerial (2010)

SDG&E Wind Interconnect Project . 210582

Figure 2T
Plant Communities



SOURCE: Sempra Utilities (2011), ESRI (2010), LandisCor Aerial (2010)

SDG&E Wind Interconnect Project . 210582

Figure 2U
Plant Communities

4.3 Drainages and Jurisdictional Resources

Several resources potentially under the jurisdiction of the USACE, CDFG, and RWQCB are present in the project area, including Campo Creek, which is considered under the jurisdiction of the USACE, CDFG, and the RWQCB. Many of these drainages have an identifiable OHWM, defined bed and bank, hydrologic indicators, and connectivity to TNWs. Several of these potentially jurisdictional features cross existing or proposed project access roads. Impacts to these areas would be avoided through temporarily spanning steel plates over the drainages for equipment and vehicle access. Impacts to these areas would be avoided through temporarily spanning steel plates over the drainages for equipment and vehicle access.

Potential impacts to 0.069 acre (approximately 3,023 square feet) of areas under the jurisdiction of the USACE, CDFG, and RWQCB would be associated with using the open trench method proposed for undergrounding the 138 kV to the Boulevard Substation. Additional avoidance, minimization, and mitigation measures may be necessary to avoid impacts. The Jurisdictional Analysis Memorandum can be found in Attachment A.

4.4 Sensitive Natural Communities

Sensitive natural communities include riparian habitat or other communities identified in local or regional plans, policies, or regulations, or designated by the CDFG and USFWS. Southern willow scrub occurs within the project associated with Campo Creek. Of the six other plant communities in the project area—chamise chaparral, big sagebrush scrub, coast live oak woodland, redshank chaparral, non-native grassland, and upper Sonoran sub-shrub scrub—none are specifically designated protection under local or regional plans.

As previously indicated, the project crosses southern willow scrub within the vicinity of Campo Creek (see Figure 2F). No CNDDDB-listed Natural Communities of Special Concern occur within the vicinity of the project, or are anticipated to be impacted by proposed access roads, steel transmission poles, or staging yards.

4.5 Common Wildlife

The project area supports a variety of wildlife species common within the desert transition ecosystem of eastern San Diego County. Below is a summary of common wildlife either observed during surveys conducted for the project or reasonably expected to occur based on suitable habitat conditions, i.e., climate, elevation, soils, habitat, geographic range and distribution, and other ecological factors. A complete list of all wildlife species observed in the project area can be found in Attachment B: Species Compendia.

Wildlife species commonly associated with upland scrub habitats consist of bird species including sage sparrow (*Amphispiza belli*), western scrub-jay (*Aphelocoma californica*), California thrasher (*Toxostoma redivivum*), California quail (*Callipepla californica*), common raven (*Corvus corax*), and red-tailed hawk (*Buteo jamaicensis*); mammal species including long-tailed weasel (*Mustela frenata*), California ground squirrel (*Spermophilus beecheyi*), black-tailed jackrabbit (*Lepus californicus*), coyote (*Canis latrans*), and desert cottontail (*Sylvilagus audubonii*); and reptile

species including gopher snake (*Pituophis melanoleucus*), southern Pacific rattlesnake (*Crotalus oreganus helleri*), western whiptail (*Aspidoscelis tigris*), western fence lizard (*Sceloporus occidentalis*), and red coachwhip (*Masticophis flagellum*).

Wildlife species expected to occur within chaparral habitats consist of bird species including bushtit (*Psaltriparus minimus*), California towhee (*Melospiza crissalis*), western scrub-jay, mourning dove (*Zenaidura macroura*), and Bewick's wren (*Thryomanes bewickii*); mammal species including California ground squirrel; and reptile species including western fence lizard, southern Pacific rattlesnake, and side-blotched lizard (*Uta stansburiana*).

Wildlife species known to occupy non-native grassland habitats include several bird species such as western meadowlark (*Sturnella neglecta*), horned lark (*Eremophila alpestris*), mourning dove, burrowing owl (*Athene cunicularia*), prairie falcon (*Falco mexicanus*), and red-tailed hawk; mammal species including California ground squirrel, kangaroo rat (*Dipodomys* spp.), and coyote; and reptile species including southern Pacific rattlesnake, side-blotched lizard, and red coachwhip.

Wildlife often associated with southern willow scrub consist of bird species including black phoebe (*Sayornis nigricans*), western scrub-jay, and ash-throated flycatcher (*Myiarchus cinerascens*); mammal species including raccoon (*Procyon lotor*) and striped skunk (*Mephitis mephitis*); and amphibian species including Pacific chorus frog (*Pseudacris regilla*).

Some common wildlife known to occur in coast live oak woodland include oak titmouse (*Baeolophus inornatus*), spotted towhee (*Pipilo maculatus*), western bluebird (*Sialia mexicana*), red-tailed hawk, and great-horned owl (*Bubo virginianus*); mammal species including California ground squirrel and mule deer (*Odocoileus hemionus*); and reptile species including California kingsnake (*Lampropeltis getula californiae*) and western fence lizard.

4.6 Special-Status Species

Special-status species are those plants and animals that, because of their recognized rarity or vulnerability to various causes of habitat loss or population decline, are recognized by federal, state, or other agencies as under threat from human-associated development. Some of these species receive specific protection that is defined by federal or state endangered species legislation. Others have been designated as special-status on the basis of adopted policies and expertise of state resource agencies or organizations with acknowledged expertise, or policies adopted by local governmental agencies such as counties, cities, and special districts to meet local conservation objectives. Special-status species include:

- Species listed or proposed for listing as threatened or endangered, or are candidates for possible future listing as threatened or endangered, under the federal Endangered Species Act (FESA) or the State Endangered Species Act (CESA);
- Species protected under the Federal Bald and Golden Eagle Protection Act;
- Species that meet the definitions of rare or endangered under CEQA (*CEQA Guidelines* Section 15380);

- Plants listed as rare under the California Native Plant Protection Act (CDFG Code 1900 et seq.);
- Plants considered by the CNPS to be rare, threatened, or endangered (List 1B and 2 plants) in California (Skinner and Palvik, 1994);
- Plants listed by the CNPS as plants in which more information is needed to determine their status and plants of limited distribution (List 3 and 4 plants) (Skinner and Palvik, 1994);
- Species covered under an adopted NCCP/Habitat Conservation Plan (HCP);
- Species considered “sensitive” by the U.S. Forest Service (USFS);
- Wildlife species of special concern to CDFG; and/or
- Wildlife fully protected in California (CDFG Code Sections 3511, 4700, and 5050).

Based on habitat suitability and documented occurrences (e.g., CNDDDB search results) in the region, several special-status species, as described in the following subsections, are known, or have the potential to occur in the project area. CNDDDB recorded occurrences, with additional CNPS and USFWS data, within five miles of the project for special-status plants and wildlife are depicted in Figure 3 on page 53 and Figure 4 on page 65, respectively.

The “Potential for Occurrence” category referenced in Table 1, Special-Status Plant Species with the Potential to Occur and Table 2 on page 59, Special-Status Wildlife Species with the Potential to Occur is defined as follows:

- **Present:** The species was observed within the project area and/or immediate vicinity during relevant biological surveys.
- **Not Expected:** The project area and/or immediate vicinity do not support suitable habitat for a particular species, and therefore the project is unlikely to impact this species.
- **Low Potential:** The project area and/or immediate vicinity only provide limited habitat for a particular species and impacts to this species from the project are unlikely. In addition, the known range for a particular species may be outside of the immediate vicinity.
- **Medium Potential:** The project area and/or immediate vicinity provide suitable habitat for a particular species, and the project may impact this species. Mitigation will likely avoid potential impacts.
- **High Potential:** The project area and/or immediate vicinity provide ideal habitat conditions for a particular species and/or known populations occur in the project area and/or immediate vicinity. The project may impact this species. Mitigation will likely avoid potential impacts.

4.6.1 Special-Status Plants

Special-status plants include those listed, or candidates for listing, by the USFWS and CDFG as trustee agencies, and species considered sensitive by the CNPS (including Lists 1A, 1B, 2, 3, and

4 as defined above), and species covered under the NCCP/HCP. Special-status plant species with the potential to occur in the project area appear in Table 1: Special-Status Plant Species with the Potential to Occur. Recorded CNDDDB and CNPS occurrences are depicted in Figure 3.

A total of nine special-status plant species have a medium to high potential to occur within the project area, including two special-status plant species with a high potential to occur (Jacumba milk-vetch and sticky geraea, and seven special-status plant species with a medium potential to occur, including Payson's jewel-flower (*Caulanthus simulans*), Tecate tarplant, Colorado Desert larkspur (*Delphinium parishii* ssp. *subglobosum*), San Diego hulsea (*Hulsea californica*), Desert beauty (*Linanthus bellus*), Southern jewel-flower (*Streptanthus campestris*), and San Bernardino aster (*Symphotrichum defoliatum*). An additional 13 special-status plant species have a low potential to occur based on species distribution and habitat types found within the project area. Furthermore, 21 special-status plant species have been recorded in the region, but are not expected to occur within the project area based on a lack of suitable habitat or the project site is located outside of the known geographic and elevation range of the species and based on negative findings during the focused plant surveys.

**TABLE 1
SPECIAL-STATUS PLANT SPECIES WITH THE POTENTIAL TO OCCUR**

Species Name	Listing Status	Habitat Requirements	Potential to Occur
Pygmy lotus (<i>Acmispon haydonii</i>)	1B.3	Found between 1,900 and 4,000 feet in elevation. Inhabits Sonoran desert scrub, pinyon or juniper woodlands, and rocky sites.	Not observed during the 2011 or 2012 botanical surveys. No occurrences are located within five miles of the project. Potential suitable habitat is located along the lower elevations of the project area. Low Potential.
Jacumba milk-vetch (<i>Astragalus douglasii</i> var. <i>perstrictus</i>)	1B.2	Found between 2,900 and 4,500 feet in elevation. Inhabits chaparral, cismontane woodlands, riparian scrub, pinyon or juniper woodlands, valley or foothill grasslands, and rocky areas.	This species was not observed in the project area during 2011 or 2012 botanical surveys. However, this species was observed southeast of the project area during 2009 botanical surveys conducted for the ECO Substation project. Additionally, the species was detected during AECOM's 2010 rare plant surveys that included, but were not limited to, the project area. Suitable habitat is present within the project area. Twelve occurrences are located within five miles of the project area. High Potential.
Harwood's milk-vetch (<i>Astragalus insularis</i> var. <i>harwoodii</i>)	2.2	Found between 150 and 1,650 feet in elevation. Inhabits open sandy flats and sandy or stony washes; mostly in creosote bush scrub.	The project area is outside of the known elevation range for the species. No recorded occurrences are within five miles of the project area. Not observed during the 2011 or 2012 botanical surveys. Not Expected.
California ayenia (<i>Ayenia compacta</i>)	2.3	Found between 490 and 3,600 feet in elevation. Inhabits sandy and gravelly washes in the desert as well as dry desert canyons.	Moderately suitable habitat is located throughout the project area. No recorded occurrences are within five miles of the project area. Not observed during the 2011 or 2012 botanical surveys. Low Potential.

Species Name	Listing Status	Habitat Requirements	Potential to Occur
Fremont barberry (<i>Berberis fremontii</i>)	3	Found between 2,755 and 6,100 feet in elevation. Inhabits dry rocky points and slopes within chaparral, pinyon and juniper woodlands, and Joshua tree woodlands.	Suitable habitat is present along the southeastern portion of the project area. Four occurrences are located within five miles of the project area. However, this species was not observed in the project area during the 2011 or 2012 botanical surveys. Low Potential.
Orcutt's brodiaea (<i>Brodiaea orcuttii</i>)	1B.1	Found between 90 and 5,300 feet in elevation. Inhabits mesic, clay habitats; sometimes serpentine in vernal pools and small drainages within valley and foothill grasslands, closed-cone coniferous forest, cismontane woodland, chaparral, and meadows.	Potentially suitable habitat exists within wetland environments in the vicinity of the project area. No occurrences are located within five miles of the project area. Not observed during the 2011 or 2012 botanical surveys. Low Potential.
Little-leaf elephant tree (<i>Bursera microphylla</i>)	2.3	Found between 650 and 2,300 feet in elevation. Inhabits hillsides, washes, canyon sides, and rocky sites within Sonoran desert scrub.	The project area is outside of the known elevation range for the species. No occurrences are within five miles of the project area. Not observed during the 2011 or 2012 botanical surveys. Not Expected.
Payson's jewel-flower (<i>Caulanthus simulans</i>)	4.2	Found between 295 and 7,250 feet in elevation. Frequently inhabits burned areas, or disturbed sites such as streambeds; also inhabits rocky, steep slopes within chaparral and coastal scrub.	Suitable habitat is present in the northern and western portions of the project area. No occurrences are located within five miles of the project area. Not observed during the 2011 or 2012 botanical surveys. However, the species was observed on Campo Reservation during AECOM's 2010 surveys. Medium Potential.
Wart-stemmed ceanothus (<i>Ceanothus verrucosus</i>)	2.2	Found between 0 and 1,250 feet in elevation. Typically found within coastal chaparral habitat.	The project area is outside of the known elevation range for the species. No occurrences are within five miles of the project area. Not observed during the 2011 or 2012 botanical surveys. Not Expected.
Pink cholla (<i>Cylindropuntia xfosbergii</i>)	3	Found between 1,350 and 2,000 feet in elevation. Typically found in Sonoran desert scrub habitat.	The project area is outside of the known elevation range for the species. No occurrences are within five miles of the project area. Not observed during the 2011 or 2012 botanical surveys. Not Expected.
Tecate tarplant (<i>Deinandra floribunda</i>)	1B.2	Found between 230 and 4,005 feet in elevation. Inhabits small drainages or disturbed area within chaparral and coastal sage scrub environments.	Suitable habitat is present within the southeastern portion of the project area. Nine occurrences are located within five miles of the project area. However, this species was not observed during 2011 or 2012 botanical surveys. Medium Potential.
Cuyamaca larkspur (<i>Delphinium hesperium</i> ssp. <i>cuyamacae</i>)	CR 1B.2	Found between 3,700 and 5,000 feet in elevation. Typical inhabits lower montane coniferous forests and meadows.	Suitable habitat is present along the higher elevations of the project area. No occurrences are located within five miles of the project area. Not observed during the 2011 or 2012 botanical surveys. Low Potential.

Species Name	Listing Status	Habitat Requirements	Potential to Occur
Colorado Desert larkspur (<i>Delphinium parishii</i> ssp. <i>subglobosum</i>)	4.3	Found between 2,000 and 5,900 feet in elevation. Inhabits chaparral, cismontane woodlands, pinyon and juniper woodlands, and Sonoran desert scrub.	Suitable habitat is present throughout much of the project area. No recorded CNDDDB occurrences within five miles of the project. However, the species was observed within the vicinity of the project during AECOM's 2010 surveys, which included the project area. Medium Potential.
Mount Laguna aster (<i>Dietaria asteroides</i> var. <i>lagunensis</i>)	CR 2.1	Found between 2,600 and 7,900 feet in elevation. Inhabits cismontane woodlands and lower montane coniferous forests.	Marginally suitable habitat is present within the southeastern portion of the project area. No occurrences are located within five miles of the project area. Not observed during the 2011 or 2012 botanical surveys. Low Potential.
Laguna Mountain goldenbush (<i>Ericameria cuneata</i> var. <i>macrocephala</i>)	CR 1B.3	Found between 3,600 and 5,600 feet in elevation. Endemic to the Laguna Mountains; among boulders, within crevices and granite outcrops.	The project area is outside of the known geographic range for the species. No occurrences are within five miles of the project area. Not observed during the 2011 or 2012 botanical surveys. Not Expected.
Annual rock-nettle (<i>Eucnide rupestris</i>)	2.2	Found between 1,500 and 1,900 feet in elevation. Typically inhabits Sonoran desert scrub.	The project area is outside of the known elevation range for the species. No occurrences are within five miles of the project area. Not observed during the 2011 or 2012 botanical surveys. Not Expected.
San Jacinto Mountains bedstraw (<i>Galium angustifolium</i>)	1B.3	Found between 5,350 and 6,500 feet in elevation. Typically inhabits open mixed forest or lower montane coniferous forest.	The project area is outside of the known elevation and geographic range for the species. One occurrence is within five miles of the project area. Not observed during the 2011 or 2012 botanical surveys. Not Expected.
Sticky geraea (<i>Geraea viscida</i>)	2.3	Found between 1,480 and 5,580 feet in elevation. Typically inhabits chaparral and disturbed habitats.	Suitable habitat is found throughout the project area. Twelve occurrences are within five miles of the project area. Also, the species was detected during AECOM's 2010 surveys, which included the project area. However, this species was not observed in the project area during the 2011 or 2012 botanical surveys. High Potential.
San Diego gumplant (<i>Grindelia halií</i>)	1B.2	Found between 570 and 5,000 feet in elevation. Inhabits meadows, valleys, foothill grasslands, chaparral, and lower montane coniferous forests.	Potential suitable habitat is present along the western portion of the project area. No occurrences are located within five miles of the project area. Not observed during the 2011 or 2012 botanical surveys. Low Potential.
Tecate cypress (<i>Hesperocyparis forbesii</i>)	1B.1	Found between 820 and 5,000 feet in elevation. Primarily inhabits north-facing slopes in closed-cone coniferous forests often associated with chaparral.	Potential suitable habitat is present in rocky areas in the vicinity of the project area. No occurrences are located within five miles of the project area. Not observed during the 2011 or 2012 botanical surveys. Additionally, growth pattern of species (tree) makes detection during surveys more likely than annual or herbaceous species. Not Expected.

Species Name	Listing Status	Habitat Requirements	Potential to Occur
Laguna Mountains alumroot (<i>Heuchera brevistaminea</i>)	1B.3	Found between 4,400 and 6,500 feet in elevation. Inhabits broadleaved upland forest, chaparral, montane woodlands, and riparian scrub.	Project area is outside of the known elevation range of the species. No occurrences are within five miles of the project area. Not observed during the 2011 or 2012 botanical surveys. Not Expected.
San Diego hulsea; San Diego sunflower (<i>Hulsea californica</i>)	1B.3	Found between 3,000 and 9,600 feet in elevation. Inhabits chaparral, lower montane coniferous forests, upper montane coniferous forest openings, and burned areas.	Suitable habitat occurs throughout the project area. No occurrences are within five miles of the project area. Not observed during the 2011 or 2012 botanical surveys. However, the species was observed on the during AECOM surveys for the Manzanita Wind Generation Project in the vicinity of the project. Medium Potential.
Mexican hulsea (<i>Hulsea mexicana</i>)	2.3	Found between 1,800 and 3,600 feet in elevation. Inhabits chaparral and volcanic soils. Often occurs on burned or disturbed areas.	Marginally suitable habitat is present within the project area. The project is at the upper end of the species known elevation range. No occurrences are within five miles of the project area. Not observed during the 2011 or 2012 botanical surveys. Low Potential.
Slender-leaved ipomopsis (<i>Ipomopsis tenuifolia</i>)	2.3	Found between 330 and 3,940 feet in elevation. Inhabits chaparral, Sonoran desert scrub, and pinyon or juniper woodlands; often associated with gravelly or rocky areas.	Potential suitable habitat is present in the lower elevations of the project area. Two occurrences are within five miles of the project area. This species was not observed during the 2011 or 2012 botanical surveys. Low Potential.
Robinson's pepper grass (<i>Lepidium virginicum</i> var. <i>robinsonii</i>)	1B.2	Found from 0 to 2,900 feet in elevation. Typically inhabits chaparral and coastal scrub.	The project area is outside of the known elevation range for the species. No occurrences are within five miles of the project area. Not observed during the 2011 or 2012 botanical surveys. Not Expected.
Parish's meadowfarm (<i>Limnanthes gracilis</i> ssp. <i>parishii</i>)	CE 1B.2	Found between 1,900 and 5,300 feet in elevation. Inhabits vernal moist areas and temporary seeps in highland meadows and plateaus.	Marginally suitable habitat exists within grassland communities in the project area. No occurrence is within five miles of the project area. Not observed during the 2011 or 2012 botanical surveys. Low Potential.
Desert beauty (<i>Linanthus bellus</i>)	2.3	Found between 3,280 and 4,595 feet in elevation. Inhabits ephemeral drainages within chaparral environments with sandy soils.	Suitable habitat is present in drainages and ephemeral features occurring within the project area. Twenty-one occurrences are within five miles of the project area. The species was detected during AECOM's 2010 surveys, which included the project area. However, this species was not observed during the 2011 or 2012 botanical surveys. Medium Potential.
Mountain Springs bush lupine (<i>Lupinus excubitus</i> var. <i>medius</i>)	1B.3	Found between 1,394 and 4,495 feet in elevation. Typically inhabits Sonoran desert scrub and pinyon or juniper woodlands.	No suitable habitat is present within the project area. One occurrence is within five miles of the project area. Not observed during the 2011 or 2012 botanical surveys. Not Expected.

Species Name	Listing Status	Habitat Requirements	Potential to Occur
Parish's desert-thorn (<i>Lycium parishii</i>)	2.3	Found between 950 and 3,000 feet in elevation. Typically inhabits desert scrub and coastal scrub.	The project area is outside of the known elevation range for the species. No occurrences are within five miles of the project area. Not observed during the 2011 or 2012 botanical surveys. Not Expected.
Brown turbans (<i>Malperia tenuis</i>)	2.3	Found between 40 and 1,100 feet in elevation. Inhabits sandy places and rocky slopes within Sonoran desert scrub.	The project area is outside of the known elevation range for the species. No occurrences are within five miles of the project area. Not observed during the 2011 or 2012 botanical surveys. Not Expected.
Hairy stickleaf (<i>Mentzelia hirsutissima</i>)	2.3	Found between 0 and 2,450 feet in elevation. Inhabits fans, slopes, coarse rubble, and talus slopes within creosote bush scrub.	The project area is outside of the known elevation range for the species. No occurrences are within five miles of the project area. Not observed during the 2011 or 2012 botanical surveys. Not Expected.
Thurber's pilostyles (<i>Pilostyles thurberi</i>)	4.3	Found between 150 and 1,200 feet in elevation. Inhabits sandy alluvium within Sonoran desert scrub. The species is a parasite on <i>Psoralea</i> sp. within its range.	The project area is outside of the known elevation range for the species. No occurrences are within five miles of the project area. Not observed during the 2011 or 2012 botanical surveys. Not Expected.
Arizona pholistoma (<i>Pholistoma auritum</i> var. <i>arizonicum</i>)	2.3	Found between 975 and 2,300 feet in elevation. Typically restricted to Arizona, although isolated individuals are present in California. Inhabits Mojavean desert scrub.	The project area is outside of the known elevation range for the species. One occurrence is within five miles of the project area. Not observed during the 2011 or 2012 botanical surveys. Not Expected.
Southern mountains skullcap (<i>Scutellaria bolanderi</i> ssp. <i>austromontana</i>)	1B.2	Found between 1,375 and 6,600 feet in elevation. Inhabits gravelly soils on streambanks or in mesic sites with chaparral, oak and pine woodlands	Marginally suitable habitat is present in the western portion of the project area. No occurrences are within five miles of the project area. Not observed during the 2011 or 2012 botanical survey. Low Potential.
Desert spike-moss (<i>Selaginella eremophila</i>)	2.2	Found between 660 and 3,000 feet in elevation. Inhabits gravelly and rocky soils within Sonoran desert scrub.	The project area is outside of the known elevation range for the species. One occurrence is within five miles of the project area. Not observed during the 2011 or 2012 botanical surveys. Not Expected.
Chaparral ragwort (<i>Senecio aphanactis</i>)	2.2	Found between 40 and 2,650 feet in elevation. Inhabits chaparral, cismontane woodlands, and coastal scrub.	The project area is outside of the known elevation range for the species. No occurrences are within five miles of the project area. Not observed during the 2011 or 2012 botanical surveys. Not Expected.
Laguna Mountains jewel-flower (<i>Streptanthus bernardinus</i>)	4.3	Found between 4,700 and 8,250 feet in elevation. Inhabits clay or decomposed granite soils within chaparral and lower montane coniferous forests; sometimes found in disturbed areas such as streambanks or roadcuts.	The project area is outside of the known elevation range for the species. One occurrence is within five miles of the project area. Not observed during the 2011 or 2012 botanical surveys. Not Expected.
Southern jewel-flower (<i>Streptanthus campestris</i>)	1B.3	Found between 2,955 and 7,550 feet in elevation. Inhabits chaparral, lower montane coniferous forests, rocky areas, and pinyon or juniper woodlands.	Suitable habitat is present within the project area. Four occurrences are within five miles of the project area. However, this species was not observed during the 2011 or 2012 botanical surveys. Medium Potential.

Species Name	Listing Status	Habitat Requirements	Potential to Occur
San Bernardino aster (<i>Symphotrichum defoliatum</i>)	1B.2	Found between 0 and 6,700 feet in elevation. Inhabits vernal mesic grasslands; found near ditches, streams and springs, and disturbed areas within meadows, marshes, coastal scrub, cismontane woodlands, lower montane coniferous forests and grasslands.	Potentially suitable habitat is present in the southeast portion of the project area, particularly in the vicinity of Campo Creek. Two occurrences are located within five miles of the project area, with one of these within ¼ mile of the project. However, this species was not observed during the 2011 or 2012 botanical surveys. Medium Potential.
Parry's tetracoccus (<i>Tetracoccus dioicus</i>)	1B.2	Found between 545 and 3,300 feet in elevation. Typically inhabits chaparral and coastal scrub.	Marginally suitable habitat is present at the extreme lower elevations of the southeastern portion of the project area. No occurrences are within five miles of the project area. Not observed during the 2011 or 2012 botanical surveys. Low Potential.
Velvety false lupine (<i>Thermopsis californica</i> var. <i>semota</i>)	1B.2	Found between 3,100 and 6,150 feet in elevation. The species is endemic to San Diego County and is restricted to wet, open meadows around Cuyamaca Lake, and within the Laguna Meadows.	The project area is outside of the known range for the species. No occurrences are within five miles of the project area. Not observed during the 2011 or 2012 botanical surveys. Not Expected.
Rigid fringepond (<i>Thysanocarpus rigidus</i>)	1B.2	Found between 1,950 and 7,250 feet in elevation. Inhabits dry, rocky slopes and ridges of oak and pine woodlands in arid mountain ranges.	Marginally suitable habitat is present at the extreme southeastern portion of the project area. No occurrences are within five miles of the project area. Not observed during the 2011 or 2012 botanical surveys. Low Potential.
Orcutt's woody-aster (<i>Xylorhiza orcuttii</i>)	1B.2	Found between 850 and 1,200 feet in elevation. Inhabits arid canyons and washes within Sonoran desert scrub.	The project area is outside of the known elevation range for the species. No CNDDB occurrences are within five miles of the project area. Not observed during the 2011 or 2012 botanical surveys. Not Expected.

CNPS Status

List 1B = Plants Rare, Threatened, Endangered in California and elsewhere

List 2 = Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere

List 3 = Plants About Which We Need More Information - A Review List

List 4 = Plants of Limited Distribution - A Watch List

Threat ranks

.1 = Seriously Endangered in California

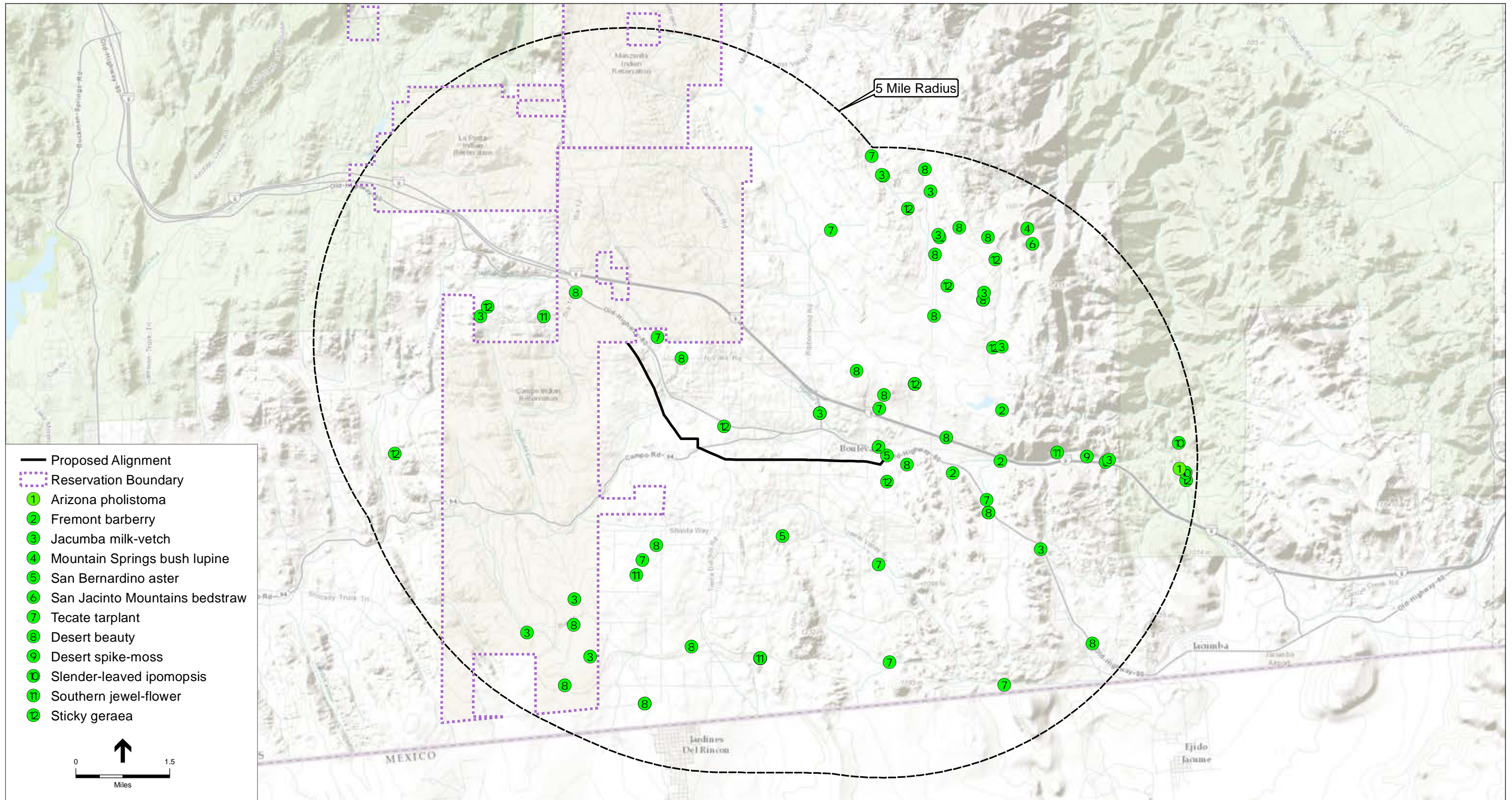
.2 = Fairly Endangered in California

.3 = Not Very Threatened in California (low degree/immediacy of threats or no current threats known)

State Status

CE = State Endangered

CR = State Rare



SOURCE: Sempra Utilities (2011), ESRI (2010), CNDDB

SDG&E Wind Interconnect Project . 210582

Figure 3
Special-Status Plant Species Occurrences
Within 5-Mile Radius of the Project Site

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Botanical species that have a medium to high potential to occur within the project area are discussed in detail, below.

4.6.1.1 Jacumba Milk-Vetch

Jacumba milk-vetch is a perennial herb in the Fabaceae family that inhabits chaparral, cismontane woodland, pinyon-juniper woodland, riparian scrub, rocky areas, and valley/foothill grassland habitats. This species typically occurs between 2,900 and 4,500 feet in elevation and blooms from April through June. Jacumba milk-vetch has a CNPS Rare Plant Rank of 1B.2, which denotes that the species is considered fairly threatened in California. Threats to this species include loss of habitat from development and impacts associated with grazing.

Suitable habitat is present within most vegetated plant communities occurring in the project area. Although not detected during 2011 or 2012 rare plant surveys, 12 occurrences were recorded to the CNDDDB within five miles of the project area, with the closest of these occurrences located in the vicinity of Pole 1, and Pole 41 (See Figure 3). Additionally, this species was observed during rare plant surveys conducted in 2009 for SDG&E's East County (ECO) Substation Project southeast of the project area, as well as during AECOM's 2010 surveys for the project area. Isolated populations of this species were observed within the vicinity of the Boulevard East Substation site and along the proposed alignment immediately to the south and east of the substation.

4.6.1.2 Payson's Jewel-Flower

Payson's jewel-flower is an annual herb in the Brassicaceae family that blooms from February through June. This species inhabits chaparral and coastal scrub communities, typically within sandy or granitic soils. Payson's jewel-flower is typically found between 295 and 7,200 feet in elevation. This species has a CNPS Rare Plant Rank of 4.2, which denotes that the species is considered uncommon and fairly endangered in California.

Suitable habitat is present in the northern and western portions of the project area associated with chaparral habitats. There are no recorded CNDDDB or CNPS occurrences within five miles of the project site, although the species was observed during AECOM's 2010 surveys for the project. However, this species was not detected within the project site during focused plant surveys conducted in 2011 and 2012.

4.6.1.3 Tecate Tarplant

Tecate tarplant is an annual herb in the Asteraceae family that blooms from August to October. This species inhabits chaparral and coastal scrub in San Diego County and Baja California, Mexico. The species is typically found between 230 and 4,005 feet in elevation. Tecate tarplant has a CNPS Rare Plant Rank of 1B.2, which denotes that the species is considered fairly threatened in California. Threats to this species include loss of habitat from development and impacts associated with grazing.

Suitable habitat is present within the chaparral communities found within the project area, and nine occurrences have been recorded within five miles of the area; with occurrences approximately one half mile northeast of Pole 1, approximately two miles southwest of Pole 16,

and three additional occurrences that are approximately one mile north, one and a half mile south, and two miles southeast of Pole 51 (See Figure 3). A species-specific rare plant survey was conducted for Tecate tarplant in October of 2011 and another in August of 2012, neither of which identified any occurrences of the species within the project site.

4.6.1.4 Colorado Desert Larkspur

Colorado Desert larkspur is a perennial herb in the Ranunculaceae family that blooms from March through June. This species inhabits chaparral, cismontane woodland, pinyon and juniper woodland, and Sonoran Desert scrub habitats. The species is typically found between 2,000 and 5,900 feet in elevation. Colorado Desert larkspur has a CNPS Rare Plant Rank of 4.3, which denotes that the species is considered uncommon, but not very endangered in California. Threats to this species include competition with non-native species.

Suitable habitat is present within the chaparral communities found within the project area. No recorded CNDDDB or CNPS are within five miles of the project. However, the species was observed during AECOM's 2010 surveys for the project area. Focused plant surveys conducted in 2011 or 2012 did not reveal the species within the project site.

4.6.1.5 Sticky Geraea

Sticky geraea is a perennial herb in the Asteraceae family that blooms from May through June. This species inhabits chaparral and disturbed communities in southern California and Baja California, Mexico. Sticky geraea is typically found between 1,480 and 5,580 feet in elevation. This species has a CNPS Rare Plant Rank of 2.3, which denotes that the species is considered rare but not very threatened in California and more common elsewhere. Development is considered to be a threat to this species.

Suitable habitat for this species is found throughout the project area with a total of 12 occurrences recorded within five miles of the project site; approximately one mile west of Pole 1, approximately a half mile north of Pole 28, and approximately a quarter mile south, one and a half mile northeast, and two and a half miles northeast of Pole 51 (See Figure 3). This species was also detected southeast of the project area during rare plant surveys conducted in 2009 for SDG&E's ECO Substation Project; as well as during AECOM's 2010 surveys for the project area. This species was observed scattered along the 138 kV transmission line corridor adjacent to and east of the existing Boulevard Substation. However, this species was not detected within the project site during focused plant surveys conducted in 2011 and 2012.

4.6.1.6 San Diego Hulsea

San Diego hulsea, also known as San Diego sunflower, is a perennial herb in the Asteraceae family that blooms from April through June. This species inhabits openings, disturbed, and burned areas within chaparral, lower montane coniferous forest, and upper montane coniferous forest communities. San Diego hulsea is typically found between 3,000 and 9,500 feet in elevation. This species has a CNPS Rare Plant Rank of 1B.3, which denotes that the species is considered rare in California and elsewhere, but not very threatened in California. Threats to the species include impacts competition from non-native plants and fire suppression.

Suitable habitat is present throughout the project area within chaparral communities, particularly in areas of lower vegetation density and disturbance. There are no CNDDDB or CNPS occurrences recorded within five miles of the project. However, the species was detected during AECOM's 2010 surveys for the project area. However, this species was not detected within the project site during focused plant surveys conducted in 2011 and 2012.

4.6.1.7 Desert Beauty

Desert beauty is an annual herb in the Polemoniaceae family that blooms from April through May. This species inhabits chaparral communities in San Diego County and Baja California, Mexico. Desert beauty is typically found between 3,280 and 4,595 feet in elevation. This species has a CNPS Rare Plant Rank of 2.3, which denotes that the species is considered rare but not very threatened in California and more common elsewhere. Development is considered to be a threat to this species.

Suitable habitat is present in washes that cross several portions of the project area. Twenty-one (21) occurrences were recorded within five miles of the project area; with occurrences within a quarter mile northwest of Pole 1, approximately a half mile west of Pole 8, approximately two miles southwest of Pole 28, and approximately a quarter mile east, two locations approximately one and a half miles north, approximately one and a half miles northeast, approximately two and a half miles northeast, and two miles southeast of Pole 51 (See Figure 3). This species was detected just south of the existing Boulevard Substation during the 2009 rare plant surveys conducted for SDG&E's ECO Substation Project, as well as during AECOM's 2010 surveys for the project area. However, this species was not detected within the project site during focused plant surveys conducted in 2011 and 2012.

4.6.1.8 Southern Jewel-Flower

Southern jewel-flower is a perennial herb in the Brassicaceae family that blooms from May through July. This species inhabits chaparral, pinyon-juniper woodland, and lower montane coniferous forest communities in Riverside, Santa Barbara, San Bernardino, San Diego, and Ventura counties; and Baja California, Mexico. Southern jewel-flower is typically found between 2,955 and 7,550 feet in elevation and is associated with gravelly areas. This species has a CNPS Rare Plant Rank of 1B.3, which denotes that the species is considered rare in California and elsewhere, but not very threatened in California. Threats to the species include impacts associated with urban development.

Suitable habitat is present throughout the project area and four occurrences were recorded within five miles of the project area; with occurrences within close proximity of the project mapped approximately one mile west of Pole 2, approximately two and a half miles southwest of Pole 28, approximately three miles east of Pole 51 (See Figure 3). However, this species was not detected within the project site during focused plant surveys conducted in 2011 and 2012.

4.6.1.9 San Bernardino Aster

San Bernardino aster is a perennial herb in the Asteraceae family that blooms from May through June. This species inhabits vernal mesic grasslands and is often found near ditches, streams, and springs. This species can also be found in disturbed areas within meadows, marshes, coastal

scrub, cismontane woodland, lower montane coniferous forests, and grasslands. San Bernardino aster is typically found from sea level to 6,700 feet in elevation. This species has a CNPS Rare Plant Rank of 1B.2, which denotes that the species is fairly threatened in California.

Suitable habitat for this species is present in the project area within drainages, disturbed areas, and grasslands habitats; including within the project staging yards. Although two occurrences have been recorded within five miles of the project area; within a quarter mile northeast of Pole 51, and approximately one and a half miles south of Pole 37 (See Figure 3), this species was not detected within the project site during focused plant surveys conducted in 2011 and 2012.

4.6.2 Special-Status Wildlife

Special-status wildlife includes those listed, or candidates for listing, by the USFWS, CDFG, the Bureau of Land Management (BLM), or USFS as trustee agencies, and species covered under the NCCP/HCP. Special-status wildlife species with the potential to occur in the project area appear in Table 2: Special-Status Wildlife Species with the Potential to Occur. Recorded CNDDDB and USFWS occurrences are depicted in Figure 4.

Four species were determined to be present within the project area due to detection during project-related surveys, including QCB, coast (San Diego) horned lizard, Cooper's hawk, and San Diego black-tailed jackrabbit. Five special-status wildlife species were determined to have a high potential to occur, including coastal whiptail, rosy boa, red-diamond rattlesnake, prairie falcon, and San Diego desert woodrat, and nine special-status species have a medium potential to occur: pallid bat (*Antrozous pallidus*), Dulzura pocket mouse (*Chaetodipus californicus femoralis*), Townsend's big-eared bat (*Corynorhinus townsendii*), western mastiff bat (*Eumops perotis californicus*), western red bat (*Lasiurus blossevillii*), western yellow bat (*Lasiurus xanthinus*), California leaf-nosed bat (*Macrotus californicus*), western small-footed myotis (*Myotis ciliolabrum*), fringed myotis (*Myotis thysanodes*), big free-tailed bat (*Nyctinomops macrotis*), and southern grasshopper mouse (*Onychomys torridus ramona*). Additionally, seven special-status species have been determined to have a low potential to occur and six special-status species are not expected to occur within the project area due to lack of suitable habitat or because the site is well outside of their known geographical range.

**TABLE 2
SPECIAL-STATUS WILDLIFE SPECIES WITH THE POTENTIAL TO OCCUR**

Species Name	Listing Status	Habitat Requirements	Potential to Occur
Invertebrates			
Quino checkerspot butterfly (<i>Euphydryas editha quino</i>)	Federally Endangered	Sunny openings within chaparral and coastal sage shrublands. Host plants include dwarf plantain (<i>Plantago virginica</i>), desert Indianwheat (<i>Plantago insularis</i>), and owl clover (<i>Orthocarpus purpurascens</i>).	Five QCB observations were recorded within the project area during protocol-level surveys conducted in spring 2010. Nearly 50 recorded observations are within five miles of the project. Suitable habitat is present throughout much of the project area, with secondary host plant species abundant in several different areas. Present.
Amphibians			
Arroyo toad (<i>Anaxyrus californicus</i>)	Federally Endangered/ California Species of Special Concern	Semi-arid regions near washes or intermittent streams, including valley - foothill and desert riparian, desert wash, etc. Rivers with sandy banks, willows, cottonwoods, and sycamores, loose gravelly areas of streams in drier parts of range.	Low-quality habitat for this species is present within the project area where Campo Creek crosses the proposed interconnection alignment adjacent to Live Oak Springs Road. Focused presence/absence surveys conducted in 0.45 acres of suitable habitat in this area in April, 2010 were negative. The species has been observed historically within approximately two miles of the project area. No occurrences have been documented within five miles of the project area. Low Potential.
Reptiles			
Coastal whiptail (<i>Aspidoscelis tigris stejnegeri</i>)	San Diego County Group II Species	Inhabits low elevation coastal scrub, chaparral and valley-foothill hardwood habitats. Prefers washes and other sandy areas. Perennial plants necessary for major food, which is termites.	Suitable habitat is present throughout the project area. One occurrence is within close proximity of the project area. However, this species was not observed during project-related surveys. High Potential.
Rosy boa (<i>Charina trivirgata</i>)	BLM Sensitive USFS Sensitive	Inhabits areas with a mix of moderate to dense brushy cover and rocky soil, such as coastal canyons and hillsides, desert canyons, washes and mountains. Found in desert and chaparral from the coast to the Mojave and Colorado deserts.	Suitable habitat is present throughout the project area. One occurrence is within close proximity of the project area. Although not observed, this species is expected to occur in suitable habitat in the project area. High Potential.
Barefoot gecko (<i>Coleonyx switaki</i>)	State Threatened	Found below 2,200 feet elevations, in areas of massive rock and rock outcrops at the heads of canyons.	The project area is outside of the known elevation range for the species. No occurrences are within five miles of the project area. Not observed during the project-related surveys. Not Expected.
Red-diamond rattlesnake (<i>Crotalus ruber</i>)	California Species of Special Concern	Typically occurs in chaparral, grassland, and desert areas from coastal San Diego County to the eastern slopes of the mountains. Often associated with rodent burrows and areas of dense vegetation.	Suitable habitat is present throughout the project area. Three occurrences are within five miles of the project area, all located to the east of the project. Although not observed, this species is expected to occur in suitable habitat in the project area. High Potential.

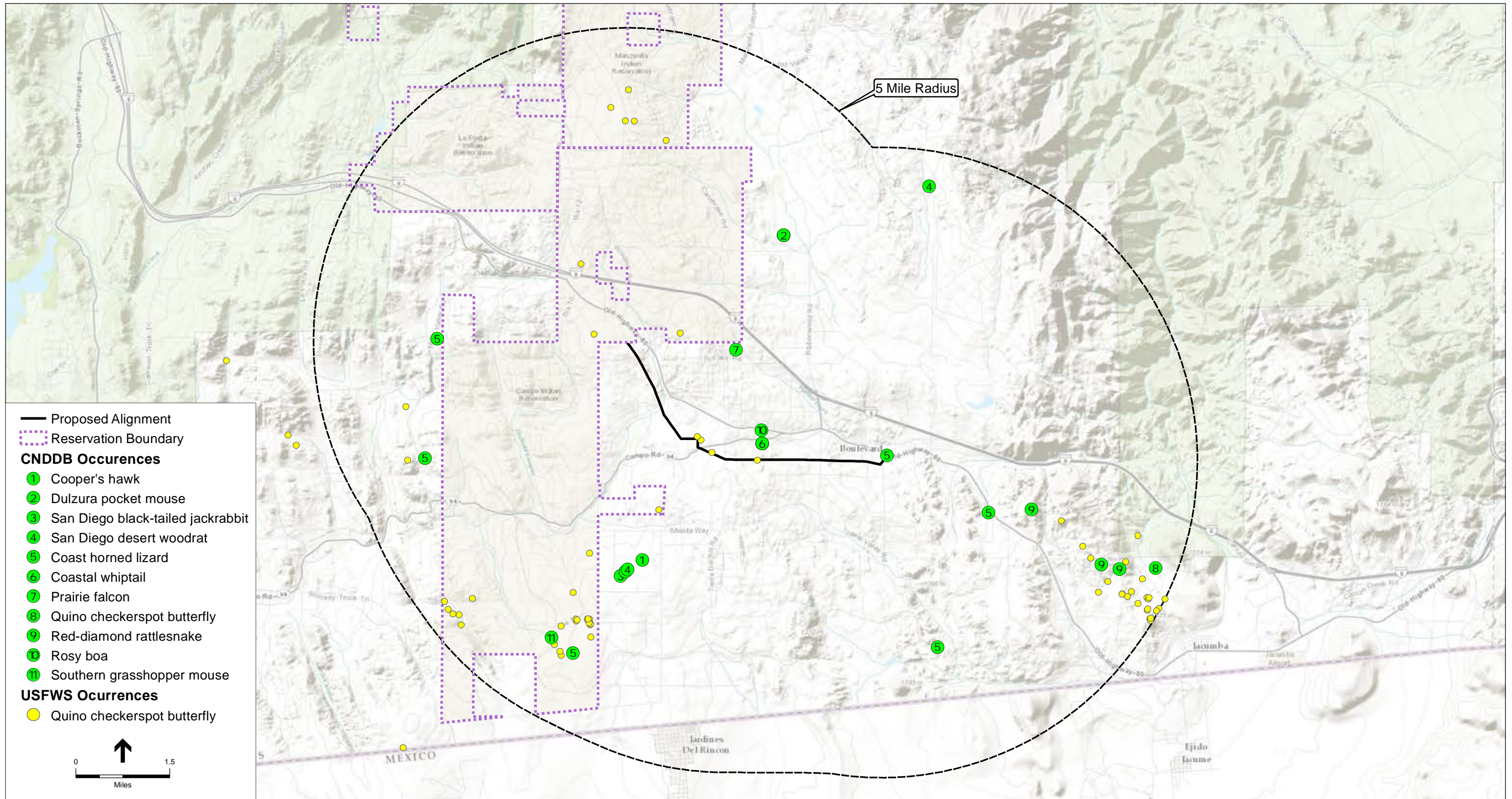
Species Name	Listing Status	Habitat Requirements	Potential to Occur
California (San Diego) mountain kingsnake (<i>Lampropeltis zonata pulchra</i>)	California Species of Special Concern	Known to occur in the central San Diego County peninsular ranges, including in the Laguna Mountains. Considered a habitat generalist, occurs in woodland, chaparral, and coastal sage scrub habitats.	Subspecies is known to occur within the vicinity of the proposed project. Suitable habitat is present throughout much of the alignment. No occurrences are within five miles of the proposed project area. High Potential.
Coast (San Diego) horned lizard (<i>Phrynosoma coronatum blainvillii</i>)	California Species of Special Concern	Inhabits coastal sage scrub and chaparral in arid and semi-arid climate. Typically prefers friable, rocky, or shallow sandy soils.	Suitable habitat is present throughout the project area. Seven occurrences are within five miles of the project area. Sign of the species was identified during 2012 rare plant surveys within the vicinity of the Boulevard staging yard. Present.
Flat-tailed horned lizard (<i>Phrynosoma mcalli</i>)	BLM Sensitive/California Species of Special Concern	Very limited distribution. Found in the extreme southwest corner of Arizona, southeast corner of California, and adjoining portions of Sonora and Baja California.	The project area is outside of the known range for the species. No occurrences are within five miles of the project area. Not Expected.
Two-striped garter snake (<i>Thamnophis hammondi</i>)	BLM Sensitive/California Species of Special Concern	Typically found in or near permanent fresh water, often associated with streams with rocky beds and dense riparian growth.	Potentially suitable habitat is present within the project within Campo Creek. However, no recorded occurrences are within five miles of the project area. Low Potential.
Birds			
Cooper's hawk (<i>Accipiter cooperii</i>)	California Species of Special Concern	Inhabits open, interrupted, or marginal type woodland habitats. Nests in riparian growths of deciduous trees and coast live oaks.	Suitable foraging habitat and nesting sites are present within the project area. One recorded occurrence is within five miles of the project area. The species was observed within the project area during biological surveys Present.
Tricolored blackbird (<i>Agelaius tricolor</i>)	BLM Sensitive/California Species of Special Concern	Highly colonial species that requires habitat consisting of open water, protected nesting areas, and foraging areas with a substantial insect base nearby.	No suitable foraging or nesting habitat is present within the project area. No occurrences are within five miles of the project location. Not observed during the project-related surveys. Not Expected.
Golden eagle (<i>Aquila chrysaetos</i>)	BLM Sensitive/California Fully Protected Species	Species forages over large areas of grasslands, relatively open chaparral or sage scrub habitats. Species is an uncommon resident in San Diego County.	Marginally suitable foraging habitat is present in areas of non-native grassland and relatively open scrub habitats within the project area. No recorded CNDDDB occurrences within five miles of the project. Species was observed during Bloom Biological, Inc. surveys within the vicinity of the project. Medium Potential (foraging only).
Southwestern willow flycatcher (<i>Empidonax traillii extimus</i>)	Federally Endangered/State Endangered	Species prefers thickets of willows and other riparian understory species for breeding. Known to occur along streams, ponds, lakes, or canyon bottoms in suitable habitat.	Limited suitable habitat is present within the plant communities in the vicinity of Campo Creek. No occurrences are within five miles of the project area. Low Potential.
Prairie falcon (<i>Falco mexicanus</i>)	California Species of Special Concern	Inhabits dry, open, hilly, or level terrain. Typically nests on cliffs. Known to forage far afield.	Suitable foraging habitat and limited nesting sites are present within the project area. Species was observed during Bloom Biological, Inc. surveys within the vicinity of the project. High Potential.

Species Name	Listing Status	Habitat Requirements	Potential to Occur
Least Bell's vireo (<i>Vireo bellii pusillus</i>)	Federally Endangered/ State Endangered	Inhabits riverine and floodplain habitats and adjacent coastal sage scrub, chaparral, or other upland plant communities.	Limited suitable habitat is present within the plant communities in the vicinity of Campo Creek. No occurrences are within five miles of the project area. Low Potential.
Mammals			
Pallid bat (<i>Antrozous pallidus</i>)	California Species of Special Concern	Inhabits low elevation rocky arid deserts and canyon-lands, and shrub-steppe grasslands. Roosts in caves, rock crevices, mines, hollow trees, and buildings.	Moderately suitable foraging habitat is present within the project area. Species known to occur in the general region. No documented roosting occurrences are within five miles of the project area. Hollow trees in the area may provide roosting habitat; however, none were documented within or immediately adjacent to the project. Medium Potential.
Dulzura pocket mouse (<i>Chaetodipus californicus femoralis</i>)	California Species of Special Concern	Inhabits a variety of habitats, including coastal sage scrub, chaparral, and grasslands within San Diego County.	Suitable habitat is present within the chaparral habitats of the project area. One occurrence is within five miles of the project area. Medium Potential.
Townsend's big-eared bat (<i>Corynorhinus townsendii</i>)	BLM Sensitive/ California Species of Special Concern	Found throughout California in a variety of habitats, but most common in mesic sites. Roosts in open, hanging from walls and ceilings. Species is extremely sensitive to human disturbance.	Moderately suitable foraging habitat is present within the project area, but no suitable roosting habitat exists. Species known to occur in the general region. No occurrences are within five miles of the project area. Medium Potential (foraging only).
Western mastiff bat (<i>Eumops perotis californicus</i>)	BLM Sensitive/ California Species of Special Concern	Open, semi-arid to arid habitats including conifer and deciduous woodlands, coastal scrub, chaparral. Roosts in crevices in cliff faces, high buildings, trees and tunnels.	Moderately suitable foraging habitat and marginal roosting habitat is present within the project area. No occurrences are within five miles of the project area. Medium Potential.
Western red bat (<i>Lasiurus blossevillii</i>)	BLM Sensitive/ California Species of Special Concern	Wide range of habitats, sea level to mixed conifer forests. Roosts in trees, prefers habitat edges and mosaics with open areas for foraging.	Moderately suitable foraging habitat and marginal roosting habitat is present within the project area. No occurrences are within five miles of the project area. Medium Potential.
Western yellow bat (<i>Lasiurus xanthinus</i>)	California Species of Special Concern	Valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. Roosts in trees, particularly palms, forages over water and among trees.	Moderately suitable foraging and roosting habitat is present near riparian areas of the project area. No occurrences are within five miles of the project area. Medium Potential.
San Diego black-tailed jackrabbit (<i>Lepus californicus bennettii</i>)	California Species of Special Concern	Inhabits intermediate canopy stages of coastal sage scrub habitats in southern California.	Suitable habitat is present throughout much of the project area. One CNDDDB occurrence is within five miles. The species was observed in close proximity of the project area during project-related surveys. Present.

Species Name	Listing Status	Habitat Requirements	Potential to Occur
California leaf-nosed bat (<i>Macrotus californicus</i>)	BLM Sensitive/ California Species of Special Concern	Inhabits desert riparian, desert wash, desert scrub, desert succulent scrub, alkali scrub and palm oasis. Rocky rugged terrain, with mines or caves.	Moderately suitable foraging and roosting habitat is present near riparian areas of the project. No occurrences are within five miles of the project area and no suitable roosting sites were documented within or adjacent to the project. Medium Potential (foraging only).
Western small-footed myotis (<i>Myotis ciliolabrum</i>)	BLM Sensitive	Inhabits a wide range of arid, wooded, and brushy uplands near water. Seeks cover in caves, buildings, mines and crevices.	Moderately suitable foraging and roosting habitat is present within the project area. Species known to occur in the general region. No occurrences are within five miles of the project area and no suitable roosting sites were documented within or adjacent to the project. Medium Potential (foraging only).
Long-eared myotis (<i>Myotis evotis</i>)	BLM Sensitive	Inhabits predominately coniferous forests, typically only between 7,000 to 8,500 feet in elevation.	Species known to occur in the region, however, the project is approximately 3,000 feet below the documented elevation range for the species. No occurrences are within five miles of the project area. Not Expected.
Fringed myotis (<i>Myotis thysanodes</i>)	BLM Sensitive	Inhabits caves, mines, building or crevices within pinyon or juniper woodlands, valley foothill hardwoods, and hardwood or conifer forests.	Moderately suitable roosting habitat (buildings) and foraging habitat is present within the project area. Species known to occur in the general region. No occurrences are within five miles of the project area. Medium Potential.
Long-legged myotis (<i>Myotis volans</i>)	San Diego County Group II Species	Inhabits woodland and forest habitats above 4,000 feet in elevation. Roosts in trees during the daytime and in caves and mines during the nighttime.	Species known to occur in the region, however, the project is at the low end of the documented elevation range of the species. No occurrences are within five miles of the project area. Low Potential.
Yuma myotis (<i>Myotis yumanensis</i>)	San Diego County Group II Species	Inhabits open forests and woodlands with bodies of water over which to feed. Maternity colonies found in caves, mines, buildings, or crevices.	The project area lacks open water source necessary for foraging. Marginally suitable roosting habitat is present in building located within developed areas of the project. No recorded occurrences are within five miles of the project area. Low Potential.
San Diego desert woodrat (<i>Neotoma lepida intermedia</i>)	California Species of Special Concern	Inhabits coastal scrub of southern California, San Diego to San Luis Obispo Counties. Moderate to dense canopies preferred, abundant in areas with rock outcrops and rocky cliffs and slopes.	Suitable habitat is present within the project area and two occurrences are within five miles of the project site. Although this species was not positively identified, a number of woodrat nests were observed within the project area during project related surveys. High Potential.
Pocketed free-tailed bat (<i>Nyctinomops femorosaccus</i>)	San Diego County Group II Species	Inhabits a variety of arid areas in southern California, including pinyon-juniper woodlands, desert scrub, palm oasis, desert wash and desert riparian. Roosting habitat is typically cliffs, crevices, and rocky outcrops.	Project lacks suitable roosting habitat for the species. Marginally suitable foraging habitat is present in scrub areas within the project area. No occurrences are within five miles of the project area. Low Potential (foraging only).

Species Name	Listing Status	Habitat Requirements	Potential to Occur
Big free-tailed bat (<i>Nyctinomops macrotis</i>)	San Diego County Group II Species	Inhabits low-lying arid areas in southern California; needs high cliffs or rocky outcrops for roosting sites. Feeds primarily on large moths.	Marginally suitable foraging habitat, however, no roosting habitat is present within, or adjacent to the project. No occurrences are within five miles of the project area. Medium Potential (foraging only).
Southern grasshopper mouse (<i>Onychomys torridus ramona</i>)	California Species of Special Concern	Inhabits desert area, especially scrub habitats with friable soils for digging.	Suitable habitat is present within the project area. One occurrence is within five miles of the project area. Medium Potential.
Peninsular bighorn sheep (<i>Ovis canadensis nelsoni</i>)	Federally Endangered/State Threatened	Inhabits desert slopes below 4,000 feet in elevation from San Geronio Pass south into Mexico.	Critical habitat for the species has been defined as the San Jacinto Mountains, northern Santa Rosa Mountains, southern Santa Rosa Mountains south to Vallecito Mountains, and the Carrizo Canyon, which is outside the project area. I-8 acts as a major barrier to the northern distribution of the species. Most importantly, suitable habitat requirements are absent on the project site and no occurrences have been recorded within five miles of the project. Not Expected.

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SOURCE: Sempra Utilities (2011), ESRI (2010), CNDBB, USFWS

San Diego Gas and Electric (SDG&E) Wind Interconnection Biological Assessment . 210582

Figure 4
 Special-Status Wildlife Species Occurrences
 Within 5-Mile Radius of the Project Site

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Species that are present, or have been documented in the vicinity of the project area are discussed in detail below.

4.6.2.1 Quino Checkerspot Butterfly

The QCB is a member of the brush-footed butterfly family (Nymphalidae). This species has a range extending from British Columbia and Alberta, Canada, south including Colorado and Utah, and west along the coast to northern Baja California, Mexico. QCB has been divided into at least 20 subspecies, with varying localized ranges and biological and morphological characteristics. All of the subspecies utilize plants in the Plantaginaceae and Orobanchaceae families for larval food. There are three subspecies of *Euphydryas editha* within southern California (*E. e. augustina*, *E. e. editha*, and *E. e. quino*). Historically, *E. e. quino* has been found in Los Angeles, Orange, western Riverside, southwestern San Bernardino, and San Diego counties in addition to northern Baja California, Mexico. Within southern California, *E. e. augustina* is restricted to the yellow pine forests of the San Bernardino Mountains. The range of *E. e. editha* within southern California is limited to the far northeastern portion of the region, specifically within the Piute Mountains. *E.e. quino* is the only subspecies expected to occur within the vicinity of the project.

The QCB is associated with a variety of habitats that include clay soil meadows, grassland, coastal sage scrub, chamise chaparral, red shank chaparral, juniper woodland and semi-desert (Ballmer et al. 2000). It ranges in elevation from sea level up to 5,000 feet. Despite association with a wide range of habitat types, distribution of this species is restricted to areas that support larval host plants. The primary host plant for QCB is California plantain (*Plantago erecta*). Other host plants include woolly plantain (*Plantago patagonica*), Coulter's snapdragon (*Antirrhinum coulterianum*), and Chinese houses (*Collinsia* spp.; Pratt, 2010). Owl's clover (*Castilleja exserta*), and rigid bird's beak (*Cordylanthus rigidus*) are considered secondary hosts (USFWS, 2002). Chinese houses may serve as the primary larval host plant for QCB at higher elevations (Pratt, 2010), such as those within the project area. Hatching occurs from eggs usually laid on the host plant itself, then the early larvae feed and will enter a physiological dormancy known as diapause during periods of poor host plant conditions. During these periods, they often rest under vegetation and rocks. If adverse conditions occur, the larvae may reenter diapause multiple times, emerging after fall or winter rains. Generally the flight season for the QCB occurs from late February through April, with peak activity typically occurring in March and April.

Although once common in southern California, QCB populations have rapidly declined to a few isolated areas of Orange, western Riverside, and San Diego counties along with areas of northern Baja California, Mexico. Reasons for the decline of the species may include habitat loss due to degradation and fragmentation caused by urban and rural development, agricultural conversion, OHV use, the invasion of non-native plants and insects, fire management practices, over-collecting, and adverse weather conditions (USFWS, 2002). The USFWS officially listed the QCB as "endangered" on January 16, 1997 (USFWS, 2002).

Focused QCB surveys were conducted for the project site in the spring of 2010. After five weeks of focused QCB surveys, it was determined that a sixth week of focused QCB surveys at the site was necessary, based on continued observations of QCB individuals during the fifth week on the adjacent Campo Wind Generation Project. One of these was determined to be in good condition,

with bright wing color and no fraying of wing edges. Potential larval host plants, including Chinese houses, were blooming with increasing abundance throughout the entire survey area during the fifth week of surveys. While the actual blooms of Chinese houses do not benefit QCB larvae, the blooming cycle indicated that Chinese houses were still green and supple, and had not yet dried up during the QCB survey season. Thus, the host plants were still available for QCB larvae to feed on during the QCB survey season. Based on the continued presence of adult QCB and the blooming stage of potential larval host plants during the fifth week of surveys, a sixth week of focused adult QCB surveys for the entire survey area (not limited to the project area) was added to the season.

A total of 66 butterfly species and several moth species were detected within the 2010 survey area (which included the Manzanita Wind Generation Project site and proposed alignment connecting the Manzanita Wind Generation Project south to the Crestwood substation) with peak numbers generally occurring during the third and fourth weeks of the surveys. Generally, nectaring plants increased in diversity and abundance during the third and fourth weeks of the surveys, which coincided with the times that QCB and other checkerspots were observed in greatest abundance. Five QCB observations were made during the protocol survey period within the project area. Additionally, nearly 50 recorded CNDDDB and USFWS occurrences have been recorded within five miles of the project site (See Figure 4).

4.6.2.2 Coastal Whiptail

The coastal whiptail, a Group II species on San Diego County's Sensitive Animal List, is a small lizard that occurs throughout most of the southwestern United States. This species can be found in a variety of habitats throughout its range, including deserts and semi-arid shrublands with sparse vegetation and open areas of bare ground. This species is also known to inhabit woodland and riparian areas. Coastal whiptail requires microhabitats that include small burrows within firm, sandy, or rocky substrates. Coastal whiptail has the potential to occur in suitable habitat throughout the project area.

Based on the presence of suitable habitat and the presence of a recorded occurrence within five miles of the project (See Figure 4), the coastal whiptail has a high potential to occur.

4.6.2.3 Rosy Boa

The rosy boa, a BLM and USFS Sensitive Species, is a relatively small snake with a range extending from the southwestern U.S. south to Baja California and Sonora, Mexico. This species is known for its rosy or salmon coloration that is common along the ventral area. The species prefers areas with a mix of moderate to dense brushy cover and rocky soil, such as coastal canyons and hillsides. In southern California, the species is often found in desert and chaparral habitats from the Pacific coast to the Mojave and Colorado deserts.

Suitable habitat for the rosy boa is present throughout the project area. One occurrence has been recorded within approximately one half mile of the project site (See Figure 4).

4.6.2.4 Red-Diamond Rattlesnake

The red-diamond rattlesnake, a CDFG Species of Special Concern, is one of the largest rattlesnakes in the region, with individuals measuring approximately 2.5 feet to 3.5 feet long. This species ranges from San Bernardino County south to Baja California Sur, Mexico. Within the northern part of its range, the species occupies varied environments from the Pacific coast to the desert slopes of the mountains; however, the species generally avoids the lower desert flats and elevations above 5,000 feet. In Mexico, the species inhabits most of the Baja California peninsula, from the Pacific Ocean to the Gulf of California (Sea of Cortez), including some of the islands within the Gulf.

Regionally, red-diamond rattlesnakes typically occur in chaparral, grassland, and desert areas from coastal San Diego County to the eastern slopes of the mountains. The species can often be found in rodent burrows and areas of dense vegetation. Suitable habitat is present throughout the project area. No CNDDDB occurrences have been recorded within five miles of the project site and the species was not observed during project-related surveys and site visits; however, suitable habitat is present and this species may occur.

4.6.2.5 Coast (San Diego) Horned Lizard

The coast (San Diego) horned lizard, a CDFG Species of Special Concern, is typically found in open coastal sage scrub, chaparral, grasslands, and juniper and oak woodland habitats. The species commonly occurs in open, sandy washes, where it uses scattered shrubs for cover. Other requirements generally include fine, loose, sandy soils where the lizard can bury itself, an abundance of native ants as a food source, and open areas for basking.

Suitable habitat is present throughout the project site, and seven occurrences have been recorded within five miles (See Figure 4). Scat of the species was identified just outside of the Boulevard staging yard during the 2012 rare plant survey; therefore, this species is expected to be present.

4.6.2.6 Arroyo Toad

The arroyo toad, a federally endangered and CDFG Species of Special Concern, is a relatively small (50 to 75 millimeter snout-vent length) toad, with females larger than males at maturity. Coloration ranges from olive green or gray to light brown. The species can be distinguished from other toads by non-paired, symmetrical dorsal blotches, bicolored parotid glands that are dark posteriorly and light anteriorly, a light spot on the sacral humps, as well as a prominent white "V-shaped" stripe crosses the top of the head between the eyes. The species prefers sandy washes and creeks with swift currents and large sedimentary deposits. Arroyo toads are habitat specialists often located in third to sixth order floodplains that support dynamic fluvial processes providing open riparian habitats. Foraging occurs on open sandy banks and adjacent elevated terraces with a low to moderate cover composed predominantly of cottonwoods (*Populus* spp.), sycamores (*Platanus* spp.), willows, and coast live oaks.

The arroyo toad was historically present from the upper Salinas River system in Monterey County to approximately nine miles southeast of San Quintin, Baja California, Mexico (Sweet, 1992). Arroyo toads are primarily documented within coastal drainages including the Santa Ynez, Santa

Clara, and Los Angeles River Basins and drainages of Orange, Riverside, and San Diego counties to the Arroyo San Simeon system.

Arroyo toad was not detected during protocol-level presence/absence surveys for the project conducted in the spring and summer of 2010. Protocol surveys focused on suitable habitat within the project area where Campo Creek crosses the proposed interconnection alignment adjacent to Live Oak Springs Road. The nearest known documented locations of arroyo toad populations are within the Cleveland National Forest (CNF) approximately 8.5 miles to the west of the project area where Cottonwood Creek intersects with Buckman Springs Road. These documented occurrences of the species in Cottonwood Creek were used as a reference site for the potential presence of the species within the project area. Arroyo toad habitat within the project is generally fragmented by topographical features (e.g., mountains) from known arroyo toad locations and, therefore, arroyo toads are not expected to occur on or adjacent to the project site.

4.6.2.7 Cooper's Hawk

Cooper's hawk, a CDFG Species of Special Concern, is a breeding and foraging resident throughout most of the wooded portions of California. Its preferred nesting habitat is characterized by dense stands of coast live oak, riparian or other forest habitat near water. Breeding Cooper's hawks are widespread over coastal slopes within San Diego County, wherever dense stands of trees exist. This species forages on small birds and mammals in open woodlands and edge habitats.

Cooper's hawks were observed within the project area on several occasions, including during the 2012 avian surveys conducted on the Manzanita Wind Energy Project, and most often observed foraging near coast live oak woodland and riparian habitats (Bloom, 2012).

4.6.2.8 Prairie Falcon

Prairie falcon, a CDFG Species of Special Concern, inhabits arid, open country in the summer, including alpine tundra, shortgrass prairie, and high desert. This species nests on the ledges of cliffs or bluffs and forages in open desert or grassland habitats. The species eats primarily small mammals and birds caught in flight. Within San Diego County, the species is known to inhabit inland areas, with documented nesting sites occurring within roughly 23 miles of the coast.

Suitable foraging habitat and limited nesting sites are present within, and adjacent to the project area. The species was observed in the vicinity of the project during the avian surveys conducted on the Manzanita Wind Energy Project (Bloom, 2012). Additionally, there is one CNDDDB occurrence record within five miles of the project site (See Figure 4). Based on observation within the vicinity of the project and the presence of suitable nesting and foraging habitat, the species has a high potential to occur.

4.6.2.9 San Diego Black-Tailed Jackrabbit

The San Diego black-tailed jackrabbit, a CDFG Species of Special Concern, is a species of hare within the Leporidae family found in southern California and Baja California, Mexico. This species can reach a length of approximately two feet and typically weighs three to six pounds.

San Diego black-tailed jackrabbit occurs in coastal sage scrub habitats and prefers intermediate canopy stages of scrub habitats and open shrub/herbaceous and tree edges.

Suitable habitat is present throughout much of the project area. Several black-tailed jackrabbits were observed in multiple locations within the project area during project-related surveys; however, these individuals could not be confirmed as the subspecies *bennetti*. Nonetheless, one occurrence has been previously recorded within five miles of the project site, with one reported sighting during project-related surveys (See Figure 4). Due to presence of suitable habitat and known occurrences of the species in the vicinity of the project site, San Diego black-tailed jackrabbit is presumed present.

4.6.2.10 San Diego Desert Woodrat

The San Diego desert woodrat, a CDFG Species of Special Concern, occurs in coastal sage scrub and chaparral habitats within San Diego County. The species typically makes middens (nests) of twigs, sticks, cactus parts, and rocks, depending on the availability of building materials. San Diego desert woodrat is known to forage within coast live oak, chamise, and California buckwheat.

Suitable habitat is present throughout the project area and two occurrences have been previously recorded within five miles (See Figure 4). Several desert woodrat middens were observed within the vicinity of the project site at various locations. The species has a high potential to occur within the project site due to the availability of suitable habitat and documented occurrences in the vicinity.

4.7 Migration Corridors

Habitat linkages are contiguous areas of open space that connect two larger habitat areas. Linkages provide for both diffusion and dispersal for a variety of species within the landscape. In addition, linkages can serve as primary habitat for some smaller species. Corridors are linear linkages between two or more habitat patches. Corridors provide for movement and dispersal, but do not necessarily include habitat capable of supporting all life history requirements of a species (SC Wildlands, 2006).

According to *A Linkage Network for the California Deserts* (SC Wildlands, 2012), there are no documented terrestrial migration corridors in the vicinity of the project site. Recognized habitat linkages within the region include the Peninsular-Borrego Connection to the north of the proposed project, and the Park to Parque Linkage to the east of the proposed project. Both of these regional linkages are well defined, and do not occur in the immediate vicinity of the proposed project (SC Wildlands, 2006; CBC 2006). A major avian migration route, the Pacific Flyway, is located approximately 45 miles east of the project area, with significant numbers of migratory birds utilizing the Salton Sea during annual migrations. It is estimated that more than 50 percent of Pacific Flyway migratory birds visit the Salton Sea region and its associated marshes each year. Migratory bird surveys conducted for the Manzanita Wind Energy Project observed modest numbers of migratory birds, indicating that the area is not within a major migration corridor (Bloom Biological, 2012).

4.8 Critical Habitat

Under the FESA, to the extent prudent and determinable, the USFWS is required to designate critical habitat for endangered and threatened species (16 U.S.C. § 1533 (a)(3)). Critical habitat is defined as areas of land, water, and air space containing the physical and biological features essential for the survival and recovery of endangered and threatened species. Designated critical habitat includes sites for breeding and rearing, movement or migration, feeding, roosting, cover, and shelter.

Designated critical habitats require special management and protection of existing resources, including water quality and quantity, host animals and plants, food availability, pollinators, sunlight, and specific soil types. Critical habitat designation delineates all suitable habitat, occupied or not, essential to the survival and recovery of the species.

The project site does not occur within any USFWS-designated critical habitats. However, critical habitat for three species is located within the region of the project site. Designated critical habitat for QCB occurs approximately 3.5 miles to the west of the project site and approximately five miles east of the Boulevard Substation (USFWS, 2009a). Designated critical habitat for peninsular bighorn sheep also occurs in the mountains approximately eight miles to the northeast of the project site (USFWS, 2009b). Lastly, arroyo toad designated critical habitat occurs approximately five miles to the west of the project site within the CNF (USFWS, 2011).

5.0 Regulatory Framework

5.1 Federal

5.1.1 Federal Endangered Species Act

Under FESA, the Secretary of the Interior and the Secretary of Commerce jointly have the authority to list a species as threatened or endangered (16 USC 1533(c)). Pursuant to the requirements of FESA, an agency reviewing a proposed project within its jurisdiction must determine whether any federally listed or proposed species may be present in the project region and determine whether the proposed project would have a potentially significant impact on such species. In addition, the agency is required to determine whether the project is likely to jeopardize the continued existence of any species proposed to be listed under FESA or result in the destruction or adverse modification of critical habitat proposed to be designated for such species (16 USC 1536(3), (4)). Project-related impacts to these species or their habitats would be considered “significant.” Section 7 of FESA contains a “take” prohibition which prohibits any action conducted, funded, or approved by a federal agency that adversely affects a member of an endangered or threatened species without prior formal consultation with the USFWS. Formal consultation with the USFWS would result in the issuance of a Biological Opinion (BO) that includes either a jeopardy or non-jeopardy decision issued by the USFWS to the consulting federal agency. The BO would also include the possible issuance of an “incidental take” permit. If such authorization is given, the project proponent must provide the USFWS with a HCP for the affected species and publish notification of the application for a permit in the Federal Register.

Section 4(a)(3) and (b)(2) of the FESA requires the designation of critical habitat to the maximum extent possible and prudent based on the best available scientific data and after considering the economic impacts of any designations. Critical habitat is defined in section 3(5)(A) of the FESA as (1) areas within the geographic range of a species that are occupied by individuals of that species and contain the primary constituent elements (physical and biological features) essential to the conservation of the species, thus warranting special management consideration or protection, and (2) areas outside of the geographic range of a species at the time of listing but that are considered essential to the conservation of the species.

5.1.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA), first enacted in 1918, domestically implements a series of treaties between the United States and Great Britain (on behalf of Canada), Mexico, Japan, and the former Soviet Union that provide for international migratory bird protection. The MBTA authorizes the Secretary of the Interior to regulate the taking of migratory birds; the act provides that it shall be unlawful, except as permitted by regulations, “to pursue, take, or kill any migratory bird, or any part, nest or egg of any such bird...” (U.S. Code Title 16, Section 703). This prohibition includes both direct and indirect acts, although harassment and habitat modification are not included unless they result in direct loss of birds, nests, or eggs. The current list of species protected by the MBTA includes several hundred species and essentially includes all native birds. Permits for take of nongame migratory birds can be issued only for specific activities, such as scientific collecting, rehabilitation, propagation, education, taxidermy, and protection of human health and safety and personal property.

5.1.3 Bald and Golden Eagle Protection Act

Similar to the MBTA, the federal Bald and Golden Eagle Protection Act prohibits the unauthorized take of a bald eagle or a golden eagle. “Take” means to *pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, destroy, molest, or disturb*. Furthermore, “disturb” means “to agitate or bother a Bald Eagle or a Golden Eagle to a degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior.”

5.1.4 Federal Regulation of Waters of the United States, Including Wetlands

Wetlands are a subset of “waters of the United States” and receive protection under Section 404 of the Clean Water Act (CWA). The term “waters of the U.S.” as defined in Code of Federal Regulations (33 CFR 328.3(a); 40 CFR 230.3(s)), includes all waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters subject to the ebb and flow of the tide. Wetlands are defined by the federal government (CFR, Section 328.3(b), 1991) as those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Waters of the U.S. do not include prior converted cropland. Notwithstanding the

determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the federal CWA, the final authority regarding CWA jurisdiction remains with U.S. Environmental Protection Agency (EPA) (328.3(a)(8) added 58 FR 45035, August 25, 1993). The USACE regulates the discharge of dredged or fill material into waters, both wetland and non-wetland, of the United States under Section 404 of the CWA.

Regional Water Quality Control Board

Under Section 401 of the CWA, the RWQCB must certify that actions receiving authorization under section 404 of the CWA also meet state water quality standards. The RWQCB also regulates waters of the state under the Porter-Cologne Act Water Quality Control Act (Porter-Cologne Act). The RWQCB requires projects to avoid impacts to wetlands if feasible and requires that projects do not result in a net loss of wetland acreage or a net loss of wetland function and values. The RWQCB typically requires compensatory mitigation for impacts to wetlands and/or waters of the state. The RWQCB also has jurisdiction over waters deemed 'isolated' or not subject to Section 404 jurisdiction under the Solid Waste Agency of Northern Cook County (SWANCC) decision.¹ Dredging, filling, or excavation of isolated waters constitutes a discharge of waste to waters of the state and prospective dischargers are required obtain authorization through an Order of Waste Discharge or waiver thereof from the RWQCB and comply with other requirements of the Porter-Cologne Act.

Clean Water Act

In accordance with Section 404 of the federal CWA, the USACE regulates discharge of dredged or fill material into waters of the United States. Waters of the United States and their lateral limits are defined in Title 33, Part 328.3(a) of the Code of Federal Regulations to include navigable waters of the United States, interstate waters, all other waters where the use or degradation or destruction of the waters could affect interstate or foreign commerce, tributaries to any of these waters, and wetlands that meet any of these criteria or that are adjacent to any of these waters or their tributaries. Waters of the United States are often categorized as "jurisdictional wetlands" (i.e., wetlands over which USACE exercises jurisdiction under Section 404) and "other waters of the United States" when habitat values and characteristics are being described. "Fill" is defined as any material that replaces any portion of a water of the United States with dry land or that changes the bottom elevation of any portion of a water of the United States. Any activity resulting in the placement of dredged or fill material within waters of the United States requires a permit from USACE. In accordance with Section 401 of the CWA, projects that apply for a USACE permit for discharge of dredged or fill material must obtain water quality certification from the appropriate RWQCB indicating that the proposed project would uphold State of California water quality standards.

¹ Based on the Supreme Court ruling *Solid Waste Agency of Northern Cook City. v. Army Corps of Engineers*, 531 U. S. 159 (SWANCC) concerning the Clean Water Act jurisdiction over isolated waters (January 9, 2001), non-navigable, isolated, intrastate waters based solely on the use of such waters by migratory birds are no longer defined as waters of the United States. Jurisdiction of non-navigable, isolated, intrastate waters may be possible if their use, degradation, or destruction could affect other waters of the United States, or interstate or foreign commerce. Jurisdiction over such other waters is analyzed on a case-by-case basis. Impoundments of waters, tributaries of waters, and wetlands adjacent to waters should be analyzed on a case-by-case basis.

Porter-Cologne Water Quality Control Act

Under the Porter-Cologne Act, waters of the state fall under the jurisdiction of the appropriate RWQCB. Under the act, the RWQCB must prepare and periodically update water quality control basin plans. Each basin plan sets forth water quality standards for surface water and groundwater, as well as actions to control nonpoint and point sources of pollution to achieve and maintain these standards. Projects that affect wetlands or waters must meet waste discharge requirements of the RWQCB, which may be issued in addition to a water quality certification or waiver under Section 401 of the CWA.

5.2 State

CEQA Guidelines Section 15380

Although threatened and endangered species are protected by specific federal and state statutes, *CEQA Guidelines* Section 15380(b) provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if the species can be shown to meet certain specified criteria. These criteria have been modeled after the definition in FESA and the section of the California Fish and Game Code dealing with rare or endangered plants or animals. This section was included in CEQA primarily to deal with situations in which a public agency is reviewing a project that may have a significant effect on, for example, a candidate species that has not been listed by either USFWS or CDFG. Thus, CEQA provides an agency with the ability to protect a species from the potential impacts of a project until the respective government agencies have an opportunity to designate the species as protected, if warranted. CEQA also calls for the protection of other locally or regionally significant resources, including natural communities. Although natural communities do not at present have legal protection of any kind, CEQA calls for an assessment of whether any such resources would be affected, and requires findings of significance if there would be substantial losses. Natural communities listed by CNDDDB as sensitive are considered by CDFG to be significant resources and fall under the *CEQA Guidelines* for addressing impacts. Local planning documents such as general plans often identify these resources as well.

California Wetland Definition

Unlike the federal government, California has adopted the Cowardin, et al. (1979) definition of wetlands (ICF International, Inc., 2010). For purposes of this classification, wetlands must have one or more of the following three attributes: (1) at least periodically, the land supports predominantly hydrophytes (at least 50 percent of the aerial vegetative cover); (2) the substrate is predominantly undrained hydric soil; and (3) the substrate is nonsoil and is saturated with water or covered by shallow water at some time during the growing season of each year.

Under normal circumstances, the federal definition of wetlands requires all three wetland identification parameters to be met, whereas the Cowardin definition requires the presence of at least one of these parameters. For this reason, identification of wetlands by state agencies consists of the union of all areas that are periodically inundated or saturated, or in which at least seasonal dominance by hydrophytes may be documented, or in which hydric soils are present.

California Department of Fish and Game Streambed Alteration Agreement

CDFG regulates activities that would interfere with the natural flow of, or substantially alter, a channel, bed, or bank of a lake, river, or stream. These activities are regulated under the California Fish and Game Code Sections 1600-1616. Requirements to protect the integrity of biological resources and water quality are often conditions of streambed alteration agreements. Requirements may include avoidance or minimization of the use of heavy equipment, limitations on work periods to avoid impacts on wildlife and fisheries resources, and measures to restore degraded sites or compensate for permanent habitat losses. A Streambed Alteration Agreement may be required by CDFG for construction activities that could result in substantial impact to a streambed. .

Both state and federal wetland laws require that the biological and hydrological functions, which are lost when a wetland or water is altered or filled, be replaced as part of the respective permit processes. Compensatory actions include replacement of lost wetland acreage, usually in amounts substantially greater than the amount lost.

State Endangered Species Act

Under CESA, the CDFG is responsible for maintaining a list of threatened and endangered species (California Fish and Game Code, 2007), candidate species, and species of special concern. Pursuant to the requirements of CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any state listed endangered or threatened species may be present on the project region and determine whether the proposed project would have a potentially significant impact on such species. In addition, the CDFG encourages informal consultation on any proposed project that may impact a candidate species. If there were project-related impacts to species on the CESA threatened and endangered list, they would be considered “significant.” Impacts to “species of concern” would be considered “significant” under certain circumstances, discussed below.

Although threatened and endangered species are protected by specific federal and state statutes, CEQA Guidelines Section 15380(b) provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if the species can be shown to meet certain specified criteria. These criteria have been modeled after the definition in FESA and the section of the California Fish and Game Code dealing with rare or endangered plants or animals. This section was included in the CEQA Guidelines primarily to deal with situations in which a public agency is reviewing a project that may have a significant effect on, for example, a candidate species that has not yet been listed by either the USFWS or CDFG. Thus, CEQA provides an agency with the ability to protect a species from a project’s potential impacts until the respective government agencies have an opportunity to designate the species as protected, if warranted.

State Fish and Game Codes

Section 2080 of the State Fish and Game Code states, “No person shall import into this state [California], export out of this state, or take, possess, purchase, or sell within this state, any

species, or any part or product thereof, that the commission [State Fish and Game Commission] determines to be an endangered species or threatened species, or attempt any of those acts, except as otherwise provided in this chapter, or the Native Plant Protection Act, or the California Desert Native Plants Act.” Pursuant to Section 2081 of the Code, the CDFG may authorize individuals or public agencies to import, export, take, or possess, any state-listed endangered, threatened, or candidate species. These otherwise prohibited acts may be authorized through permits or Memoranda of Understanding if: (1) the take is incidental to an otherwise lawful activity; (2) impacts of the authorized take are minimized and fully mitigated; (3) the permit is consistent with any regulations adopted pursuant to any recovery plan for the species; and (4) the applicant ensures adequate funding to implement the measures required by CDFG. The CDFG makes this determination based on available scientific information and considers the ability of the species to survive and reproduce. Due to the potential presence of state-listed rare, threatened, or endangered species on the project site, Sections 2080 and 2081 of the Code were considered in this evaluation.

Section 3503 of the California Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3503.5 specifically states that it is unlawful to take, possess, or destroy any raptors (i.e., species in the orders Falconiformes and Strigiformes), including their nests or eggs. Typical violations of these codes include destruction of active nests resulting from removal of vegetation in which the nests are located. Violation of Section 3503.5 could also include failure of active raptor nests resulting from disturbance of nesting pairs by nearby project construction. This statute does not provide for the issuance of any type of incidental take permit.

All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California that supports wildlife resources are subject to regulation by CDFG under Section 1602 of the California Fish and Game Code. Under Section 1602, it is unlawful for any person, governmental agency, or public utility to do the following without first notifying CDFG: substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake. A stream is defined as a body of water that flows at least periodically or intermittently through a bed or channel that has banks and supports fish or other aquatic life. This definition includes watercourses with a surface or subsurface flow that supports or has supported riparian vegetation. CDFG’s jurisdiction within altered or artificial waterways is based on the value of those waterways to fish and wildlife. A CDFG streambed alteration agreement must be obtained for any project that would result in an impact on a river, stream, or lake.

Protection of fully protected species is described in Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code. These statutes prohibit take or possession of fully protected species. CDFG is unable to authorize incidental take of fully protected species when activities are proposed in areas inhabited by those species. CDFG has informed nonfederal agencies and private parties that they must avoid take of any fully protected species in carrying out projects.

Native Plant Protection Act

The Native Plant Protection Act includes measures to preserve, protect, and enhance rare and endangered native plants. The list of native plants afforded protection pursuant to the Native Plant Protection Act includes those listed as rare and endangered under the CESA. The Native Plant Protection Act provides limitations on take as follows: “No person will import into this State, or take, possess, or sell within this State” any rare or endangered native plant, except in compliance with provisions of the act. Individual landowners are required to notify the CDFG at least 10 days in advance of changing land uses to allow the CDFG to salvage any rare or endangered native plant material. Due to the absence of state-listed rare, threatened, or endangered plant species on the project site, the Native Plant Protection Act was not considered in this evaluation.

5.3 Local

San Diego County General Plan

The vegetation and wildlife section of the Conservation Element (Part X) of the San Diego County General Plan includes biological resource policies relevant to the project. These policies include:

- Policy 5 (X-47): San Diego County shall encourage the use of native plant species in review of landscaping and erosion control plants for public and private projects.
- Policy 6 (X-47): If a project is determined to have significant adverse impacts on plants or wildlife, an acceptable mitigating measure may be voluntary donation of land or monies for acquisition of land of comparable value to wildlife.
- Policy 9 (X-52): When significant adverse habitat modification is unavoidable, San Diego County will encourage project designers to provide mitigating measures in their design to protect existing habitat.
- Policy 16 (X-54): The County will regulate major land-clearing projects to minimize significant soil erosion, and the destruction of archaeological, historic, and scientific resources and endangered species of plants and animals (County, 2011).

San Diego County Code of Regulatory Ordinances

The San Diego County Code of Regulatory Ordinances (Code) does not include any specific measures or ordinances protecting specific tree species (e.g., heritage trees, historic trees, landmark trees, specimen trees, etc.), nor does the Code include any other biological resource-related ordinances applicable to the project (County, 2012).

6.0 Potential Impacts

A number of direct, indirect, and cumulative impacts to biological resources could occur as a result of implementation of the project. Under the stipulations of CEQA, potential impacts to biological resources could be considered significant if actions associated with the project:

- a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional

plans, policies, or regulations, or by the CDFG or USFWS.

- b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations, or by the CDFG or USFWS.
- c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- f) Conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state habitat conservation plan.

Construction and operation of the project could impact plants and wildlife in a variety of ways. Construction activities could result in mortality or harm to sensitive species or displace wildlife and would result in the loss of habitat for plant and wildlife species. Operation of the project could result in mortality through collision or displacement of avian and bat species utilizing the project area. Use of access roads for maintenance operations could also result in the injury or mortality of wildlife species.

The following discussion describes the project's potential to impact special-status species and habitats that may occur as a result of construction and operation of the project. Potential impacts to biological resources are separated into those likely to occur from construction (both short and long-term impacts) and those that may occur as a result of substation and transmission line operation and maintenance.

6.1 Loss of Plant Communities and Habitat

Construction Impacts

Direct impacts as a result of construction activities associated with the project would include the permanent removal and temporary disturbance of vegetation communities utilized as habitat for both common and rare wildlife. Other direct impacts associated with construction of the project include fugitive dust and increased noise levels due to heavy equipment operations occurring in these areas. Indirect impacts to habitat could include alterations to existing topographical and hydrological conditions, increased erosion and sediment transport, and the establishment of non-native and invasive weeds. Operational impacts include disturbances associated with increased human presence.

Common plant and wildlife species would be impacted by the project through the direct, permanent removal of 8.59 acres of big sagebrush scrub, 4.52 acres of chamise chaparral, 0.70 acre of redshank chaparral, 0.17 acre of upper Sonoran subshrub scrub, 0.22 acre of coast live oak

woodland, as well as disturbed areas, and developed areas. Plants that are not directly removed may also be impacted by the increase in dust, and vehicle and foot traffic. **Table 3**, Temporary Vegetation Impacts and **Table 4**, Permanent Vegetation Impacts provide a summary of impact acreages by vegetation community for the project components.

**TABLE 3
TEMPORARY VEGETATION IMPACTS (ACRES)**

Project Component	Coast Live Oak Woodland	Non-Native Grassland	Chamise Chaparral	Upper Sonoran Subshrub Scrub	Big Sagebrush Scrub	Redshank Chaparral	Total
TL 6931 Fire Hardening/Wind Interconnection	0.03	0.00	1.67	0.01	0.25	0.31	2.27
Staging Yards	0.17	15.59	0.00	0.00	7.17	0.00	22.93
Access Roads/Landing Zones	0.03	0.00	0.78	0.11	0.00	0.00	0.92
Total	0.23	15.59	2.45	0.12	7.42	0.31	26.12

**TABLE 4
PERMANENT VEGETATION IMPACTS (ACRES)**

Project Component	Coast Live Oak Woodland	Non-Native Grassland	Chamise Chaparral	Upper Sonoran Subshrub Scrub	Big Sagebrush Scrub	Redshank Chaparral	Total
TL 6931 Fire Hardening/Wind Interconnection	0.16	0.00	3.74	0.01	8.59	0.70	13.20
Access Roads/Landing Zones	0.06	0.00	0.78	0.16	0.00	0.00	1.00
Total	0.22	0.00	4.52	0.17	8.59	0.70	14.20

As described below in Section 6.2: Sensitive Wildlife Species, 3.46 acres of existing (onsite) vegetation will be mitigated for as a result of permanent impacts to occupied QCB habitat. However, 10.74 acres of vegetation that is not considered occupied QCB habitat would be permanently impacted, none of which is considered a Sensitive Natural Community or suitable habitat for supporting other listed species. The plant communities found within the proposed project are widespread throughout the region. SDG&E will generally follow the Operational Protocols and Habitat Enhancement Measures outlined in the NCCP in order to reduce impacts to biological resources to a less than significant level. Therefore, the permanent removal of 10.74 acres of vegetation would not be considered a significant impact.

Common wildlife species, including gopher snake, red coachwhip, granite spiny lizard (*Sceloporus orcutti*), western fence lizard, western scrub-jay, Bewick's wren, phainopepla (*Phainopepla nitens*), mourning dove, black-throated sparrow (*Amphispiza bilineata*), California squirrel, black-tailed jackrabbit, and coyote may be displaced or inadvertently impacted directly

or indirectly through the removal of vegetation and habitat. Permanent and temporary impacts will total 40.32 acres of suitable, undisturbed habitat of varying types.

Operational Impacts

No impacts to plant communities and habitats would occur during the operational phase of the project.

6.2 Sensitive Wildlife Species

Construction Impacts

Sensitive Invertebrate Species

General biological surveys conducted in the project area found suitable QCB habitat throughout much of the project area. Focused protocol-level QCB surveys conducted in spring 2010 for the project area found five QCB adults along the proposed interconnect alignment.

The majority of the proposed project crosses through QCB habitat. As shown in Tables 5 and 6, respectively, a total of 9.75 acres of temporary and 3.46 acres of permanent impacts are anticipated to occupied QCB habitat as a result of construction of the proposed project. Direct impacts to the federally listed QCB would be considered take under FESA, as well as a significant impact under CEQA.

TABLE 5
QCB HABITAT TEMPORARY IMPACTS
(Includes 1 km radius of suitable habitat around occupied areas)

Impact	Chamise Chaparral	Upper Sonoran Subshrub Scrub	Big Sagebrush Scrub	Redshank Chaparral	Total
Temporary	1.60 ac	0.01 ac	8.04 ac	0.10 ac	9.75 ac
Mitigation Ratio 1:1					9.75 ac

TABLE 6
QCB HABITAT PERMANENT IMPACTS
(includes 1 km radius of suitable habitat around occupied areas)

Impact	Chamise Chaparral	Upper Sonoran Subshrub Scrub	Big Sagebrush Scrub	Redshank Chaparral	Total
Permanent	2.94 ac	0.01 ac	0.20 ac	0.31 ac	3.46 ac
Mitigation Ratio 2:1					6.92 ac

Sensitive Reptile and Mammal Species

Construction of the proposed project could potentially impact special-status reptile species, including coastal whiptail, rosy boa, and San Diego coast horned lizard. Approximately 40.32 acres of suitable, undisturbed habitat that includes all of the vegetated areas found within the

limits of the proposed project would be disturbed. Direct impacts (i.e., mortality) may occur during construction and operations by vehicles and the permanent removal of occupied burrows during grading. Indirect impacts during construction and operations associated with noises, ground vibration, and increased human presence could disrupt hibernation and behavior including feeding and breeding cycles. Compliance with the Operational Protocols and Habitat Enhancement Measures outlined in the NCCP would reduce potential impacts to reptile species to a less than significant level.

Construction activities associated with the proposed project may potentially impact special-status mammal species, including San Diego desert woodrat, Dulzura pocket mouse, and San Diego black-tailed jackrabbit. Potential indirect impacts to mammal species include the temporary loss of habitat and noise pollution from an increase in vehicle and equipment use. Direct impacts include permanent removal of habitat and mortality from construction vehicles and equipment.

Sensitive Amphibian Species

Low-quality, but suitable arroyo toad habitat was identified in the vicinity of the project area in Campo Creek, adjacent to Live Oak Springs Road. However, the nearest documented occurrences of arroyo toad populations are approximately 8.5 miles to the west. No high quality habitat to support arroyo toads is present within the limits of the proposed project and no arroyo toads were detected on the proposed project site during protocol surveys. The project site is buffered from these populations by topographical features (e.g., mountains) and large upland habitats. Construction of the project is not anticipated to impact arroyo toads.

Avian Species

Activities associated with construction of the project components may potentially impact nesting raptors, passerines, and other special-status bird species. Construction activities could result in the direct loss of active nests of both common and special-status bird species (including raptors) or the abandonment of active nests as a result of noises and/or vibrations generated by temporary construction activities. The MTBA and the California Fish and Game Code (3503 and 3503.5) consider the loss of active nests (nests with eggs or young) of all native bird species as unlawful. Consequently, the loss or abandonment of nests of bird species as a result of construction-related activities is considered a potentially significant impact and would conflict with state and federal laws.

Open grasslands primarily exist where staging yards would be located. Temporary impacts associated with the staging yards could indirectly impact raptor species by reducing foraging habitat. In addition, disturbance of existing plant communities can decrease common prey species (e.g., burrowing mammals) in the area. However, given the amount of available habitat, these temporary impacts are not considered significant.

Critical Habitat

The proposed project will not occur within critical habitat, including that of QCB, arroyo toad, and Peninsular bighorn sheep. No impacts to designated critical habitat of any species would occur as a result of the proposed project.

Operational Impacts

Vehicle and equipment travel on access roads during operation and maintenance may also disturb wildlife in a number of ways. Vehicles could cause direct mortality or injury to wildlife that are unable to move out of the way. As with construction, injury to or mortality of a special-status species during operations and maintenance would be significant.

Concerns regarding potential electrocution impacts to wildlife are primarily centered on avian species. Electrocutions with avian species can occur from the three following events:

- Phase to phase contact when a bird that is perched, landing, or taking off from a utility pole cross-arm comes into contact with two conductors completing an electrical circuit.
- Simultaneous contact with energized phase conductors and other equipment.
- Simultaneous contact with an energized wire and a grounded wire or other grounded device or neutral wire.

Most bird electrocutions occur on distribution systems at relatively lower voltages. This is due primarily to the spacing of the electrical conductors. On transmission poles, the wires are separated by eight to 30 feet. In distribution systems, the spacing is two to six feet. The closer spacing is more of a potential hazard to raptors and other large birds because their body size and wingspan are large enough to span the distance between the conductor wires, completing the electrical circuit.

Collision impacts of avian species with existing transmission facilities can be a significant impact. Collision impacts typically occur to migratory bird species and are generally due to poor visibility of electrical lines. Factors leading to avian collisions with existing transmission lines include a lack of visual cues that make the lines stand out against the surrounding environment. Disorientation of avian species can be caused by “light dazzle” from city/industrial light sources during evening hours, by spatial configuration of the electrical lines, and proximity to heavily used major avian flyways. The project is not located within a major flyway for migratory birds and is not located proximate to a significant light dazzle source; thus, collision impacts to avian species are anticipated to be less than significant.

The introduction of new poles and power lines (and other tall structures) in an area that otherwise does not contain these structures, may increase the amount of predation of mammals by raptors. Because the majority of the interconnection power line will generally parallel the existing TL 6931 power line, the installation of new steel poles will not significantly increase perching opportunities for raptors in the area. The potential increase in predation from adding new perch sites in areas that did not previously contain any would be minimal and less than significant.

6.3 Rare and Special-Status Plant Species

Construction Impacts

Sensitive Plant Species

Construction associated with the project will affect 40.32 acres of undisturbed habitat, including 16.01 acres of big sagebrush scrub, 6.97 acres of chamise chaparral, 1.01 acre of redshank chaparral, 0.29 acre of upper Sonoran subshrub scrub, 15.59 acres of non-native grassland, 0.45 acre of coast live oak woodland, as well as disturbed areas and developed areas. Several special-status plant species are known to occur within the vicinity of the project, and six were determined to have a medium to high potential to occur within the project, due to the presence of suitable habitat and known populations occurring in close proximity (See Table 1).

Operational Impacts

As all operation-related activities are proposed to occur on previously disturbed areas, no impacts to special-status plants species are anticipated operation-related activities.

6.4 Sensitive Natural Communities

Construction and Operational Impacts

Sensitive natural communities include riparian habitat or other sensitive natural communities identified in local or regional plans, policies, or regulations, or designated by the CDFG and USFWS. Southern willow scrub occurs within the proposed project associated with Campo Creek, but will not be impacted by construction-related activities as the power line will span the entirety of the creek. Several additional USACE and CDFG jurisdictional features; as defined by Fish and Game Code Section 1602, CWA Section 404, and Rivers and Harbors Act Section 10; exist within the proposed project, and may be impacted by project activities as described in the Jurisdictional Analysis Memorandum (Attachment A). Of the six plant communities impacted by the proposed project—chamise chaparral, big sagebrush scrub, coast live oak woodland, redshank chaparral, non-native grassland, and upper Sonoran subshrub scrub—none are specifically designated protection under local or regional plans. No impacts to sensitive natural communities would occur as a result of the proposed project.

6.5 Jurisdictional Resources

Construction Impacts

Several features within the vicinity of the project impacts are potentially subject to the jurisdiction of the USACE, CDFG, and RWQCB. Potentially jurisdictional features within the vicinity project impacts under the USACE's jurisdiction are limited to unvegetated channels, which are characterized as drainage features that have a defined bed and bank and a distinguishable OHWM, but lack hydrophytic vegetation, and are connected to a TNW. Areas of CDFG jurisdiction refer to streambeds and associated riparian scrub habitats. All areas mapped as USACE-jurisdictional waters fall within the Section 401 authority of the RWQCB, specifically the unvegetated channels. Several of these potentially jurisdictional features cross existing or proposed project access roads. Impacts to these areas would be avoided through temporarily

spanning steel plates over the drainages for equipment and vehicle access. Potential impacts to 0.069 acre (approximately 3,023 square feet) of areas under the jurisdiction of the USACE, CDFG, and RWQCB would be associated with using the open trench method proposed for undergrounding the 138 kV to the Boulevard Substation. Additional avoidance, minimization, and mitigation would result in less than significant impacts.

Operational Impacts

As all operation-related activities are proposed to occur within previously disturbed areas, no impacts to jurisdictional resources are anticipated from operation-related activities.

6.6 Wildlife Movement and Migration Corridors

Construction and Operational Impacts

The proposed project would not create barriers that would impede the local or regional movement of wildlife in the area. The proposed project is not located with a known wildlife movement corridor and wildlife will be able to pass through the site during the operational phase. During the construction phase, wildlife will be able to move through the site during periods when no activities are occurring (e.g., after hours). Impacts to wildlife passing through the area would be minimized by reducing nighttime light spillage.

6.7 Local Policies or Ordinances Protecting Biological Resources

Construction and operation of the proposed project will not conflict with any local environmental policies or ordinances promulgated to protect biological resources, as discussed below.

- *Policy 5: San Diego County shall encourage the use of native plant species in review of landscaping and erosion control plans for public and private projects.*

The proposed project does not propose any landscaped features. However, as previously indicated, vegetated areas that will be subjected to temporary impacts will be reseeded with a suitable six mix.

- *Policy 6: If a project is determined to have significant adverse impacts on plants or wildlife, an acceptable mitigation measure may be voluntary donation of land or monies for acquisition of land of comparable value to wildlife.*

Impacts to occupied QCB habitat will be mitigated at a 2:1 ratio for permanent impacts and a 1:1 ratio for temporary impacts.

- *Policy 9: When significant adverse habitat modification is unavoidable, San Diego County will encourage project designers to provide mitigating measures in their design to protect existing habitat.*

The proposed project is consistent with this policy with the implementation of the operational protocols of the NCCP and the project's proposed APMs.

- *Policy 16: The County will regulate major land-clearing projects to minimize significant soil erosion; destruction of archaeological, historic, and scientific resources; and endangered species of plants and animals.*

The proposed project does not involve major land-clearing. SDG&E will obtain all applicable ministerial permits from San Diego County for the proposed project to ensure that destruction of archaeological, historic, and scientific resources and impacts to soil erosion and endangered plants and animals are minimized and in compliance with San Diego County regulations. Further, SDG&E's APMs will ensure impacts will be minimized to the extent feasible. The proposed project is consistent with this policy.

6.8 Habitat Conservation Plans, Natural Community Conservation Plans, or Other Approved Plans

SDG&E's existing NCCP is the only conservation plan that applies to the project area. Mitigation measures that should be implemented as part of the project should be consistent with the operational protocols in the NCCP. Additionally, SDG&E should generally follow the habitat enhancement and reclamation measures described within the NCCP in order to reduce impacts to biological resources.

7.0 Recommended Mitigation Measures

Implementation of the following mitigation measures, as well as the Operational Protocols and Habitat Enhancement Measures outlined in the NCCP would help to avoid or minimize potential impacts as a result of construction of the project:

- SDG&E should conduct focused surveys for special-status plants within the TBO South 1 and Boulevard Staging Yards prior to any ground-disturbing activities. Focused surveys should coincide with the known blooming period for potentially occurring species. If a special-status species is encountered during the survey, the localities should be flagged and preserved by erecting a perimeter fence around the plants during all ground disturbing activities that would occur in the immediate vicinity.
- SDG&E should conduct protocol-level surveys for QCB prior to construction (including the TBO South 1 and Boulevard staging yards which have not been surveyed for QCB to date). Surveys are not recommended for the Motocross staging yard, as the area is disturbed and has little potential to support QCB. The surveys should be conducted within the QCB 2013 flight season, or the flight season prior to construction, as designated by the USFWS. Once the surveys have been completed, a 45-day report should be submitted to the USFWS and CPUC.
- Subsequent to approval from USFWS through Section 7 consultation, temporary and permanent impacts to QCB habitat should be mitigated at a 1:1 ratio and a 2:1 ratio, respectively, through the in-perpetuity management of 13.21 "acre credits" from the acquired Recht property. The Recht property is part of the mitigation program for the ECO Substation whereby only a portion of the property is required to be managed for

QCB, and voluntary management of the remainder for QCB is available to SDG&E as credits.

- If feasible, SDG&E should avoid construction during the nesting or breeding season (February 1 through August 31). When it is not feasible to avoid construction during the nesting or breeding season, SDG&E should perform a site survey in the area where the work is to occur. This survey will be performed to determine the presence or absence of nesting birds or other species in the work area. However, if an active nest is identified, a biological monitor and SDG&E biological lead should determine a suitable construction buffer, if necessary, to ensure that the birds are not disturbed. If the birds are federal or state-listed species, SDG&E should consult with the USFWS and CDFG as necessary to determine the construction buffer. Monitoring of the nest should continue until the birds have fledged.
- Prior to construction, all inactive raptor nests within 250 feet (or a distance determined to be appropriate by the biological monitor) of project construction shall be dismantled and removed from the site. Removal of inactive nests should occur outside the raptor breeding season (January to July). However, if it is necessary to remove an inactive raptor nest during the breeding season, a qualified biologist should supervise removal.
- Structures should be constructed to conform to the Avian Power Line Interaction Committee's *Suggested Practices for Avian Protection on Power Lines* to minimize impacts to raptors.
- Construction night lighting in sensitive habitats should be minimized to the extent feasible. Exterior lighting within the project area and adjacent to undisturbed habitat should be the lowest illumination allowed for human safety, selectively placed, shielded, and directed away from preserved habitat to the maximum extent practicable.
- Nighttime vehicle traffic volume associated with project activities should be kept to a minimum and speeds should be limited to 10 mph to prevent mortality of nocturnal wildlife species.
- At the completion of the project, all construction materials should be removed from the site.
- All new access roads constructed as part of the project that are not required as permanent access for future project operation and maintenance should either be restored or permanently closed. Where required, roads should be permanently closed using the most effective feasible and least environmentally-damaging methods appropriate to that area (e.g., stockpiling and replacing topsoil or replacing rock), with the concurrence of the underlying landowner and the governmental agency having jurisdiction.

8.0 References

- AECOM, Inc. 2010a. *45-Day Summary Report of Focused Surveys for the Quino Checkerspot Butterfly for Manzanita Wind Energy Project*. Prepared for SDG&E.
- AECOM, Inc. 2010b. *30-Day Summary Report of 2010 Focused Surveys for the Arroyo Toad for Manzanita Wind Energy Project*. Prepared for SDG&E.
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Attachment A

Jurisdictional Analysis Memorandum



SAN DIEGO GAS & ELECTRIC (SDG&E) TL 6931 FIRE HARDENING / WIND INTERCONNECT PROJECT

Jurisdictional Analysis Memorandum

Prepared for
San Diego Gas & Electric Company

March 2013



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TL 6931 FIRE HARDENING / WIND INTERCONNECT

Jurisdictional Analysis

1. Introduction and Purpose

Environmental Science Associates (ESA) conducted a jurisdictional analysis for the San Diego Gas & Electric Company (SDG&E) TL 6931 Fire Hardening / Wind Interconnect Project (Project), which includes the replacement of 5.2 miles of wooden 69 kV transmission poles with double circuit 69 kV/138 kV steel transmission poles. The Project is located in the Boulevard area of southeastern San Diego County, California, approximately 10 miles north of the United States (U.S.)-Mexico border, 15 miles west of the Imperial County border, and 50 miles east of downtown San Diego (Figures 1 and 2).

The Project consists of the following primary components:

1. On the west end of the project, at the Campo Reservation boundary on private property, a double circuit steel pole dead-end structure (Pole 1) will be installed.
2. Approximately 5.2 miles of TL 6931 from the Campo Reservation boundary to the Boulevard Substation will be fire hardened by replacing or modifying approximately 49 existing wood, single-circuit 69 kV poles with approximately 53 double-circuit dull galvanized steel poles. Additionally, two temporary wood poles will be installed for the interconnection of TL 6931 to the Boulevard East Substation until the existing Boulevard Substation is demolished at which time the two temporary wood poles would be removed. The proposed new steel poles will include 138 kV class insulators and vertical spacing and will provide for a second circuit on the rebuilt TL 6931. The new second circuit would be either a 138 kV generation interconnection circuit for the proposed Shu'luuk Wind Project (in the event that project is constructed) or a vacant position for a second circuit to be installed as needed in the future.
3. On the east end of the project, a new double circuit steel cable pole (Pole 52) will be installed. From Pole 52 to the Boulevard East Substation the 138 kV line will be constructed underground and the 69 kV line will be constructed overhead. The approximately 750 foot underground 138 kV line will be generally constructed under existing roads, while a temporary 730 foot long 69 kV line will be built overhead and used as the interconnection to the Boulevard East Substation until the Boulevard Substation is demolished. Once the new Boulevard East Substation is constructed, as part of the ECO Substation project, a new right-of-way (ROW) for the permanent 550 foot long 69 kV overhead line will be required.

4. Other ancillary facilities required to implement the proposed project, including 13 new permanent access roads for access and three permanent helicopter landing zones to facilitate on-going maintenance of the proposed project, and any temporary facilities required for construction (e.g., staging areas, guard structures, and temporary wood poles to accommodate TL 6931 interconnection to the Boulevard East Substation).

The proposed project will also result in modifications to existing 12 kV distribution facilities including the installation of one new steel distribution pole between Pole 22 and 23.

The purpose of this study was to identify and map the location and extent of the limits of waters of the U.S., including wetlands, which would fall under the jurisdiction of the Army Corps of Engineers (USACE) pursuant to the Federal Clean Water Act, Section 404 regulatory program. This wetland study also evaluated the extent of Waters of the State of California (State) that may fall under the jurisdiction of California Department of Fish and Wildlife¹ (CDFW) pursuant to Section 1602 of the Fish and Game Code of California (Streambed Alteration Agreements), and the Regional Water Quality Control Board (RWQCB) under the 401 Certification Program, the Porter-Cologne Act regulating waste discharge into waters of the State, or the Waste Discharge Requirements general permitting process. The study area included all areas that would be directly affected by the implementation of Project components, as described above.

¹ The California Department of Fish and Game (CDFG) changed its name on January 1, 2013 to The California Department of Fish and Wildlife (CDFW). In this document, references to literature published by CDFW prior to Jan. 1, 2013 are cited as 'CDFG'. The agency is otherwise referred to by its new name, CDFW.

2. Methods

2.1 Field Surveys

Prior to field surveys, a desk top analysis was conducted to obtain contextual information relevant to the survey area. ESA conducted a review of available background information pertaining to the Project layout, geography, and topography prior to conducting a jurisdictional analysis site visit in February 2013. Site maps were generated with available aerial photographs and potentially jurisdictional features were identified and marked with lines and GPS coordinates to assist in field verification. Soil types mapped within the study area were consulted prior to field efforts to target areas with potentially hydric soils.

ESA biologists Joseph Henry and Dallas Pugh conducted a site visit on February 7, 2013, to evaluate potentially jurisdictional features within the study area, defined as within 50 feet of Project impacts. The jurisdictional analysis was conducted consistent with *U.S. Army Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987). The definition of growing season and the basis of determining and recording indicators for hydrophytic vegetation, hydric soils, and wetland hydrology was based on the *Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Arid West Region (Version 2.0)*, as well as the *Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE, 2008a; USACE, 2008b). The 1987 USACE Manual, Arid West Supplement, and Field Guide to the OHWM were used for the analysis and evaluation of any normal circumstances, atypical situations, and problem areas, as needed.

Non-wetland waters of the U.S. and State were indicated if one or more USACE parameters were absent but the Ordinary High Water Mark (OHWM) was clearly visible. The OHWM of channels was determined based on observations of physical evidence that included direct observations of flow, scour marks, and drift lines of debris. The top of bank was delineated to establish the limits of waters of the State. It is assumed for the purpose of this report that USACE jurisdictional areas are also under the jurisdiction of the RWQCB. Isolated waters lacking one or more USACE parameters, and not associated with a streambed were determined to be under the sole jurisdiction of the RWQCB. The limits of potential jurisdictional features were recorded in the field with a hand-held GPS with sub-foot accuracy. The USACE jurisdictional status of these areas was determined by the in-field verification of the hydrological connection (i.e. walking the connection) between the waters and Campo Creek, a known tributary of a Traditional Navigable Water (TNW) and a USACE-jurisdictional water under U.S. Supreme Court's decision in *Rapanos v. U.S. and Carabell v. U.S. (Rapanos)*. Although located within the vicinity of the Project site, Campo Creek was not included in the study area, as it does not occur within 50 feet of Project impacts.

2.2 Jurisdictional Authority

2.2.1 Waters of the U.S.

The USACE and the Environmental Protection Agency (EPA) have issued a set of guidance documents detailing the process for determining Clean Water Act (CWA) jurisdiction following the Rapanos decision. The EPA and USACE issued a summary memorandum of the guidance for implementing the Supreme Court's decision in Rapanos that addresses the jurisdiction over waters of the United States under the CWA. The complete set of guidance documents, summarized as key points below, were used to collect relevant data for evaluation by the EPA and the USACE to determine CWA Jurisdiction over the Project site and to complete the "significant nexus test" as detailed in the guidelines.

The significant nexus test includes consideration of hydrologic and ecologic factors. For circumstances such as described in point (B) below, the significant nexus test would take into account physical indicators of flow (evidence of an OHWM), if a hydrologic connection to a TNW exists, and if the aquatic functions of the water body have a significant effect (more than speculative or insubstantial) on the chemical, physical, and biological integrity of a TNW. The USACE and EPA will apply the significant nexus standard to assess the flow characteristics and functions of the tributary drainage to determine if it significantly affects the chemical, physical and biological integrity of downstream TNW.

Rapanos Key Points Summary

- (A) The USACE and EPA will assert jurisdiction over the following waters:
- TNWs.
 - Wetlands adjacent to TNW.
 - Non-navigable tributaries of TNW that are relatively permanent.
 - Where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months).
 - Wetlands that directly abut such tributaries.
- (B) The USACE and EPA will decide jurisdiction over the following waters based on a fact-specific analysis to determine whether they have a significant nexus with a TNW:
- Non-navigable tributaries that are not relatively permanent.
 - Wetlands adjacent to non-navigable tributaries that are not relatively permanent.
 - Wetlands adjacent to but that do not directly abut a relatively permanent non-navigable tributary.
- (C) The USACE and EPA generally will not assert jurisdiction over the following features:
- Swales or erosion features (e.g., gullies, small washes characterized by low volume, infrequent, or short duration flow).
 - Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water.

2.2.2 Waters of the State

The State Water Resources Control Board (SWRCB) and the RWQCB (together “Boards”) are the principal State agencies with primary responsibility for the coordination and control of water quality. The Boards regulates activities pursuant to Section 401(a)(1) of the federal CWA as well as the Porter Cologne Water Quality Control Act (Porter-Cologne) (Water Code Section 13260). Section 401 of the CWA specifies that certification from the State is required for any applicant requesting a federal license or permit to conduct any activity including but not limited to the construction or operation of facilities that may result in any discharge into navigable waters. The certification shall originate from the State in which the discharge originates or will originate, or, if appropriate, from the interstate water pollution control agency having jurisdiction over the navigable water at the point where the discharge originates or will originate. Any such discharge will comply with the applicable provisions of Sections 301, 302, 303, 306, and 307 of the CWA.

In the Porter-Cologne, the Legislature declared that the “State must be prepared to exercise its full power and jurisdiction to protect the quality of the waters in the State from degradation...” (California Water Code Section 13000). Porter-Cologne grants the Boards the authority to implement and enforce the water quality laws, regulations, policies and plans to protect the groundwater and surface waters of the State. It is important to note that enforcement of the State's water quality requirements is not solely the purview of the Boards and their staff. Other agencies (e.g., CDFW) have the ability to enforce certain water quality provisions in state law.

Pursuant to Division 2, Chapter 6, Section 1602 of the CDFW Code, CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel or bank of any river, stream, or lake which supports fish or wildlife. A Lake or Streambed Alteration Agreement application must be submitted to CDFW for “any activity” that may substantially change the bed, channel, or bank of any river, stream or lake.” CDFW has jurisdiction over riparian habitats associated with watercourses. Jurisdictional waters are delineated by the outer edge of riparian vegetation or at the top of the bank of a stream or lake, whichever is wider. CDFW jurisdiction does not include tidal areas or isolated resources. The CDFW reviews proposed actions, and if necessary, submits to the applicant a proposal that includes measures to protect affected fish and wildlife resources. The final proposal that is mutually agreed upon by CDFW and the applicant is the Lake or Streambed Alteration Agreement.

Pursuant to the SWRCB’s Water Quality Order Number 2004-0004-DWQ, *Statewide General Waste Discharge Requirements for Dredged of Fill Discharges to Waters Deemed by the U.S. Army Corps of Engineers to be Outside of Federal Jurisdiction* (General Waste Discharge Requirements), dredging, filling, or excavation of isolated waters not under USACE jurisdiction constitutes a discharge of waste to waters of the State, and prospective dischargers are required to submit a report of waste discharge to the RWQCB.

3. Results and Conclusions

3.1 Field Survey Results

3.1.1 Soils

The U.S Department of Agriculture, Natural Resources Conservation Service (NRCS) maps five soil classes within the study area, with La Posta and Mottsville classes (both considered non-hydric soils) comprising approximately 59 percent and 38 percent, respectively, of the mapped soils within the study area (NRCS 2007). The soil types mapped within the study area are described in detail below.

Kitchen Creek loamy coarse sand (9 to 15 percent slopes, eroded) soils are somewhat excessively drained, with medium runoff and moderately rapid permeability. These soils typically occur in chaparral and grassland habitats at elevations between 2,500 and 4,500 feet above mean sea level (amsl). These soils typically originate from weathered granitic or other acid igneous rocks and are considered uncommon throughout the Coastal Ranges in southern California. These soils are not considered to be hydric.

La Posta loamy coarse sand (5 to 30 percent slopes, eroded and severely eroded) and La Posta rocky loamy coarse sand (5 to 30 percent slopes, eroded) soils are somewhat excessively drained, with medium runoff and moderately rapid permeability. These soils typically occur in mountainous areas dominated by chaparral, oak woodland, and grassland habitats at elevations between 2,500 and 4,000 feet amsl. These soils typically originate from weathered granitic rocks and are common throughout the Coastal Ranges in southern California. These soils are not considered to be hydric.

Loamy alluvial land consists of unconsolidated alluvium or colluvium that typically occurs within the floodplains of streams in mountainous areas, and less commonly within depressional areas surrounded by upland plant communities. These soils are somewhat poorly drained, and have moderate permeability. These soils are included on the NRCS hydric soils list, and are mapped within the southeast corner of the Boulevard Staging Yard, in the vicinity of Feature H (NRCS, 2007; Figure 4H).

Mottsville loamy coarse sand (2 to 9 percent slopes) soils are excessively drained with negligible or very low runoff. These soils typically occur in mountainous areas dominated by big sagebrush habitats at elevations between 4,400 and 5,400 feet amsl. These soils typically originate from weathered granitic rocks and are formed on alluvial fans and fan aprons. Mottsville loamy coarse sand soils are common throughout western Nevada and arid environments within southern California. These soils are not considered to be hydric.

Tollhouse rocky coarse sandy loam (30 to 65 percent slopes) soils are somewhat excessively to excessively drained, with rapid to very rapid runoff, and moderately rapid to rapid permeability. These soils typically occur in steep mountainous areas dominated by chaparral habitats at

elevations between 2,000 and 8,000 feet amsl. These soils typically originate from weathered granitic rocks and are common throughout the intermediate elevations of the Sierra Nevada Mountains, and ranges in southwestern California. These soils are not considered to be hydric.

3.1.2 Vegetation

Seven dominant plant communities occur within the Project area: big sagebrush scrub, chamise chaparral, redshank chaparral, upper Sonoran subshrub scrub, non-native grassland, southern willow scrub, and coast live oak woodland. Within the study area, numerous ephemeral and isolated swales and erosion features are present within upland plant communities (i.e. big sagebrush scrub, chamise chaparral, redshank chaparral, upper Sonoran subshrub scrub, non-native grassland, and coast live oak woodland). Southern willow scrub is mapped within the vicinity of Campo Creek, and although within the Project area, is not included in the study area. The majority of the channels and drainages in the study area lacked hydrophytic vegetation, and occurred within upland plant communities dominated by facultative and obligate upland species. Facultative upland species occasionally occur in wetlands, but are mostly associated with uplands. Obligate upland species rarely occur in wetlands, and almost always occur in uplands. Features dominated by upland vegetation, and lacking any hydrophytic vegetation (Figures 4A, 4B, 4C, 4D, 4E, and 4G), were mapped as unvegetated streambed.

Although the majority of the channels and drainages in the study area occurred within uplands plant communities, hydrophytic vegetation was observed in two features within the study area (Figures 4F and 4H). However, the hydrophytic vegetation present within these features was observed to be patchy, and was not prevalent enough to pass the USACE dominance test (Environmental Laboratory 1987). Hydrophytic plants noted within these features included arroyo willow (*Salix lasiolepis*) and Goodding's willow (*S. gooddingii*), both facultative wetland species. Facultative wetland species usually occur in wetlands, but occasionally occur in uplands.

3.1.3 Hydrology

Water that flows through the unvegetated channel features (Figures 4A, 4B, 4C, 4D, 4E, and 4G) within the Project site originates from the surrounding uplands. These features are hydrologically connected to Campo Creek, which connects to the Pacific Ocean via Tecate Creek, a known tributary of the Tijuana River (Figure 5). Based on observations of the short duration of flow in the channel segments after rain events during several site visits to the Project site, and the criteria from Section 2.2, the unvegetated channel features are considered non-relatively permanent waters (non-RPWs) or ephemeral drainages.

Hydrology within the vicinity of the features containing hydrophytic vegetation, Figures 4F and 4H respectively, originates from surrounding uplands. An OHWM was clearly visible within Feature H (Figure 4H) which drains into a federal wetland just east of McCain Road. Feature F (Figure 4F) lacked an identifiable OHWM or other physical evidence of flow and lacks hydrologic connectivity.

3.1.4 Feature Detail

Feature A (Figure 4A) occurs within proximity to Pole 1, and crosses an existing TL 6931 access road. The feature originates within chamise chaparral habitat to the west of the existing access road and flows generally east through coast live oak woodland and big sagebrush scrub habitats before draining into Campo Creek via a storm drain system that runs underneath Old Highway 80. Within the study area, no hydric soils or hydrophytic vegetation are present with the feature. Based on observations of short duration flow following rain events, the feature is considered an ephemeral drainage.

Feature B (Figure 4B) occurs within proximity to an existing TL 6931 access road in the northwest portion of the Project area. The feature originates within chamise chaparral habitat to the northeast as unchannelized sheet flow then channelizes within oak woodland habitat and flows generally south through non-native grassland and big sagebrush scrub before draining directly into Campo Creek. Downstream of Feature B, but upstream of Campo Creek, the channel crosses another section of existing TL 6931 access road, and is analyzed as Feature C. Within the study area, no hydric soils or hydrophytic vegetation are present with the feature. Based on observations of short duration flow following rain events, the feature is considered an ephemeral drainage.

Feature C (Figure 4C) is the downstream continuation of Feature B, and occurs within proximity to an existing TL 6931 access road in the western portion of the Project area. Feature B flows generally south through non-native grassland and big sagebrush scrub present within the immediate vicinity of Feature C before draining directly into Campo Creek. Within the study area, no hydric soils or hydrophytic vegetation are present with the feature. Based on observations of short duration flow following rain events, the feature is considered an ephemeral drainage.

Feature D (Figure 4D) occurs within proximity to Pole 14 and associated helicopter landing zone, and crosses two sections of proposed TL 6931 access road. The feature originates within big sagebrush scrub habitat to the east and flows generally west through big sagebrush scrub, oak woodland, and non-native grassland habitats before draining directly into Campo Creek near Live Oak Springs Road. Within the study area, no hydric soils or hydrophytic vegetation are present with the feature. Based on observations of short duration flow following rain events, the feature is considered an ephemeral drainage.

Feature E (Figure 4E) occurs within proximity to Pole 24, and crosses an existing TL 6931 access road. The feature originates within chamise chaparral habitat to the northeast of the existing access road and flows generally southwest along State Route 94 through redshank chaparral, chamise chaparral oak woodland, and non-native grassland habitats before draining into Campo Creek just west of Live Oak Springs Road. Within the study area, no hydric soils or hydrophytic vegetation are present with the feature. Based on observations of short duration flow following rain events, the feature is considered an ephemeral drainage.

Feature F (Figure 4F) occurs within proximity to Poles 31 and 32, and is within the immediate vicinity of, although not crossed by, an existing TL 6931 access road. The feature appears to

drain the upland chamise chaparral habitat, although no signs of consistent channelized flow are present. Immediately west of the elevated access road an artificially created basin exists. Although this basin was not observed to hold water, it appears to have altered the hydrologic regime sufficient to allow for the establishment of hydrophytic vegetation, specifically arroyo willow, present to the west and east of the elevated existing TL 6931 access road. Due to the disturbed hydrology present at this feature, further review is required to determine if there is a hydrologic connection to Campo Creek, or other tributary of a TNW. Within the study area, no hydric soils are present with the feature.

Feature G (Figure 4G) occurs within proximity to Poles 52-1, 52-2, and 53. The feature also crosses an existing TL 6931 access road, as well the proposed underground component of the 138 kV transmission line. The feature originates within chamise chaparral habitat to the south of Pole 52-1 and flows generally north through chamise chaparral and disturbed habitats before joining a roadside feature along Old Highway 80 which drains into Campo Creek just west of Live Oak Springs Road. Within the study area, no hydric soils or hydrophytic vegetation are present with the feature. Based on observations of short duration flow following rain events, the feature is considered an ephemeral drainage.

Feature H (Figure 4H) occurs within proximity to the Boulevard Staging Yard. The feature originates within big sagebrush scrub habitat to the west of the Boulevard Staging Yard and flows generally south then east through big sagebrush scrub and non-native grassland habitats along Old Highway 80 before terminating within non-native grassland habitat to the east of McCain Valley Road. The presence of Old Highway 80 appears to have concentrated the hydrology within the feature sufficient to allow for the establishment of hydrophytic vegetation, specifically Goodding's willow, within the study area. Although hydrophytic vegetation was present within the feature, it was not prevalent enough to pass the USACE dominance test (Environmental Laboratory 1987), as the feature was dominated by facultative and obligate upland species, including big sagebrush (*Artemisia tridentata*) and California buckwheat (*Eriogonum fasciculatum*). Loamy alluvial lands, which are on the NRCS hydric soils list, are mapped within close proximity to the feature near the southeast corner of the Boulevard Staging Yard. Despite the mapping of hydric soils within close proximity of the feature, no hydric characteristics were observed within the soils present within the study area. Based on observations of short duration flow following rain events, the feature is considered an ephemeral drainage.

3.2 Conclusions

3.2.1 Non-Wetland Waters of the U.S.

Potentially jurisdictional features within the study area under the USACE's jurisdiction are limited to non-wetland waters of the U.S. characterized as drainage features that have a defined bed and bank and a distinguishable OHWM, but lack hydrophytic vegetation, and are connected to a TNW.

A significant nexus determination is required for the USACE to take jurisdiction over (1) non-RPWs that flow directly or indirectly into TNWs; (2) wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs; and, (3) wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.

The unvegetated channel features within the vicinity of Project impacts were identified as non-wetland waters of the U.S. and State (Features A, B, C, D, E, and G) under the jurisdiction of USACE, the RWQCB and CDFW (Table 1), as indicated by the presence of wetland hydrology and determination of hydrologic connectivity to a TNW (Figure 5). These non-wetland waters were determined to be connected to the Pacific Ocean via Campo Creek, which connects with Tecate Creek before joining the Tijuana River, and hence is under the jurisdiction of the USACE, the RWQCB and CDFW (Ponce 2005). Feature H is a channel vegetated with predominantly upland vegetation with a scattering of arroyo willow, draining into a federal wetland just east of McCain Road and is also considered a non-wetland water of the U.S.

Potential impacts to 0.069 acre (approximately 3,023 square feet) of USACE-jurisdictional non-wetland waters within Feature G occur within the vicinity of Pole 52-1 (Figure 4G) and would be associated with using the open trench method proposed for undergrounding the 138 kV. Additional avoidance, minimization, and mitigation measures may be necessary to avoid impacts.

3.2.2 Waters of the State

CDFW

Areas of CDFW jurisdiction refer to streambeds and associated riparian scrub habitats. A total of 1.89 acres of CDFW-jurisdictional areas were mapped within the study area (Table 1).

Based on the presence of a distinguishable channel, all unvegetated channels under USACE jurisdiction (Features A, B, C, D, E, and G) were also determined to be under the jurisdiction of the CDFW. Additionally, Feature H was determined to support riparian vegetation associated with a distinguishable channel. Impacts to several CDFW-jurisdictional areas (Feature A, B, C, D, and E) would be avoided through temporarily spanning steel plates over the drainages for equipment and vehicle access. Impacts to Feature H associated with the construction of the Boulevard Staging Yard are not expected to occur as the Project is anticipated to impact less than half of the acreage within the current footprint for the staging yard. Additionally, the establishment of a 25-foot buffer between Feature H and the impact area associated with the Boulevard Staging Yard is recommended to avoid any potential impacts. Potential impacts to

0.069 acre (approximately 3,023 square feet) of CDFW-jurisdictional areas within Feature G occur within the vicinity of Pole 52-1 (Figure 4G) and would be associated with using the open trench method proposed for undergrounding the 138 kV. Additional avoidance, minimization, and mitigation measures may be necessary to avoid impacts.

RWQCB

All areas mapped as USACE-jurisdictional waters fall within the Section 401 authority of the RWQCB, specifically the unvegetated channels (Features A, B, C, D, E, and G). Feature F supports hydrophytic vegetation, but does not support hydric soils and lacks a hydrologic connection to Campo Creek or other TNW tributary.

Impacts to several RWQCB-jurisdictional areas (Features A, B, C, D, and E) would be avoided during construction activities by temporarily spanning steel plates over the drainages for equipment and vehicle access. No impacts to Feature F are expected. Potential impacts to 0.069 acre (approximately 3,023 square feet) of RWQCB-jurisdictional areas within Feature G occur within the vicinity of Pole 52-1 (Figure 4 G) and would be associated with using the open trench method proposed for undergrounding the 138 kV. Additional avoidance, minimization, and mitigation measures may be necessary to avoid impacts.

**TABLE 1
SUMMARY OF JURISDICTIONAL ACREAGE WITHIN STUDY AREA**

Agency	Non-wetland Water of the U.S./Streambed	Isolated water of the State ²	Total
USACE	1.89	0.00	1.89
CDFW	1.89	0.0	1.89
RWCQB	1.89	0.07	1.96

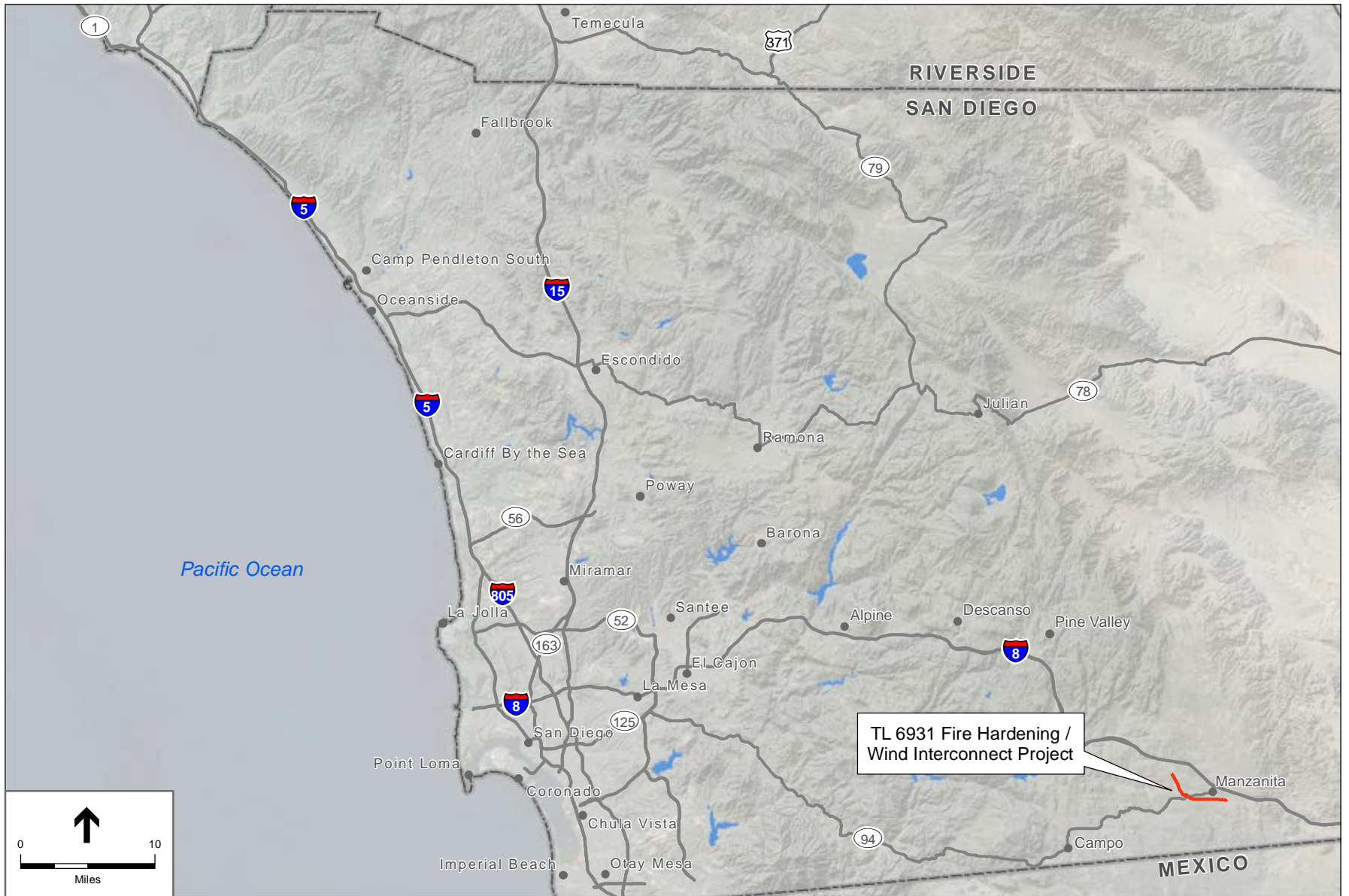
²The area defined as freshwater marsh in Figure 4F is an artificially constructed basin that lacks hydrologic connection to Campo Creek or other TNW tributary. Although Campo Creek contains riparian scrub habitat under the jurisdiction of the USACE, CDFW, and RWQCB, this feature was not within the study area as it does not occur within 50 feet of Project impacts.

4. References

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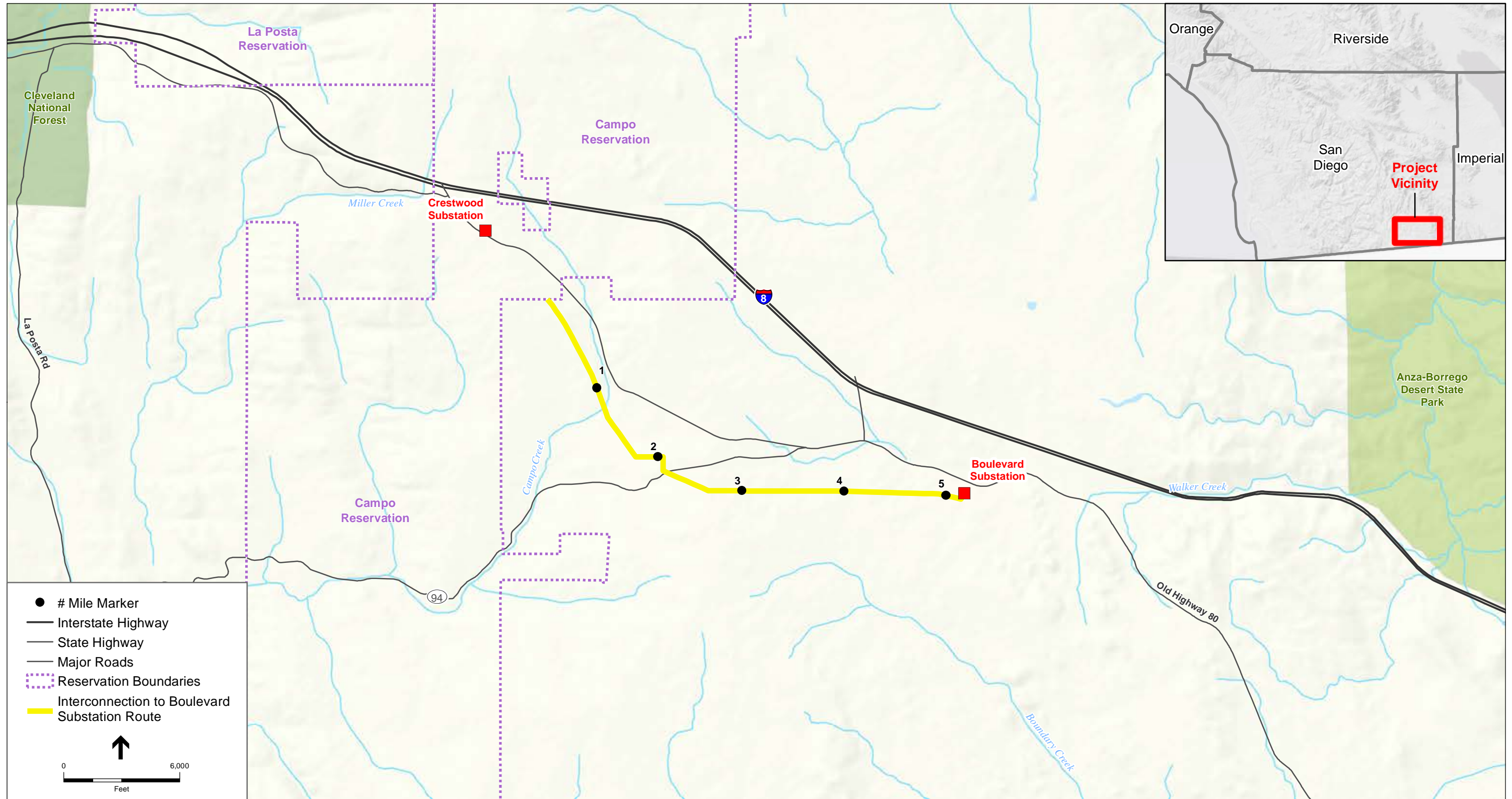
FIGURES



SOURCE: ESRI (2012)

Jurisdictional Assessment Report - TL 6931 Fire Hardening / Wind Interconnect Project . 210582

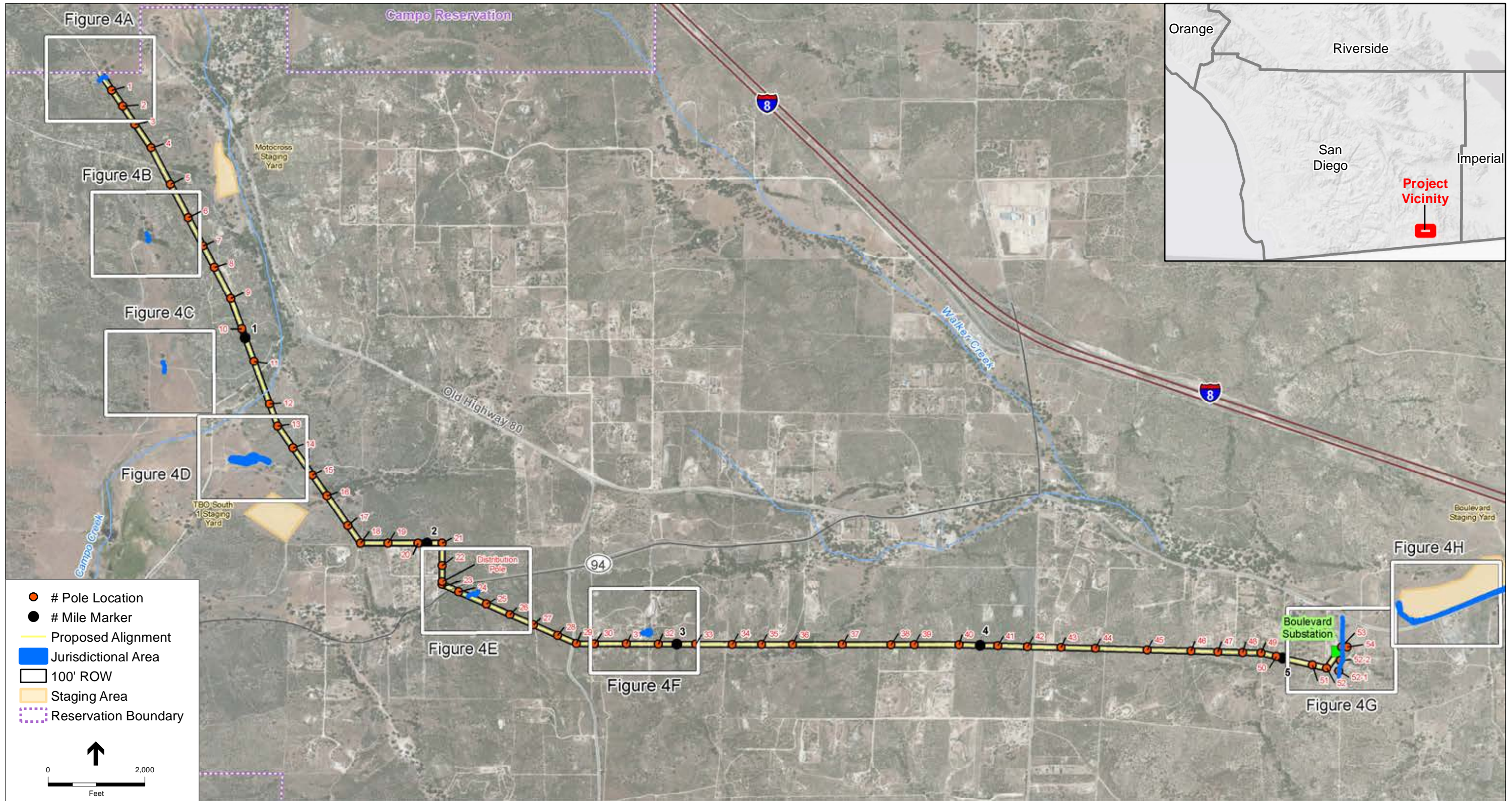
Figure 1
Regional Location



SOURCE: Sempra Utilities (2011), ESRI (2010), USGS (2010)

Jurisdictional Assessment Report - TL 6931 Fire Hardening / Wind Interconnect Project . 210582

Figure 2
Project Location Map



SOURCE: Sempra Utilities (2011), ESRI (2010), Landiscor Aerial (2010)

Jurisdictional Assessment Report - TL 6931 Fire Hardening / Wind Interconnect Project - 210582

Figure 3
Proposed Alignment



SOURCE: Sempra Utilities (2011), ESRI (2010), NHD

SDG&E Wind Interconnect Project . 210582

Figure 4A

Feature A Jurisdictional Detail



SOURCE: Sempra Utilities (2011), ESRI (2010), NHD

SDG&E Wind Interconnect Project . 210582

Figure 4B

Feature B Jurisdictional Detail



SOURCE: Sempra Utilities (2011), ESRI (2010), NHD

SDG&E Wind Interconnect Project . 210582

Figure 4C

Feature C Jurisdictional Detail



SOURCE: Sempra Utilities (2011), ESRI (2010), NHD

SDG&E Wind Interconnect Project . 210582

Figure 4D

Feature D Jurisdictional Detail



SOURCE: Sempra Utilities (2011), ESRI (2010), NHD

SDG&E Wind Interconnect Project . 210582

Figure 4E

Feature E Jurisdictional Detail

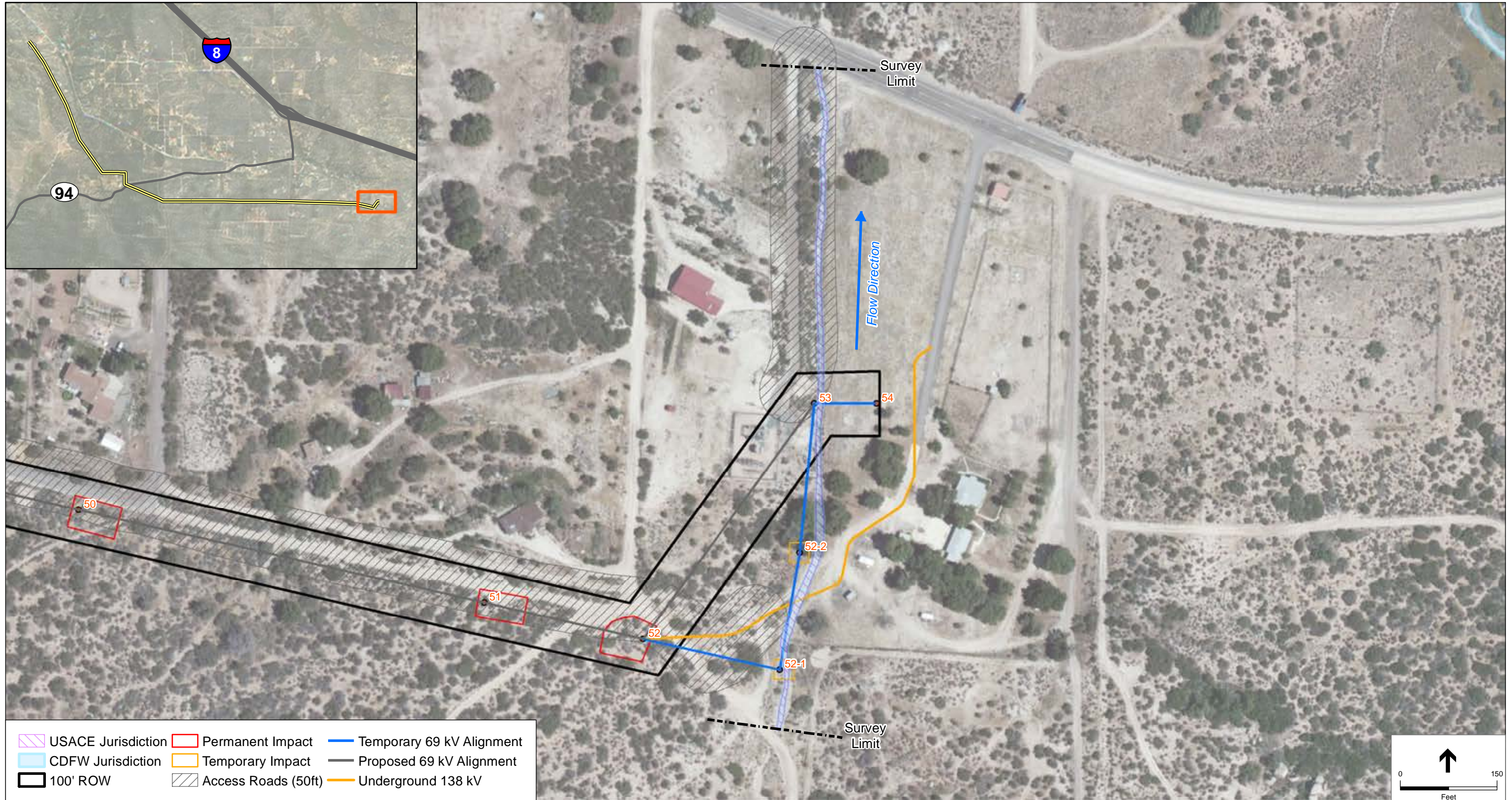


SOURCE: Sempra Utilities (2011), ESRI (2010), NHD

SDG&E Wind Interconnect Project . 210582

Figure 4F

Feature F Jurisdictional Detail



SOURCE: Sempra Utilities (2011), ESRI (2010), NHD

SDG&E Wind Interconnect Project . 210582

Figure 4G

Feature G Jurisdictional Detail



SOURCE: Sempra Utilities (2011), ESRI (2010), NHD

SDG&E Wind Interconnect Project . 210582

Figure 4H

Feature H Jurisdictional Detail

PHOTOGRAPHS



Photograph 1: Feature A
Facing downstream (generally east). Photograph taken from within the channel.



Photograph 2: Feature B
Facing downstream (generally south). Photograph taken from within the channel.



Photograph 3: Feature C

Facing downstream (generally south). Photograph taken just west of the channel.



Photograph 4: Feature D

Facing upstream (generally east). Photograph taken from within the channel.



Photograph 5: Feature E
Facing downstream (generally southwest). Photograph taken from existing access road.



Photograph 6: Feature F
Facing generally east. Photograph taken from existing access road.



Photograph 7: Feature G
Facing upstream (generally east). Photograph taken from within the channel.



Photograph 8: Feature H
Facing downstream (generally east) along southern edge of Boulevard Staging Yard.



Photograph 9: Feature H
Facing upstream (generally northwest) along western edge of Boulevard Staging Yard.



Photograph 10: Erosional Feature
Erosional feature common along existing roadways through the Study Area. Facing generally south.

Attachment B

Species Compendia



PLANT SPECIES OBSERVED WITHIN PROPOSED PROJECT

Scientific Name	Common Name	Comments
<i>Adoxaceae</i>	Moschatel Family	
<i>Sambucus nigra</i>	blue elderberry	formerly <i>Sambucus mexicana</i>
<i>Agavaceae</i>	Agave Family	
<i>Agave deserti</i>	desert agave	
<i>Hesperoyucca whipplei</i>	our lord's candle	
<i>Yucca shidigera</i>	Mojave yucca	
<i>Amaranthaceae</i>	Amaranth Family	
<i>Chenopodium album</i>	lambsquarters	
<i>Chenopodium californicum</i>	California goosefoot	
<i>Salsola australis</i>	Russian thistle	formerly <i>Salsola tragus</i>
<i>Anacardiaceae</i>	Sumac Family	
<i>Malosma laurina</i>	laurel sumac	
<i>Rhus ovata</i>	sugarbush	
<i>Rhus trilobata</i>	skunkbush	
<i>Apiaceae</i>	Umbel Family	
<i>Bowlesia incana</i>	American bowlesia	
<i>Lomatium mohavense</i>	Mojave lomatium	
<i>Taushia arguta</i>	southern umbellwart	
<i>Apocyanaceae</i>	Dogbane Family	
<i>Asclepias californica</i>	California milkweed	
<i>Aspodelaceae</i>	Asphodel Family	
<i>Asphodelus fistulosus</i>	asphodel	
<i>Asteraceae</i>	Sunflower Family	
<i>Ambrosia sp.</i>	bursagee	
<i>Ambrosia psilostachya</i>	western ragweed	
<i>Artemisia dracunculus</i>	tarragon	
<i>Artemisia tridentata</i>	big sagebrush	
<i>Baccharis pilularis</i>	coyotebrush	
<i>Baccharis salicifolia</i>	mulefat	
<i>Centaurea melitensis</i>	Maltese star thistle	
<i>Chaenactis fremontii</i>	desert pincushion	
<i>Chaenactis glabriuscula</i>	yellow pincushion	
<i>Cirsium occidentale</i>	western thistle	
<i>Corethrogyne filaginifolia</i>	California aster	
<i>Deinandra fasciculatus</i>	fascicled tarplant	
<i>Encelia farinose</i>	brittlebush	
<i>Ericameria linearifolia</i>	interior golden bush	
<i>Eriophyllum confertiflorum</i>	golden yarrow	
<i>Eriophyllum wallacei</i>	Wallace's wooly daisy	
<i>Filago sp.</i>	filago	may be reclassified to <i>Logfia</i> sp.
<i>Grindelia stricta</i>	coastal gumweed	
<i>Gutierrezia californica</i>	California matchweed	
<i>Gutierrezia sarothrae</i>	snakeweed	
<i>Hulsea californica</i>	San Diego hulsea	
<i>Isocoma menziesii</i>	goldenbush	
<i>Lastenia gracilis</i>	common goldfields	
<i>Layia glandulosa</i>	white tidy tips	
<i>Layia platyglossa</i>	coastal tidy tips	
<i>Malacothrix glabrata</i>	desert dandelion	
<i>Porophyllum gracile</i>	odora	
<i>Pseudognaphalium californicum</i>	green everlasting	formerly of the genus <i>Gnaphalium</i>
<i>Pseudognaphalium canescens</i>	Wright's cudweed	
<i>Rafinesquia californica</i>	California chicory	
<i>Senecio vulgaris</i>	common groundsel	
<i>Stephanomeria pauciflora</i>	brownplume wirelettuce	
<i>Stephanomeria virgata</i>	rod wirelettuce	
<i>Stylocine sp.</i>	nest-straw	
<i>Uropappus lindleyi</i>	silver puffs	
<i>Boraginaceae</i>	Borage Family	
<i>Amsinckia menziesii</i>	common fiddleneck	
<i>Cryptantha intermedia</i>	common cryptantha	
<i>Heliotropium curassivicum</i>	salt heliotrope	
<i>Pectocarya linearis</i>	slender pectocarya	
<i>Plagiobothrys tenellus</i>	slender popcornflower	
<i>Brassicaceae</i>	Mustard Family	
<i>Brassica nigra</i>	black mustard	
<i>Caulanthus heterophyllus</i>	San Diego jewel flower	

Scientific Name	Common Name	Comments
<i>Caulanthus lasiophylla</i>	California mustard	formerly of the genus <i>Guillenia</i>
<i>Descurainia pinnata</i>	western tansy-mustard	
<i>Hirschfeldia incana</i>	short-pod mustard	
<i>Lepidium nitidum</i>	shining peppergrass	
<i>Sisymbrium irio</i>	London rocket	
<i>Thysanocarpus curvipes</i>	lacepod	
Cactaceae	Cactus Family	
<i>Cylindropuntia californica</i> var. <i>parkeri</i>	cane cholla	
<i>Opuntia oricola</i>	chaparral pricklypear	
Crassulaceae	Stonecrop Family	
<i>Dudleya abramsii</i> ssp. <i>abramsii</i>	Abram's liveforever	
Cucurbitaceae	Gourd Family	
<i>Cucurbita foetidissima</i>	calabazilla	
<i>Cucurbita palmata</i>	coyote melon	
<i>Marah macrocarpa</i>	wild cucumber	formerly <i>Marah macrocarpa</i>
Cuscutaceae	Dodder Family	
<i>Cuscuta californica</i>	chaparral dodder	
Ephedraceae	Joint-fir Family	
<i>Ephedra californica</i>	California ephedra	
Ericaceae	Heath Family	
<i>Arctostaphylos glauca</i>	big berry manzanita	
<i>Arctostaphylos pungens</i>	Mexican manzanita	
Euphorbiaceae	Spurge Family	
<i>Euphorbia albomarginata</i>	white-margin sandmat	
<i>Euphorbia melanadenia</i>	rattlesnake weed	
<i>Euphorbia pepus</i>	petty spurge	
<i>Ricinus communis</i>	castor bean	
Fabaceae	Pea Family	
<i>Acmispon argophyllus</i>	silver-leaf lotus	formerly of the genus <i>Lotus</i>
<i>Acmispon glaber</i>	deerweed	formerly of the genus <i>Lotus</i>
<i>Acmispon strigosus</i>	strigose lotus	formerly of the genus <i>Lotus</i>
<i>Astragalus</i> sp.	locoweed	
<i>Lupinus</i> sp.	lupine	
<i>Lupinus bicolor</i>	miniature lupine	
<i>Lupinus hirsutissimus</i>	stinging lupine	
<i>Lupinus truncatus</i>	truncate leaf lupine	
<i>Melilotus indicus</i>	Indian sweetclover	formerly <i>Melilotus indica</i>
<i>Trifolium willdenovii</i>	tomcat clover	
Fagaceae	Oak Family	
<i>Quercus agrifolia</i>	coast live oak	
<i>Quercus berberidifolia</i>	California scrub oak	
Garryaceae	Silk Tassel Family	
<i>Garrya veatchii</i>	canyon silk tassel	
Geraniaceae	Geranium Family	
<i>Erodium cicutarium</i>	red stem filaree	
Hydrophyllaceae	Waterleaf Family	
<i>Emmenanthe penduliflora</i>	whispering bells	
<i>Eriodictyon crassifolium</i>	thick-leaved yerba santa	
<i>Eriodictyon trichocalyx</i>	shiny-leaved yerba santa	
<i>Eucrypta chrysanthemifolia</i>	common eucrypta	
<i>Phacelia cicutaria</i>	caterpillar phacelia	
<i>Phacelia distans</i>	wild heliotrope	
Lamiaceae	Mint Family	
<i>Marrubium vulgare</i>	hore-hound	
<i>Salvia apiana</i>	white sage	
<i>Salvia carduacea</i>	thistle sage	
<i>Salvia columbariae</i>	chia	
<i>Trichostema lanatum</i>	wooly bluecurls	
Laliaceae	Lily Family	
<i>Allium praecox</i>	early onion	
<i>Calochortus splendens</i>	splendid mariposa	
Loasaceae	Eveningstar Family	
<i>Mentzelia montana</i>	montane mentzelia	
Malvaceae	Mallow Family	
<i>Malacothamnus fasciculatus</i>	chaparral mallow	
<i>Sphaeralcea ambigua</i>	apricot mallow	
Nyctaginaceae	Four O-Clock Family	
<i>Mirabilis laevis</i>	wishbone bush	
Onagraceae	Primrose Family	

Scientific Name	Common Name	Comments
<i>Camissonia californica</i>	California suncup	
<i>Camissonia strigulosa</i>	sandysoil suncup	
<i>Epilobium canum</i>	California fuchsia	
<i>Oenothera californica</i>	California evening-primrose	
Orobanchaceae	Broomrape Family	
<i>Castilleja exserta</i>	purple owl's clover	
<i>Castilleja foliolosa</i>	Indian paintbrush	
Paeoniaceae	Peony Family	
<i>Paeonia californica</i>	California peony	
Papaveraceae	Poppy Family	
<i>Dendromecon rigida</i>	bush poppy	
<i>Eschscholzia californica</i>	California poppy	
<i>Platystemon californicus</i>	cream cups	
Phrymaceae	Lopseed Family	
<i>Mimulus auranticus</i>	sticky monkey flower	
<i>Mimulus guttatus</i>	seep monkey flower	
<i>Mimulus pilosus</i>	downy monkey flower	
Plantaginaceae	Snapdragon Family	
<i>Antirrhinum nuttallianum</i>	Nuttall's snapdragon	
<i>Collinsia concolor</i>	Chinese houses	
<i>Keckiella ternata</i>	scarlet keckiella	
<i>Penstemon centranthifolius</i>	scarlet bugler	
<i>Penstemon spectabilis</i>	showy penstemon	
<i>Plantago erecta</i>	dot-seed plantain	
Poaceae	Grass Family	
<i>Avena barbata</i>	slender wild oat	
<i>Bromus diandrus</i>	riggut grass	
<i>Bromus hordeaceus</i>	soft brome	
<i>Bromus madritensis</i>	foxtail chess	
<i>Bromus rubens</i>	red brome	
<i>Bromus tectorum</i>	cheat grass	
<i>Cynodon dactylon</i>	Bermuda grass	
<i>Festuca microstachys</i>	Pacific fescue	formerly of the genus <i>Vulpia</i>
<i>Hordeum murinum</i>	foxtail barley	
<i>Melica imperfecta</i>	coast range melic	
<i>Schismus barbatus</i>	Mediterranean schismus	
<i>Stipa coronatum</i>	giant stipa	formerly of the genus <i>Achnatherum</i>
Polemoniaceae	Phlox Family	
<i>Eriastrum densifolium</i>	chaparral woolly-star	
<i>Eriastrum filifolium</i>	thread-leaved woolly-star	
<i>Gilia diegensis</i>	San Diego gilia	
Polygonaceae	Buckwheat Family	
<i>Chorizanthe brevicorn</i>	brittle spineflower	
<i>Chorizanthe fimbriata</i>	fringed spineflower	
<i>Eriogonum elongatum</i>	tall buckwheat	
<i>Eriogonum fasciculatum</i> var. <i>polifolium</i>	California buckwheat	
<i>Eriogonum gracile</i>	slender buckwheat	
<i>Eriogonum wrightii</i>	foothill buckwheat	
<i>Polygonum aviculare</i> ssp. <i>depressum</i>	common knotweed	formerly <i>Polygonum arenastrum</i>
<i>Pterostegia drymarioides</i>	granny's hairnet	
<i>Rumex crispus</i>	curly dock	
Portulacaceae	Portulac Family	
<i>Calandrinia ciliata</i>	red maids	
<i>Calyptridium monandrum</i>	common pussypaws	
<i>Claytonia parviflora</i>	narrow leaf miner's-lettuce	
<i>Claytonia perfoliata</i>	miner's-lettuce	
Pteridaceae	Cliff-break Ferns	
<i>Pellaea mucronata</i>	bird's foot cliff-break	
<i>Pentagramma triangularis</i>	silverback fern	
Ranunculaceae	Buttercup Family	
<i>Clematis pauciflora</i>	ropevine clematis	
<i>Delphinium parishii</i> ssp. <i>subglobosum</i>	oceanblue larkspur	
<i>Thalictrum fendleri</i>	meadow rue	
Rhamnaceae	Buckthorn Family	
<i>Ceanothus cuneatus</i> var. <i>cuneatus</i>	buck brush	
<i>Ceanothus greggii</i>	cup-leaf lilac	
<i>Ceanothus leucodermis</i>	chaparral whitethorn	
<i>Ceanothus megacarpus</i>	bigpod lilac	

Scientific Name	Common Name	Comments
<i>Rhamnus crocea</i>	redberry buckthorn	
Rosaceae	Rose Family	
<i>Adenostomafasciculatum</i>	chamise	
<i>Adenostoma sparsifolium</i>	redshanks	
<i>Cercocarpus betuloides</i>	mountain mahogany	
<i>Prunus ilicifolia</i>	hollyleaf cherry	
Rubiaceae	Coffee Family	
<i>Galium angustifolium</i>	bedstraw	
<i>Galium aparine</i>	common bedstraw	
Salicaceae	Willow Family	
<i>Populus freemontii</i>	cottonwood tree	
<i>Salix goodingii</i>	Gooding's willow	
<i>Salix lasiolepis</i>	arroyo willow	
Simmondsiaceae	Joboa Family	
<i>Simmondsia chinensis</i>	Jojoba	
Solanaceae	Nightshade Family	
<i>Datura wrightii</i>	Jimson weed	
<i>Nicotina glauca</i>	tree tobacco	
<i>Solanum umbelliferum</i>	blue witch nightshade	
<i>Solanum xanti</i>	chaparral nightshade	
Tamiraceae	Tamarix Family	
<i>Tamarix ramosissima</i>	salt cedar	
Themidaceae	Themida Family	
<i>Dichelostemma capitatum</i>	blue dicks	
Urticaceae	Nettle Family	
<i>Urtica dioica</i>	stinging nettle	
Viscaceae	Mistletoe Family	
<i>Phoradendron californicum</i>	Desert Mistletoe	

WILDLIFE SPECIES OBSERVED WITHIN PROPOSED PROJECT

Scientific Name	Common Name	Comments
INVERTEBRATES		
Hesperiidae	Skippers	
<i>Erynnis funeralis</i>	funeral duskwing	
<i>Erynnis tristis</i>	mournful duskwing	
<i>Erynnis propertius</i>	propertius duskywing	
<i>Heliopetes ericetorum</i>	northern white-skipper	
<i>Hesperia juba</i>	Juba skipper	
<i>Hylephila phyleus</i>	fiery skipper	
Lycaenidae	Hairstreaks	
<i>Callophrys perplexa</i>	perplexing hairstreak	
<i>Celastrina ladon</i>	echo blue	
<i>Euphilotes battoides</i>	square spotted blue	
<i>Everes amyntula</i>	western tailed-blue	
<i>Glaucopsyche lygdamus</i>	southern blue	
<i>Glaucopsyche piasus umbrosa</i>	arrowhead blue	
<i>Icaricia acmon</i>	acmon blue	
<i>Icaricia monticola</i>	lupine blue	
<i>Incisalia augustinus</i>	western brown elfin	
<i>Plebius Melissa</i>	Melissa blue	
Nymphalidae	Brush-footed Butterflies	
<i>Euphydryas editha quino</i>	quino checkerspot butterfly	
<i>Junonia coenia</i>	common buckeye	
<i>Nymphalis antiopa</i>	mourning cloak	
<i>Phyciodes mylitta</i>	Mylitta crescent	
<i>Polygonia satyrus</i>	satyr angelwing	
<i>Vanessa annabella</i>	west coast lady	
<i>Vanessa cardui</i>	painter lady	
Mantidae	Praying mantises	
<i>Stagmomantis californica</i>	California mantis	
Papilionidae	Swallowtails	
<i>Papilio eurymedon</i>	pale swallowtail	
<i>Papilio rutulus</i>	western tiger swallowtail	
Pieridae	Whites and Orangetips	
<i>Anthocharis sara</i>	Sara's orangetip	
<i>Colias eurytheme</i>	orange sulphur	
<i>Colias harfordii</i>	Harford's sulphur	

Scientific Name	Common Name	Comments
<i>Euchloe hyantis</i>	California marble	
<i>Eureme nicippe</i>	sleepy orange	
<i>Nathalis iole</i>	dainty sulphur	
<i>Pieris rapae</i>	cabbage white	
<i>Phoebis sennae</i>	cloudless sulphur	
<i>Pontia protodice</i>	checkered white	
<i>Pontis sisymbrii</i>	spring white	
Riodinidae	Metalmarks	
<i>Apodemia mormo</i>	Mormon metalmark	
AMPHIBIANS		
Bufonidae	True toads	
<i>Anaxyrus boreas</i>	western toad	formerly of the genus <i>Bufo</i>
Hylidae	Tree frogs and relatives	
<i>Pseudacris regilla</i>	Pacific chorus frog	
REPTILES		
Phrynosomatidae	Spiny lizards	
<i>Sceloporus occidentalis</i>	western fence lizard	
<i>Utastansburiana</i>	side-blotched lizard	
BIRDS		
Accipitidae	Hawks, eagles, and relatives	
<i>Buteo cooperii</i>	Cooper's hawk	
<i>Buteo jamaicensis</i>	red-tailed hawk	
<i>Buteo lineatus</i>	red-shouldered hawk	
Cathartidae	New World Vultures	
<i>Cathartes aura</i>	turkey vulture	
Columbidae	Pigeons and doves	
<i>Zenaidura macroura</i>	mourning dove	
Corvidae	Jays and crows	
<i>Aphelocoma californica</i>	western scrub-jay	
<i>Corvus brachyrhynchos</i>	American crow	
<i>Corvus corax</i>	common raven	
<i>Cyanocitta stelleri</i>	Steller's jay	
Emberizidae	Sparrows, towhees, longspurs, and allies	
<i>Amphispiza bilineata</i>	black-throated sparrow	
<i>Pipilo maculatus</i>	spotted towhee	
<i>Melospiza crissalis</i>	California towhee	
Fringillidae	True finches	
<i>Spinus psaltria</i>	lesser goldfinch	
Mimidae	Mockingbirds and trashers	
<i>Mimus polyglottos</i>	northern mockingbird	
Odontophoridae	New World quails	
<i>Callipepla californica</i>	California quail	
Paridae	Tits and chickadees	
<i>Baeolophus inornatus</i>	oak titmouse	
Picidae	Woodpeckers and allies	
<i>Colaptes auratus</i>	northern flicker	
<i>Melanerpes formicivorus</i>	acorn woodpecker	
<i>Picoides nuttallii</i>	Nuttall's woodpecker	
Parulidae	New World warblers	
<i>Dendroica coronata</i>	yellow-rumped warbler	
Strigidae	True owls	
<i>Bubo virginianus</i>	great horned owl	
LAGOMORPHS		
Leporidae	hares and rabbits	
<i>Lepus californicus</i>	black-tailed jackrabbit	
<i>Sylvilagus audubonii</i>	desert cottontail	
RODENTS		
Scuridae	squirrels and relatives	
<i>Ammospermophilus leucurus</i>	white-tailed antelope ground squirrel	
<i>Otospermophilus beecheyi</i>	California ground squirrel	