
**SAN DIEGO GAS & ELECTRIC COMPANY
SYCAMORE-PEÑASQUITOS
230-KILOVOLT TRANSMISSION LINE PROJECT
HABITAT RESTORATION PLAN**

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PREPARED BY:



PREPARED FOR:



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1 – INTRODUCTION

This Habitat Restoration Plan (Plan) describes the measures that will be taken by San Diego Gas & Electric Company (SDG&E) and its contractors to restore temporary work areas used during construction of the Sycamore-Peñasquitos 230-kilovolt (kV) Transmission Line Project (Project) to near pre-construction conditions and promote long-term habitat establishment. The Project includes the following components:

- Segment A – Construction of approximately 0.65 mile of new overhead 230-kV transmission line and approximately 0.74 mile of relocated existing overhead 138-kV power line on one new tubular steel pole (mono-pole structure) and one new steel H-frame structure that will replace existing wood structures, all within existing SDG&E ROW. Construction of approximately 0.2 mile of new underground 230-kV transmission line and approximately 0.15 mile of relocated underground 138-kV power line into the existing Sycamore Canyon Substation. Construction of two new cable poles at the transition points from overhead to underground, outside of the Sycamore Canyon Substation.
- Segment B – Construction of approximately 11.55 miles of 230-kV underground transmission line in existing roads and bridges and two new cable poles at the transition point from overhead to underground.
- Segment C – Construction of approximately 2.08 miles of new 230-kV transmission line and all-dielectric self-supporting (ADSS) communication cable on existing 230-kV tubular steel poles within existing SDG&E ROW from Scranton Road to the Peñasquitos Substation.
- Minor modifications of the existing Sycamore Canyon and Peñasquitos Substations to allow for connection of the new 230-kV transmission line.

This Plan was prepared in accordance with SDG&E's Subregional Natural Community Conservation Plan (NCCP; SDG&E 1995) Section 7.2, Habitat Enhancement Measures, and serves to satisfy the requirements of Mitigation Measure (MM) BIO-6 from the Project's Final Environmental Impact Report (Final EIR) Mitigation Monitoring, Compliance and Reporting Program (MMCRP). In addition, MM BIO-3, specific to weed control, is also addressed in this Plan, as it includes specific procedural requirements for non-native and invasive species (as determined by California Invasive Plant Council (Cal-IPC); Cal-IPC 2006) management that may pertain to habitat restoration efforts.

2 – OBJECTIVES

The purpose of this Plan is to prescribe vegetation restoration for temporary work areas impacted by construction of the Project. Approximately 89.12 acres of total temporary impacts with 1.42 acres of temporary impacts to sensitive vegetation communities are proposed for this Project. Total actual temporary impacts will be validated through an as-built report following construction. Permanent impacts (approximately 0.93 acre proposed, consisting of 0.42 acre of sensitive vegetation communities) will be addressed separately through drawdown of mitigation credit from SDG&E's NCCP mitigation bank and are not discussed further in this Plan. This Plan provides specific information for implementing Mitigation Measure (MM) Biology-6 of the Final EIR as well as the means of monitoring the effectiveness of restoration through achievement of established success criteria. The management practices and activities in this Plan are intended to accomplish the following objectives:

- Describe restoration techniques that will be employed for the successful restoration of temporary disturbance areas.
- Identify applicable elements of the Habitat Enhancement Measures set forth in Section 7.2 of SDG&E's Subregional NCCP (see Section 3.1) that are consistent with the restoration requirements described in the Project's Final EIR.
- Provide a comprehensive restoration approach for the implementation of MM Biology-6 (as stipulated in the Project's Final EIR).
- Allow the assigned Habitat Restoration Specialists (HRSs) the ability to adaptively manage the restoration program to achieve success standards, based on site-specific conditions at the time of construction and during the maintenance period.

APPENDIX A: Project Components and Vegetation Mapping depicts vegetation communities crossed by the Project.¹ Temporary work areas that previously lacked vegetation—including approximately 87.71 acres of paved surfaces, access roads, and areas of landscape/ornamental vegetation—will be recontoured and restored to pre-construction conditions.

¹ Chambers Group, Inc. conducted biological surveys during the spring, summer, and fall of 2015–2016 in support of the Final EIR and Decision prepared by the California Public Utilities Commission (CPUC) for the Project. Vegetation communities crossed by the Project were mapped by Chambers Group, Inc. in accordance with Holland (1986) or Gray and Bramlet (1992) and were described within the Final EIR based on San Diego County descriptions (Oberbauer et al. 2008; Chambers Group 2016).

3 – FINAL EIR MITIGATION MEASURE AND NCCP REQUIREMENTS

3.0 MITIGATION MEASURES

MMs included in the MMCRP of the Final EIR (CPUC 2016) for the Project and applicable to the implementation of this Plan are provided below:

MM Biology-3: Weed Control Plan

SDG&E shall prepare and implement a comprehensive, adaptive Weed Control Plan for pre-construction and long-term invasive, non-native species abatement. Developed land shall be excluded from weed control. Where SDG&E owns the property, the Weed Control Plan shall include specific weed abatement methods, practices, and treatment timing developed specifically for the Project area by qualified individuals with at least 5 years of weed control experience within San Diego County. The Weed Control Plan shall address control methods and issues controlling invasive non-native species within all vegetation communities and land cover types found along the Project alignment. On ROW easement on MCAS Miramar, the Weed Control Plan shall incorporate all appropriate and legal U.S. Marine Corps-stipulated regulations. The Weed Control Plan shall be submitted to MCAS Miramar for final authorization of weed control methods, practices, and timing prior to implementation of weed control on MCAS Miramar. The Weed Control Plan shall be submitted to the City of San Diego for final authorization of weed control methods, practices, and timing prior to implementation of any weed control within the City of San Diego Multi-Habitat Planning Area (MHPA).

The Weed Control Plan shall include the following:

- *A pre-construction weed inventory shall be conducted by surveying the entire ROW and areas immediately adjacent to the ROW where access permission is obtained, as well as at all ancillary facilities associated with the Project for weed populations that: (1) are considered by the San Diego County Agriculture Commissioner or, MCAS Miramar (for ROW on MCAS Miramar), or City of San Diego (for ROW within the City of San Diego MHPA) as being a priority for control, (2) are weed populations that are rated High or Moderate for negative ecological impact in the California Invasive Plant Inventory (online) Database (Cal-IPC 2006 [and 2007 update]; <http://www.cal-ipc.org/ip/inventory/index.php>) or are weed species of concern to MCAS Miramar (for ROW on MCAS Miramar), and (3) aid and promote the spread of wildfires in San Diego County.*
- *Prolific wildfire promoting species such as brome grasses (*Bromus sp.*) shall be mapped but not targeted for control outside of Project impact areas. These populations shall be*

mapped and described according to density and area covered. These plant species shall be treated prior to construction or at a time when treatments would be most effective based on phenology according to control methods and practices for invasive weed populations included in the Weed Control Plan designed in consultation with the San Diego County Agriculture Commissioner's Office and Cal-IPC, or required by MCAS Miramar, or City of San Diego as appropriate.

- *Weed control treatments shall include all legally permitted methods to be used in the following prioritized order: preventative, manual, mechanical, and chemical.*
- *All treatments shall be applied with the authorization of the MCAS Miramar, and City of San Diego as appropriate.*
- *The application of herbicides shall be in compliance with all state and federal laws and regulations under the prescription of a Pest Control Advisor (PCA) and implemented by a Licensed Qualified Applicator.*
- *Where manual and/or mechanical methods are used, disposal of the plant debris will be within an approved landfill area within San Diego County.*
- *The timing of the weed control treatment shall be determined for each plant species in consultation with the PCA for the Project and with MCAS Miramar, and City of San Diego as appropriate, with the goal of controlling populations before they start producing seeds. For the lifespan of the project (i.e., as long as the project is physically present), long-term measures to control the introduction and spread of weeds in the project area shall be taken as follows:*
 - *From the time construction begins until 2 years after construction is complete, annual surveying for new invasive weed populations and the monitoring of identified and treated populations shall be required in the survey areas described above. After this time, surveying for new invasive weed populations and monitoring of identified and treated populations shall be required at an interval of every two years. However, the treatment of weeds shall occur on a minimum annual basis, unless otherwise approved by the PCA, the San Diego County Agriculture Commissioner, Cal-IPC, and MCAS Miramar, and City of San Diego as appropriate.*
 - *During project construction and operation/maintenance, all seeds and straw materials shall be certified weed free, and all gravel and fill material shall also be certified weed free.*

During project construction, vehicle and boot wash stations shall be provided.

MM Biology-6: Compensatory Mitigation for Impacts to Habitat²

SDG&E shall restore temporarily impacted areas following construction according to the performance criteria described below and/or shall purchase/dedicate suitable habitat for preservation to off-set permanently impacted areas. Restoration of some vegetation communities in temporarily impacted areas may not be possible if those areas are subject to vegetation management to maintain proper clearance between transmission lines and vegetation, for example. In those instances, the mitigation shall consist of off-site acquisition and preservation of the vegetation community. Restoration of temporarily impacted areas involves recontouring the land, replacing the topsoil (if it was collected), planting seed and/or container stock, maintaining (i.e., weeding, replacement planting, supplemental watering, etc.), and monitoring the restored area for a period of 5 years or until success criteria are met.

SDG&E shall prepare a Habitat Restoration Plan that shall be subject to approval by the CPUC, U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), City of San Diego (for restoration within City of San Diego Multi-Habitat Planning Area (MHPA)), and Marine Corps Air Station (MCAS) Miramar (for restoration on MCAS Miramar) prior to habitat impacts. Required mitigation ratios are provided by habitat type in Table 1. In cases where the impacts to sensitive vegetation communities occur in the City of San Diego MHPA, the mitigation shall also occur in the MHPA. The Habitat Restoration Plan shall also identify, if applicable, the potential need for reintroduction and/or increasing the Multiple Species Conservation Program (MSCP)-covered species populations within habitat restoration areas if those covered species were affected by the Proposed Project.

² An abbreviated version of the mitigation measure has been inserted. Portions of the measure related to Mitigation Parcels and Habitat Management Plans have been redacted.

Table 1: Required Habitat Mitigation Ratios³

HABITAT TYPE		TEMPORARY IMPACT MITIGATION RATIO
Diegan Coastal Sage Scrub	Diegan Coastal Sage Scrub	1:1
	Diegan Coastal Sage Scrub in the MHPA	1:1
	Diegan Coastal Sage Scrub – Disturbed	1:1
	Diegan Coastal Sage Scrub – Disturbed in the MHPA	1:1
	Diegan Coastal Sage Scrub – Revegetated	1:1
	Diegan Coastal Sage Scrub – Revegetated in the MHPA	1:1
Coastal Sage Scrub	Coastal Sage-Chaparral Scrub	0.5:1
	Coastal Sage-Chaparral Scrub in the MHPA	1:1
Chaparral	Chamise Chaparral	0.5:1
	Chamise Chaparral in the MHPA	1:1
	Chamise Chaparral-disturbed	0.5:1
	Chamise Chaparral-Disturbed in the MHPA	1:1
	Scrub Oak Chaparral	1:1
	Scrub Oak Chaparral in the MHPA	2:1
	Southern Mixed Chaparral	0.5:1
	Southern Mixed Chaparral in the MHPA	1:1
	Southern Mixed Chaparral-Disturbed	0.5:1
	Southern Mixed Chaparral-Disturbed in the MHPA	1:1

The Restoration Plan shall include the following performance criteria:

- *Percent cover and composition shall be similar to the conditions of a nearby reference site, defined as variation of no more than 10 percent absolute cover from the reference site cover and species composition condition.*
- *Maintenance and monitoring for restoration shall be for a minimum of 5 years or until success criteria are met. Compensation planting areas shall be monitored eight times in Year 1, six times per year in Years 2 and 3, and 4 times per year in Years 4 and 5 and above.*
- *Compensation planting areas shall be monitored for invasive plants in the first 5 years following replanting. Invasive plant monitoring shall occur eight times in Year 1, six times*

³This version of Table 1 has been modified from the Table 4.1-10: Required Habitat Mitigation Ratios found in the MMCRP in include only those vegetation communities anticipated to be affected by construction and the temporary impact mitigation requirements.

per year in Years 2 and 3, and 4 times per year in Years 4 and 5. If invasive plants are found during the 5-year monitoring period, they shall be removed as necessary to support meeting the cover and vegetation composition success criteria.

- *If the restoration fails to meet the established success criteria after the maintenance and monitoring period, maintenance and monitoring shall extend beyond the 5-year period until the criteria are met or unless otherwise approved by the CPUC.*
- *Maintenance and monitoring shall be conducted following a prescribed schedule to assess progress and identify potential problems with the restoration. Remedial action (e.g., additional planting, weeding, erosion control, use of container stock, supplemental watering, etc.) shall be taken by an experienced, licensed Habitat Restoration Contractor during the maintenance and monitoring period if necessary to ensure the success of the restoration.*

Any impacts associated with unauthorized activity (e.g., exceeding approved construction footprints or implementing the Habitat Management Plan after the allowed timeframe of 18 months following the initiation of any vegetation disturbing activities) shall be mitigated at a 5:1 ratio. Restoration of the unauthorized impacts shall be credited at a 1:1 ratio (i.e., mitigated by in-place habitat restoration); the remaining 4:1 shall be acquired and preserved off-site. For areas where habitat restoration cannot meet mitigation requirements, as determined by the Habitat Restoration Specialist in coordination with CPUC, USFWS, CDFW, and MCAS Miramar (for restoration on MCAS Miramar), off-site purchase and dedication of habitat (or as otherwise prescribed by MCAS Miramar for restoration on MCAS Miramar) shall be provided at the mitigation ratios provided in Table 1: Required Habitat Mitigation Ratios.

3.1 NCCP REQUIREMENTS

This Plan has been prepared to comply with the Final EIR mitigation measures, which have more stringent requirements than the NCCP. However, some of the NCCP requirements are consistent with the Final EIR. The enhancement measures identified in the NCCP are described here for reference only. An “enhancement site” is a site that is unlikely to recover from Project impacts without assistance and requires habitat restoration. Project areas temporarily disturbed by construction activity will be restored as enhancement sites in accordance with the Enhancement and Monitoring Program. For this Project, enhancement sites will be referred to as restoration areas. Language found in SDG&E’s Subregional NCCP (SDG&E 1995) is provided below:

Habitat Enhancement Measures

Habitat enhancement increases the value of biological resources in an impacted area, thereby improving the value of that habitat for Covered Species.⁴ Habitat enhancement activities shall occur under the direction of a Habitat Restoration Specialist. All disturbed areas, whether inside or outside of preserves, and which do not need to be maintained in a cleared state, shall be enhanced, either through vegetation restoration, habitat reclamation, or a combination of the two. Vegetation restoration entails a range of techniques.

For SDG&E Activities occurring within the Preserve, and for SDG&E Activities affecting riparian/wetland areas, the particular enhancement methodology will be proposed by SDG&E, with USFWS and CDFG concurring prior to implementation. For all other areas outside of the Preserve, SDG&E has discretion over the enhancement method selected, although it is expected that a standard coastal sage scrub seed mix will be used for reseeding many disturbed areas. For impacts both within and outside Preserve, if habitat enhancement is not selected, or is not successful according to the criteria specified in the mitigation flow chart (Figure 24 [Mitigation Flow Diagram - of the NCCP]), then a deduction from the SDG&E Mitigation Credits shall be made in accordance with ratios contained in Section 7.4 [of the NCCP]. For all temporary impacts greater than 500 square feet, acreage not meeting success criteria shall be deducted from SDG&E mitigation credits at a 1:1 ratio. For areas of less than 500 square feet, success criteria will not be required to be met. In such areas, refer to erosion control measures contained in Section 7.1 [of the NCCP].

⁴ Covered species are listed in Table 3.1, Covered Species List, of SDG&E’s Subregional NCCP. For the purposes of the SDG&E Subregional NCCP, the term “covered species” is defined within the Subregional NCCP Implementing Agreement.

Note that in contrast to what is discussed above, the Final EIR dictates that all temporary impact areas, regardless of size will be restored according to this Plan and based on the ratios presented in MM Biology-6.

4 – PLAN IMPLEMENTATION

SDG&E and its contractors will restore temporary work areas to pre-construction conditions as defined by MM BIO-6. This Plan has been prepared to incorporate performance-based best management practices and identifies the responsibilities for the HRS, in overseeing the restoration effort. The HRS will have the ability to modify procedures within the context of this Plan if the changes accomplish the following:

- are consistent with the requirements of the MMCRP; and
- facilitate successful restoration and long-term soil stabilization.

SDG&E will designate a HRS(s) to oversee implementation of this Plan and guide adaptive measures for restoration, if deemed necessary to achieve restoration success criteria.

The HRS will be available to assist SDG&E and its contractors during construction and restoration activities. SDG&E will review and authorize any modifications to the implementation, maintenance, or monitoring methods as long as the changes comply with this Plan and are approved by an HRS.

4.0 ANTICIPATED TEMPORARY IMPACTS

Approximately 89.12 acres of temporary impacts are proposed for this Project. Temporary impact areas may include staging or laydown areas, areas essential for equipment access, or other provisional ground disturbance associated with the Project components listed in Section 1. The majority of temporary impacts are proposed to occur to disturbed, bare ground and landscape/ornamental communities (Table 2). Per the NCCP and Final EIR, no mitigation is required for temporary impacts to non-sensitive communities such as bare ground, landscape/ornamental vegetation, and disturbed areas. Therefore, no mitigation is required for 87.71 acres of temporary impacts to these vegetation community types. While mitigation is not required and is not the subject of this Plan, non-sensitive vegetation areas will be stabilized per the Storm Water Pollution Prevention Plan (SWPPP) and/or returned to preconstruction conditions, as appropriate.

Table 2: Total Anticipated Impact Summary Table

Type of Impact		Area Impacted (square feet [acres])		
		Within a Preserve	Outside of a Preserve	Total
Temporary	Total Anticipated Temporary Impacts to Sensitive Vegetation Communities (Coastal Sage Scrub and Chaparral)	248 ft ² [< 0.01 ac]	61,021 ft ² [1.41 ac]	61,269 ft ² [1.41 ac]
	Total Anticipated Temporary Impacts to Non-Sensitive Vegetation Communities (Disturbed, Bare Ground, and Landscape/Ornamental communities)	83,524 ft ² [1.92 ac]	3,736,993 ft ² [85.78 ac]	33,820,517 ft ² [87.71 ac]
	Total Anticipated Temporary impacts	83,772 ft² [1.92 ac]	3,798,014 ft² [87.19 ac]	3,881,786 ft² [89.11 ac]

ft² = square feet

Table 3: Anticipated Sensitive Community Impacts Per Structure

Structure Location	Total Anticipated Temporary Impacts to Coastal Sage Scrub	Total Anticipated Temporary Impacts to Chaparral	Total Anticipated Temporary Impacts to Sensitive Communities
CC MM CP	4,765 ft ² [0.11 ac]	--	4,765 ft ² [0.11 ac]
E39	649 ft ² [0.01 ac]	--	649 ft ² [0.01 ac]
E40	248 ft ² [<0.01 ac]	--	248 ft ² [<0.01 ac]
E44	9 ft ² [<0.01 ac]	--	9 ft ² [<0.01 ac]
E47	4,211 ft ² [0.10 ac]	--	4,211 ft ² [0.10 ac]
E48	3,790 ft ² [0.09 ac]	--	3,790 ft ² [0.09 ac]
P04	--	13,888 ft ² [0.32 ac]	13,888 ft ² [0.32 ac]
P05 CP	2,873 ft ² [0.06 ac]	2,457 ft ² [0.06 ac]	5,330 ft ² [0.12 ac]
P06	265 ft ² [0.01 ac]	1,884 ft ² [0.04 ac]	2,149 ft ² [0.05 ac]
GS3	435 ft ² [0.01 ac]	--	435 ft ² [0.01 ac]
GS10	1,314 ft ² [0.03 ac]	--	1,314 ft ² [0.03 ac]
GS11	1,294 ft ² [0.03 ac]	--	1,294 ft ² [0.03 ac]
GS12	37 ft ² [<0.01 ac]	--	37 ft ² [<0.01 ac]
Combined Locations Total	19,890 ft² [0.46 ac]	18,229 ft² [0.42 ac]	38,119 ft² [0.88 ac]
MCAS Miramar			

P03A/B & R3	2,526 ft ² [0.06 ac]	7,627 ft ² [0.18 ac]	10,152 ft² [0.23 ac]
SS & T1	5,606 ft ² [0.13 ac]	1,873 ft ² [0.04 ac]	7,479 ft² [0.17 ac]
R2	1,802 ft ² [0.04]	4 [<0.001 ac]	1,806 ft² [0.04 ac]
Underground Trench	1,299 ft ² [0.03 ac]	2,166 [0.05 ac]	3,465 ft² [0.08 ac]
Combined Miramar Locations Total	11,232 ft² [0.26 ac]	11,670 ft² [0.27 ac]	22,902 ft² [0.53 ac]
Combined Miramar and Non-Miramar Locations Total	31,122 ft² [0.72 ac]	29,899 ft² [0.69 ac]	61,021 ft² [1.40 ac]

ft² = square feet

ac = acres

Impacts to Sensitive Vegetation Communities

Approximately 1.42 acres of temporary impacts is proposed for coastal sage scrub and chaparral communities, as shown in Table 2. These temporary impacts are proposed both within and outside the MHPA, as well as within MCAS Miramar. These native communities are identified in the Final EIR as sensitive vegetation communities based in part on classifications by CDFW and in the NCCP; therefore, these vegetation communities will be restored when construction activities are complete. Based on the reduced impact areas for poles E41 through E44, impacts to nonnative grassland communities are not anticipated. If impacts to nonnative grassland communities cannot be avoided, the HRP will be revised at that time, to include this community. Upon completion of construction, the HRS or their designee will conduct a post-construction survey to determine actual temporary impacts from construction activities. This survey will occur after the HRS or their designee has assessed each site to be restored and determined that the construction contractor has completed their obligations. The habitat restoration team will then prepare an as-built report with the finalized restoration acreage.

Table 4: Approved Project Estimated Impacts

LOCATION	HABITAT TYPE	IMPACT AREAS (ACRES)	RATIO	MITIGATION ACRES
		Temporary	Temporary	Temporary
Inside Preserve ¹	Coastal Sage Scrub	<0.01 (248 ft ²)	2:1	0.01
Outside Preserve ¹	Coastal Sage Scrub	0.46	1:1	0.46
	Chaparral	0.42		0.42
Total		0.88		0.88
Miramar Outside Preserve ¹	Coastal Sage Scrub	0.23	1:1	0.26
	Chaparral	0.27		0.27
Total		0.50		0.53
TOTALS		1.41		1.42

Note: ¹The term Preserve Area means the area encompassed by the Multiple Species Conservation Plan's MHPA map, as currently defined or ultimately adopted, the equivalent maps for the Multiple Habitat Conservation Plan and Multiple Habitat Conservation and Open Space programs in San Diego County, the South Orange County NCCP Subregional Plan reserve area, and the Riverside County Conservation Agency Core reserve areas. Until preserve areas are formally delineated, within the areas covered by those plans, those areas which are designated moderate, high, and very high quality habitat identified during the Pre-activity Survey Report (PSR), or any Covered Species habitat lands the ownership or use of which has been conveyed or dedicated to, or is otherwise managed by any entity for the long-term conservation of Covered Species, since no HCP or equivalent, or Open Space programs in San Diego County occur within the proposed impact areas.

4.1 PRE-CONSTRUCTION DOCUMENTATION AND REFERENCE SITE SAMPLING

Locations of temporary vegetation community impacts will be revegetated with native species characteristic of adjacent native vegetation communities as documented by reference site sampling. Prior to vegetation clearance or ground-disturbing activities in temporary work areas, reference areas will be identified within or adjacent to each restoration area. These reference sites will contain similar vegetation, percent native plant composition, and absolute percent cover as the anticipated temporary impact areas. Prior to ground-disturbing activities, SDG&E will collect pre-construction condition data at the planned temporary work areas containing native vegetation and select adjacent reference sites located within 1,000 feet from the temporary work area for sampling. Data collected from undisturbed habitats on the site and from reference sites will include native plant cover, non-native plant cover, species richness, and information on the physical conditions of the site (e.g., presence of erosion, trash, debris). Other pertinent information, including topsoil depth (as applicable) and unique features (e.g., culverts, rock outcrops, rock walls, artificial fill, or compaction) will also be documented. Reference and pre-construction data will be collected using a modified California Native Plant Society (CNPS) relevé method. Reference data will then be used to establish the success criteria for each native community type impacted (e.g., coastal sage scrub; chaparral).

The relevé method of habitat assessment was developed in Europe, and the CNPS published a Vegetation Sampling Protocol in *A Manual of California Vegetation* (Sawyer and Keeler-Wolf 1995) that was developed as a quantitative sampling technique applicable to vegetation communities in California (CNPS 2007). The relevé method is generally considered a “semi-

quantitative” method. It relies on visual estimates of plant cover rather than on counts of the “hits” of a particular species along a transect line or on precise measurements of cover/biomass by planimetric or weighing techniques (CNPS 2007). The relevé method provides information on the physical condition of a site, habitat structure, plant cover (assignment of cover classes), and species composition that often provides a better assessment of overall habitat condition as compared to point-intercept transects or quadrats. The relevé method is endorsed by CNPS and CDFW. Relevé codes and corresponding cover classes developed for this Project are shown in Table 5. Site data will be collected either on standardized datasheets or via handheld electronic devices (e.g., smartphones and/or tablets).

Table 5: Relevé Cover Class Codes

Cover Class	Taxon Cover in the Plot Area
0	0%
1	>0 – 1%
2	>1 – 5%
3	>5 – 10%
4	>10 – 15%
5	>15 – 25%
6	>25 – 35%
7	>35 – 50%
8	>50 – 75%
9	>75%

In addition, SDG&E will establish permanent photo points and compile photographic documentation with at least one photo from all temporary work areas that are subject to restoration in accordance with this Plan. Global positioning system (GPS) coordinates will be recorded for the photo location stations during the pre-construction site assessments. Photographs for each pre-construction and reference site will be included in the pre-construction site assessment and in the Restoration Monitoring Reports.

Potential topsoil salvage locations will be identified for implementation during construction in work areas where ground-disturbing activities, such as grading, are required. Pre-construction documentation will also be incorporated into Restoration Monitoring Reports, as described in Section 6.1, to demonstrate that SDG&E’s goals and objectives contained within the Subregional NCCP are achieved, and the requirements of the Final EIR Mitigation Measures are satisfied.

4.1.0 Vegetation Clearing and Soil Salvage

Topsoil will be salvaged by the construction contractor from temporary work areas where ground disturbance is required and restoration activities will be conducted. In general, topsoil will not be salvaged in areas that will be permanently impacted, where fill will be imported, within areas containing greater than 25 percent non-native species cover (based on pre-construction surveys), where topsoil has less than a minimum depth of 4 inches (based on soil depths and conditions observed during construction), or where soil has been previously highly disturbed.

Clearing and grading activities performed by the construction contractor will be limited to the approved work limits, and vegetation will be left in place wherever possible.⁵ Where grubbing and/or grading are not required, vegetation will be mowed to avoid excessive root damage and to allow for natural recruitment following construction.

In temporary work areas identified for topsoil salvage, SDG&E's construction contractor will remove and salvage topsoil, as directed by SDG&E's HRS or their designee, to maximize the amount of organic matter and native seed base available within restoration areas. When adequate work space allows, topsoil will be stockpiled and maintained along the edge of the work area. However, in areas where work space is limited due to factors such as topography, ROW limitations, and/or Environmentally Sensitive Areas, topsoil may need to be labeled and stockpiled in other work areas and/or staging yards. Topsoil will generally be returned to the area where it was excavated and covered with native mulch, when available. Erosion and sediment controls will be deployed by the construction contractor in accordance with the SWPPP for the Project to protect salvaged topsoil for future restoration efforts. The HRS will provide support to environmental monitors during construction to facilitate Plan implementation, including recommendations regarding vegetation clearing and topsoil salvage.

4.2 RESTORATION SITE PREPARATION

4.2.0 Construction Material and Equipment

Following the completion of Project activities, the construction contractor will be responsible for removing construction debris from the work areas.⁶ Prior to beginning restoration efforts, the HRS or their designee will perform inspections to verify that all construction debris has been properly

⁵ In accordance with MM BIO-6 of the MMCRP, all construction and construction-related activities including clearing and grading will be confined to the minimum necessary. The specific limits of clearing and grading within the defined work limits will be delineated with stakes and/or flagging prior to beginning work in any area and exclusive-use easements will be clearly identified.

⁶ The initiation of cleanup activities will depend on the location and the phase of construction.

removed. Construction equipment that is not required for final cleanup and seeding will be transported to the staging areas or demobilized from the Project.

4.2.1 Compaction and Seedbed Preparation

Soil compaction can decrease infiltration and increase surface runoff, reduce water-holding capacity, and increase the potential seed loss due to wind erosion. Following recontouring to preconstruction conditions and prior to initiating final grading, HRS or the designee will determine if soil decompaction is necessary by comparing the work area to the pre-construction compaction condition as well as adjacent non-disturbed areas by using a penetrometer per the manufacturer's recommendations or by another related method. If decompaction is required, it will be performed by the construction contractor with oversight from the HRS or their designee. Decompaction will be performed with a deep-tillage instrument, the teeth of a backhoe bucket, a bulldozer ripper, or a similar mechanism prior to respreading the topsoil. Prior to entering the Project area, construction equipment used for decompaction will be inspected by SDG&E to verify that it is free of soil, mud, or vegetative materials to prevent the spread of invasive species. In some cases where compaction is only on the surface, scarifying or imprinting during seedbed preparation will be sufficient.⁷ The HRS or their designee will inspect the seedbed prior to conducting seeding, as described in Section 4.4 Seeding.

4.2.2 Final Grade

Once all of the construction debris has been removed, the construction contractor will return temporary work areas to near pre-construction contours and elevations. Topsoil that was stockpiled during grading and grubbing associated with construction will be returned to areas where the topsoil was originally harvested. Care will be taken not to impact non-disturbed areas; however, the edges of temporary work areas will be slightly feathered to blend in with immediately adjacent areas. Restoration will be limited to only approved work areas.

4.3 WEED ABATEMENT

Specific to this Habitat Restoration Plan, the Weed Control Plan included in APPENDIX C specifies requirements for avoiding and minimizing the establishment and spread of noxious and invasive plant species within temporarily disturbed areas caused by the Project. SDG&E has completed weed inventory surveys prior to construction to identify known locations of weeds within the Project vicinity. Prior to construction within designated impact areas, SDG&E will treat weeds in accordance with the Weed Control Plan. During construction, SDG&E and their construction contractor will implement weed spreading prevention measures, as well as weed

⁷ Scarification is the process of loosening the surface layer. The process improves soil-to-seed contact and permeability, and facilitates seed cover when the soil is back-dragged after the seed is applied.

control measures (including weed eradication and removal). Weed control measures will be used in the following order: preventative, manual, mechanical, and chemical.

This Plan has been developed in accordance with the Project's Weed Control Plan and addresses post-construction weed control within temporary work areas where restoration efforts will occur. MM BIO-3 outlines the Weed Control Plan requirements for the Project, listed in Section 3.1.

SDG&E will implement post-construction measures to prevent the spreading of invasive weeds into temporary impact areas. Post-construction measures will include treatment of new weed populations and new species not previously identified in the pre-construction weed surveys on an annual basis starting 1 year after construction is complete. Weed surveys and treatment will continue until no new weed species or populations are identified and weeds are reduced to below their pre-Project coverage levels, unless otherwise approved by the PCA, MCAS Miramar, or City of San Diego, as appropriate.

Treatment methods will consist of manual and/or mechanical removal and/or application of a systemic herbicide. If chemical weed abatement methods are determined to be required, the application of these methods will be conducted in a manner that minimizes potential impacts to sensitive plant and wildlife species, such as the timing of implementation, the application rate for chemical controls, and the utilization of site-specific measures. For example, herbaceous species may be treated with a foliar application of herbicide (e.g., 3 percent), and large woody perennial species may be treated using the cut-stump method, in which the plant is cut near ground level first and a concentrated form (e.g., 30 percent) of herbicide is applied within 5 minutes to the cut stump. All treatments will be monitored by the HRS or designee and shall be applied with the authorization of the MCAS Miramar, and the City of San Diego as appropriate. The application of herbicides shall be in compliance with all state and federal laws and regulations under the prescription of a Pest Control Advisor (PCA) and implemented by a Licensed Qualified Applicator.

Non-native brome grasses (*Bromus* spp.) were mapped throughout the Project area but are not targeted for control outside Project impact areas due to the ubiquitous nature of such species in San Diego County. Brome grasses will be controlled only in those temporary impact areas that are subject to restoration efforts.

4.4 SEEDING

All previously undisturbed, temporary work areas that are not subject to long-term use or ongoing vegetation maintenance (approximately 1.42 acre) will be revegetated with native species that are characteristic of the adjacent native vegetation communities, as described in Section 7.2, Habitat Enhancement Measures, of SDG&E's Subregional NCCP and the Final EIR. Temporary work areas will be seeded, but no soil additives or amendments will be applied to the seeded areas

initially. If seed loss due to granivory, desiccation, or other causes occurs, reseeded will be prescribed by the HRS, as appropriate, to support achievement of success criteria described in Section 6.0, Monitoring, Success Criteria, and Remedial Measures.

APPENDIX B: Prescribed Seed Mixes depicts the prescribed base seed mixes for temporary impact areas, including all stringing sites, guard structures, staging yards, etc. As described below, locations of seed mix applications and prescribed seed mixes will be refined based on the actual temporary impacts, field verification of site conditions prior to, during, and after Project construction, and seed availability and quality once all seed is collected, cleaned and tested. As described in the following sections, seed mixes, application methods, and rates⁸ may be modified by the HRS to achieve the objectives described in this Plan, MM Biology-6, and Section 7.2, Habitat Enhancement Measures, of SDG&E's Subregional NCCP.

4.4.0 Seed Mixes

The Project area supports two main vegetation communities which will be utilized as part of the restoration effort. The two restoration seed mixes include coastal sage scrub and chaparral. Each base seed mix contains 15 to 20 potential species identified from surveys conducted to date in the vegetation communities being impacted. Species will be native, non-invasive and will be collected from within 20 miles of the restoration site from local genetic stock. The HRS will evaluate and provide recommendations for revegetation of temporary work areas. The seed mixes described in this Plan are specific to seed that would be applied to sensitive vegetation communities temporarily impacted by Project construction. Prescribed seed mixes for the temporary work areas are based on typical composition of plant species for coastal sage scrub and Chaparral communities within all anticipated impact areas. Refinement of the seed mixes per individual impact area will be based on specific vegetation characteristics of the impact sites, availability of seed from appropriate sources, and the results of the germination/purity testing. The final seed mixes will be refined from the base mixes provided to include at least 8 to 10 native species and a minimum of 25 pounds of pure live seed per acre. Following installation, SDG&E will document what was completed at each restoration site, including the source of each seed mix and the restoration areas where each seed mix is applied.

SDG&E will make every effort to acquire seed mixes from and blended by a local distributor sourced from an area with a similar elevation and coastal proximity (within 20 miles) as the temporary work area where the seed will be applied. If local seed stock is not commercially available, other options such as focused seed collection within the vicinity of the Project may be recommended by the HRS. For MCAS-managed lands, the first source for seeds should be from

⁸ Germination testing will be conducted by the seed supplier to determine pure live seed quantities and consequent application rates.

local, focused seed collections within MCAS Miramar. Seed from appropriate plants within the project site or near the affected area may be collected for restoration purposes only. Seed collection feasibility will depend on timing of individual construction segments and landowner permissions. Should it not be possible to collect seed on MCAS Miramar or if collection will not provide all seed resources needed for successful restoration on MCAS-managed lands, commercial seed sources may be used but only with approval from the MCAS Miramar biologist. All seed will be weed-free and each bag of seed will be properly labeled with the species, percentage of seed of each species, percentage of germination of each species, purity (i.e., pure live seed) of seed, and inert ingredients (i.e., chaff, leaf parts, etc.).

Seed mixes have been developed for temporary work areas with native vegetation. APPENDIX B provides the proposed seed mixes for both vegetation communities to be restored. The seed mixes represent the HRS's recommended base seed mix for each vegetation community. Seed scarification treatments can be applied for species that do not typically germinate well from seed; typically perennial shrub species associated with chaparral vegetation communities. Scarification treatments may include hot water, depending upon the species. The seed scarification method for a specific species will be prescribed by the HRS. If scarification treatment is utilized, it is recommended that seed be applied within 24 to 72 hours of completion of the treatment. Scarification treatments leave seeds vulnerable to environmental conditions that are less than favorable. Therefore, it is recommended that no more than 30 percent of the seed for a specific species should be treated with the intent of preserving a percentage of seed that will germinate naturally when conditions are favorable.

Adjustments to prescribed seed mixes may be made by the HRS to achieve the objectives described in this Plan. Guidelines for the prescribed seed mixes and any adjustments are as follows:

- Based on seed sources and availability, primary successional species from each vegetation community seed mix will be utilized to facilitate establishment within the prescribed timeframes shown in Table 5: Success Criteria for 5-Year Program.
- Seed mixes may be augmented at the discretion of the HRS based on the availability of individual species prior to seeding (e.g., following purity and germination testing), to tailor the mixes for optimal success based on the variation of each impact area, and to allow for a contingency.

SWPPP Soil Stabilization and Seeding

In some cases, when completion of a Project component occurs outside the recommended planting season (defined herein as October through January), it may be necessary for the construction contractor to implement temporary soil stabilization to meet SWPPP standards until the planting

season. All temporarily disturbed areas where construction is complete will be stabilized using hydro mulch in accordance with the Project SWPPP until the planting season.. If interim seeding is deemed advantageous by the HRS, the Project's Qualified SWPPP Developer (QSD) and/or Qualified SWPPP Practitioner (QSP), the annual component of the prescribed habitat-appropriate seed mix will be applied in conjunction with hydro mulch to stabilize the soil. . In addition, work sites that do not have active ongoing construction for more than 14 days will also be stabilized in accordance with the Project's SWPPP.

4.4.1 Application Methods

Application methods may include hydroseeding and/or hand-broadcast seeding. All initial seeding necessary for site stabilization for SWPPP will be performed by the construction contractor and will occur after final grading and seedbed preparation have been completed and the HRS has conducted the site assessment to determine that sites are ready for handoff. Seeding will be conducted in accordance with the schedule described in Section 5.0 Restoration Seeding. SDG&E will endeavor to perform all vegetation restoration from mid-October through mid-January to take advantage of the rainy season.

Where approved by the HRS, seed may be applied within larger disturbance areas within approximately 300 feet of a designated access road using a hydroseeding truck with a tower gun and hose. Hydraulic mulch will be applied in conjunction with seed to enhance seed germination and vegetation establishment. All amendments applied to the restoration areas will be nontoxic to native organisms and will decay into harmless byproducts within one year of application. Hand-broadcasted application and raking is best suited for small areas that are inaccessible by a hydroseed truck. Seed applied directly on bare soil will be lightly raked into the soil surface by hand or with a drag chain to achieve adequate soil-to-seed contact. If conditions are suitable, the HRS may also recommend soil imprinting.

4.4.2 Seeding Rates

Appendix B contains the recommended seeding rates for temporary impact areas being restored. Seeding rates vary depending on the seed weight, application method, amount of cover needed at each restoration area, habitat type being restored, and species being seeded.

4.5 IRRIGATION

No irrigation systems will be installed as part of this Plan, and restored areas are not planned for watering by truck. However, restored areas may be watered by truck during abnormally dry conditions or periods of drought in support of achievement of success criteria, as recommended by the HRS or their designee. Watering will be limited to the restoration areas and applied in a manner that avoids runoff into non-target areas.

4.6 TEMPORARY EROSION CONTROL

Prior to vegetation establishment, temporary erosion control may be necessary to reduce soil erosion during precipitation events. Hydraulic mulching will be used to reduce soil erosion until seed is placed in September/October. The rate of hydraulic mulch will be a minimum of 1,000 pounds per acre but may range from 1,000 to 3,000 pounds per acre based upon site conditions and the seed mix being utilized. Mulch applied to the restoration areas will be certified weed-free and nontoxic to native organisms and will decay into harmless by-products. Hydraulic mulch rates will be site specific and will be determined by the HRS and the Project's QSD prior to application. The construction contractor will provide sufficient documentation to the HRS to confirm that hydraulic mulch and seed application tanks have been washed, as appropriate, to verify that vagrant seeds are not applied to restoration areas. Other forms of erosion control devices such as natural fiber matting or jute netting may be utilized as well.

5 – RESTORATION SCHEDULE

Restoration efforts (i.e., maintenance and monitoring) will be implemented once construction activities have been completed within the temporary impact areas. The HRS will verify that the temporary impact area is ready for hand-off from the construction contractor, marking the start of the maintenance and monitoring program.

5.0 RESTORATION SEEDING

Several factors affect the end of the site preparation period and the commencement of seeding, including forecasted rainfall throughout the year, the site's response to weed control strategies, and observations of vegetation growth. The optimal seeding time for native plant species in San Diego County is typically between mid-October through mid-January to maximize natural rainfall patterns that occur within the Project area. The seeding window may be extended with concurrence from SDG&E to take advantage of the entire rainy season (e.g., earlier than October and into February or March, depending on the seasonal rainfall to date that year).

If construction is completed outside the optimal seeding window for that given year, hydro mulch or a modified seeding protocol will be implemented, as described in the SWPPP Soil Stabilization and Seeding section above. During the planting season, the mulch would be broken up and/or the ground would be appropriately decompacted and prepared to apply the seed mix.

5.0.0 Maintenance

After seeding is complete, site maintenance visits will occur eight times during Year 1, followed by six times during Years 2 and 3, and four times during Year 4 and beyond. As recommended by the HRS, maintenance activities will include weed treatment, erosion control, remedial seeding, or other requirements needed to achieve success. Additional maintenance visits may be conducted throughout the year by the maintenance contractor, if needed. Herbicide application will occur under the direction of a professional applicator with an Agricultural Pest Control Adviser License or a Qualified Applicator License. Herbicide treatments will occur in accordance with the guidelines and restrictions presented in the Weed Control Plan (Chambers Group 2016).

6 – RESTORATION MONITORING

Post-construction monitoring of all restored temporary work areas will be performed by SDG&E to evaluate progress towards achievement of restoration success criteria as described in MM Biology-6 of the Final EIR. The following subsections describe the monitoring methods, success criteria, and reporting for the post-construction monitoring of restored areas.

6.0 MONITORING, SUCCESS CRITERIA, AND REMEDIAL MEASURES

6.0.0 Qualitative Monitoring

After construction and initial restoration have been completed, the HRS team will monitor Project-wide restoration efforts. Restoration areas will be monitored qualitatively eight times in year 1, six times per year in years 2 and 3, and four times per year in years 4 and 5. This monitoring will focus on identifying the progress of native plant development in the restoration areas, developing appropriate maintenance activities, and verifying that the recommended maintenance activities have been conducted. The HRS team will identify any potential problems associated with non-native species, herbivory, drought stress, potential erosion problems, and make recommendations for maintenance actions to address issues observed. New, existing, or potential erosion issues will be identified for repair in a timely manner prior to rain events, and addressed as recommended by the HRS team. If non-native plants are found during the five-year monitoring period, they shall be removed as necessary to support meeting the cover and species richness success criteria.

6.0.1 Quantitative Monitoring

Quantitative monitoring for performance in relation to the success criteria will occur once annually in the spring of each year until success criteria are achieved. Pertinent information will be collected through direct observation during an annual site visit, including data on native and non-native plant cover, species composition, and restored physical conditions. Performance monitoring will include the following:

- documenting the percent cover of native and non-native vegetation within the restoration areas
- comparing restoration areas to reference sites
- documenting all plant species within the restoration areas
- conducting photographic documentation of restoration areas at permanent photograph points established during construction

Performance monitoring of the habitat restoration areas will be conducted using the same relevé method techniques utilized for pre-construction and reference site surveys. Quantitative performance monitoring data will be collected either on standardized datasheets or via handheld electronic devices (e.g., smartphones and/or tablets). GPS coordinates will be recorded for the photo location stations during the pre-construction site assessments. Photographs for each restoration area will be included in the annual Restoration Monitoring Report.

6.0.2 Success Criteria

Per Section 9.0, Mitigation Monitoring and Reporting Plan, of the Final EIR as described in MM BIO-6 and in conjunction with Section 7.2, Habitat Enhancement Measures, of SDG&E's Subregional NCCP, the success criteria that will be used to measure the progress and success of the restoration areas will be:

- Absolute percent cover (native vegetative cover) shall not deviate more than 10 percent from the reference site cover condition.
- Species composition (i.e., species richness) shall not deviate more than 10 percent from the reference site condition.

Achievement of these success criteria will be based on the native and non-native plant cover and species richness identified during the pre-construction condition surveys and the observations made at the reference sites.

Maintenance and monitoring for restoration shall be for a minimum of five years or until success criteria are met. The success criteria for the monitoring program are provided in Table 6: Success Criteria for Five-Year Program, including success criteria milestones for each year of the program. If the success criteria milestone for the restoration areas are not met each year, remedial measures will be employed as described in Section 6.0.3, Remedial Measures.

6.0.3 Remedial Measures

Remedial measures are employed to address restoration areas that do not achieve one or more interim success criteria with the intent of progressing sites toward meeting their final success criteria. If the restoration fails to meet the established success criteria after the maintenance and monitoring period, maintenance and monitoring shall extend beyond the five-year period until the criteria are met or unless otherwise approved by the CPUC. Below is a list of potential adaptive management remedial measures that could be employed for sites not achieving interim success criteria, if deemed appropriate and feasible by the HRS:

- supplemental seeding

- installation of container plants and irrigation
- soil decompaction or erosion control such as native plant mulch, weed-free straw mulch, natural fiber (biodegradable) erosion control matting (e.g., jute netting or approved equal), and/or weed-free straw wattles
- application of soil amendments such as lime, gypsum, phosphorous, etc. All amendments applied to the restoration areas will be nontoxic to native organisms and will decay into harmless byproducts within one year of application.
- installation of herbivore-exclusion cages/fencing
- additional weed abatement measures
- other adaptive management measures determined by the HRS

6.1 REPORTING

SDG&E will submit a Restoration Monitoring Report to the CPUC each year of the five-year program. This report will include the following:

- project background
- maintenance and monitoring methods
- maintenance activities conducted
- monitoring results for restoration areas and reference sites
- discussion of the restoration program's performance in relation to success criteria
- a conclusion and recommendations for remedial measures

6.2 COMPLETION OF RESTORATION PROGRAM

The restoration of the Project's temporary impact areas will be considered complete when the monitoring period is over (after five years) or prior to five years if final Year 5 success criteria have been met and approval is received from the CPUC. For restoration areas within the MHPA, SDG&E will seek concurrence from the City of San Diego that final success criteria have been met.

Table 6: Success Criteria for Five-Year Program

Milestone Year	Success Criteria		
	Absolute Native Plant Cover (Percent) ¹	Native Species Richness (Count per area) ^{1,2}	Restored Physical Conditions (soil and rock)
Year 1	≤10% reference site condition	≤50% reference site condition	Physical conditions restored and no major erosion noted
Year 2	≤20% reference site condition	≤60% reference site condition	Physical conditions restored and no major erosion noted
Year 3	≤50% reference site condition	≤70% reference site condition	Physical conditions restored and no major erosion noted
Year 4	≤75% reference site condition	≤80% reference site condition	Physical conditions restored and no major erosion noted
Year 5 ³	≤90% reference site condition	≤90% reference site condition	Physical conditions restored and no major erosion noted

¹ Success criteria percentages are based on site-specific data collected in reference sites.

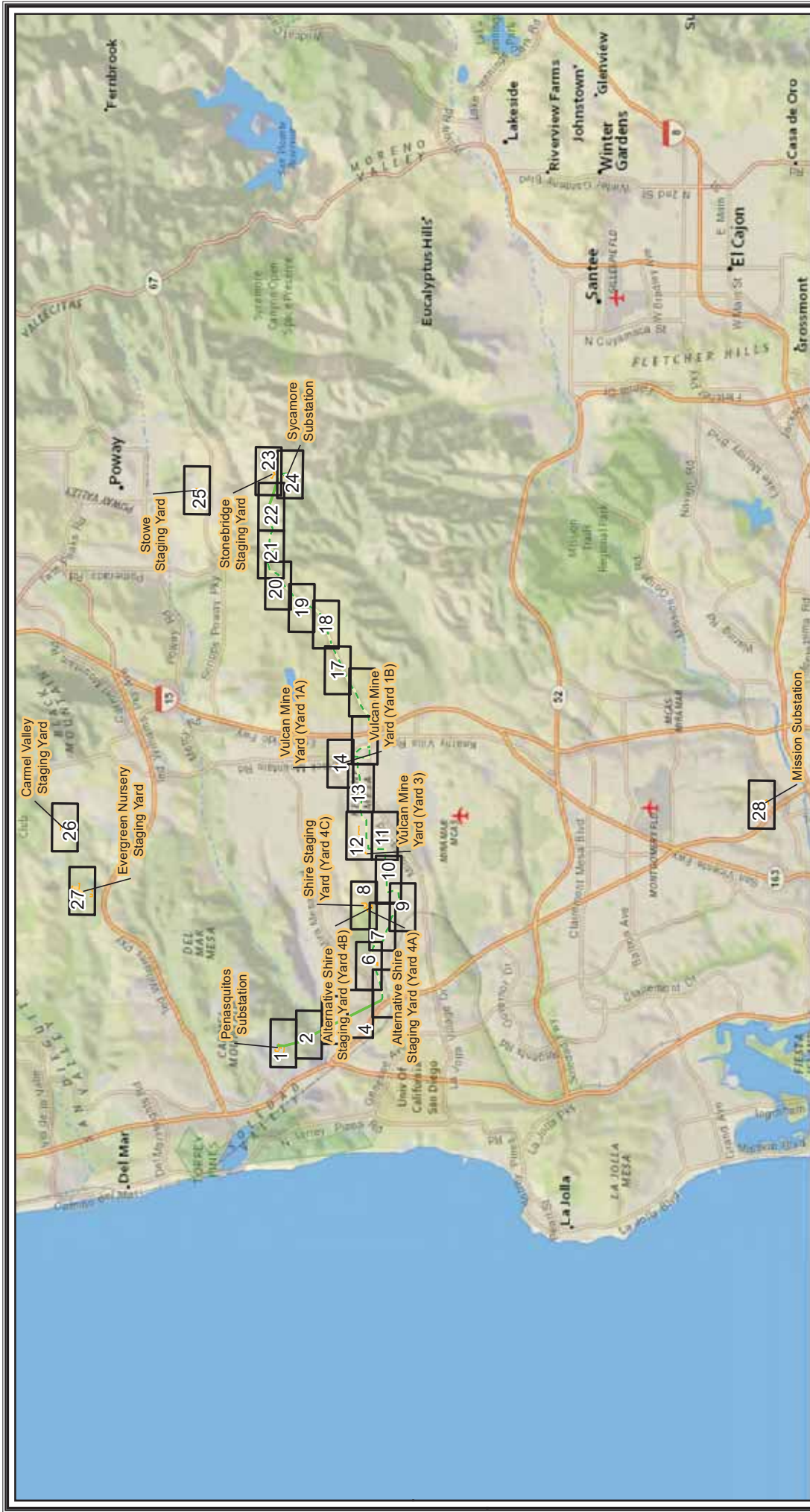
² Native species richness is measured by the count of the number of native species (annual and perennial) detected in the reference sites for each community type and during annual monitoring.

³ If success criteria are not met at the end of Year 5, additional maintenance and monitoring will be needed until standards are achieved.

7 – REFERENCES

- California Invasive Plant Council (Cal-IPC). 2006 (updated in 2007 and 2008). Invasive Plant Inventory. Online. <http://www.cal-ipc.org/ip/inventory/index.php>. Site accessed December 2016.
- California Public Utilities Commission (CPUC). 2016. Sycamore-Peñasquitos 230-kV Transmission Line Proposed Project Final Environmental Impact Report; Addendum, http://www.cpuc.ca.gov/Environment/info/panoramaenv/Sycamore_Penasquitos/FEIR.html. May.
- Chambers Group, Inc. (Chambers Group). 2016. *Weed Control Plan for the Sycamore-Peñasquitos 230 Kilovolt (kV) Transmission Line Project*. Chambers Group, Inc., San Diego, California. Prepared for San Diego Gas & Electric Company, San Diego, California.
- California Native Plant Society (CNPS). 2000 (revised 2007). Relevé Protocol. CNPS Vegetation Committee. Online. http://www.cnps.org/cnps/vegetation/pdf/cnps_releve_protocol_20070823.pdf. Site accessed February 2017.
- Gray, J., and D. Bramlet. 1992. Habitat Classification System, Natural Resources, Geographic Information System (GIS) Project. County of Orange Environmental Management Agency, Santa Ana, CA.
- Holland, R.F. 1986. *Preliminary Descriptions of the Terrestrial Natural Communities of California*. State of California, The Resources Agency, Department of Fish and Game, Natural Heritage Division, Sacramento, CA.
- Oberbauer, T., M. Kelly, and J. Buegge. 2008. Draft Vegetation Communities of San Diego County. Based on “Preliminary Descriptions of the Terrestrial Natural Communities of California,” Robert F. Holland, Ph.D., October 1986.
- Sawyer, J. O., and T. Keeler-Wolf. 1995. *A Manual of California Vegetation*. California Native Plant Society. 471 pp.
- San Diego Gas & Electric Company (SDG&E). 1995. Subregional Natural Community Conservation Plan.
- SDG&E. 2011. Best Management Practices Manual for Water Quality Construction.
- SDG&E. 2014. Guidelines for NCCP On-Call Contractors.

APPENDIX A: PROJECT COMPONENTS AND VEGETATION MAPPING



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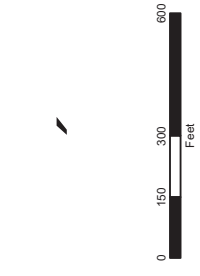
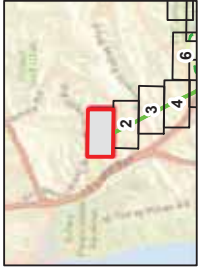
- Map Page (28 total pages)
- Potential Staging Yard
- Proposed Project (Overhead)
- Proposed Project (Underground)



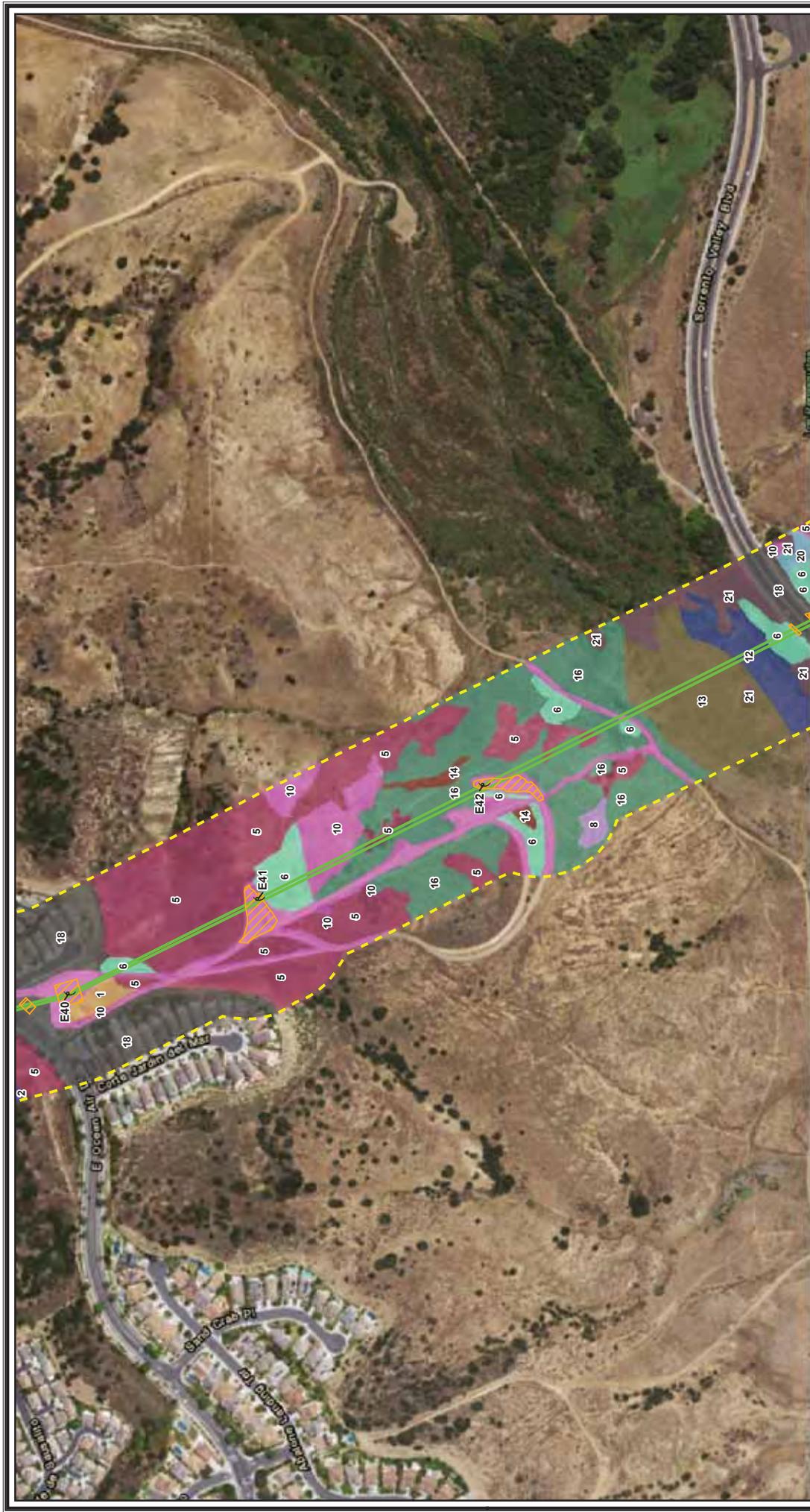
Appendix A
Sycamore to Peñasquitos, 230kV Transmission Line Project
Project Components and Vegetation Mapping Overview Map



Appendix A
 Sycamore to Peñasquitos,
 230kV Transmission Line Project
 Project Components and Vegetation Mapping
 Page 1 of 28



- Legend**
- ⌘ Poles
 - Proposed Project (Overhead)
 - ▭ Biological Study Area
 - - - Access Road
 - ▭ Potential Slagging Yard
 - ▭ Temporary Impact Area
- Vegetation Community**
- 2: Chaparral
 - 5: Coastal Sage Scrub
 - 6: Coastal Sage Scrub - Disturbed
 - 10: Disturbed Habitat
- 18: Ornamental/Developed Lands**
- 19: Ornamental/Developed Lands with Scattered Native Shrubs**



Appendix A
Sycamore to Peñasquitos, 230kV Transmission Line Project
Project Components and Vegetation Mapping
 Page 2 of 28

Name: 20807 RESTOR App A Proj & Veg Atlas.mxd
 Print Date: 6/9/2017 Author: stonnie

Legend

- ⌘ Poles
- Proposed Project (Overhead)
- Biological Study Area
- Temporary Impact Area
- Vegetation Community
- 1: Buckwheat Scrub
- 2: Chaparral
- 5: Coastal Sage Scrub
- 6: Coastal Sage Scrub-Disturbed
- 8: Coastal Sage Scrub-Sparse
- 10: Disturbed Scrub
- 12: Freshwater Marsh
- 13: Meadow/Seep
- 14: Native Grassland
- 16: Nonnative Grassland
- 18: Ornamental/Developed Lands
- 20: Riparian Scrub-Disturbed
- 21: Riparian Woodland

Scale: 0 150 300 600 Feet

Inset Map: 1 2 3 4 5 6 7



Appendix A
Sycamore to Peñasquitos, 230kV Transmission Line Project
Project Components and Vegetation Mapping
Page 3 of 28

Name: 20807 RESTOR App A Proj & Veg Atlas.mxd
 Print Date: 6/8/2017 Author: stonide

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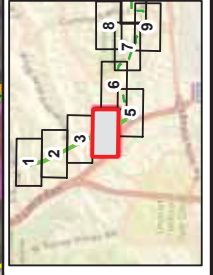
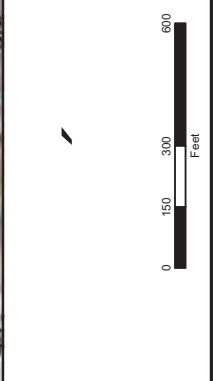
- Poles
- Proposed Project (Overhead)
- Biological Study Area
- Temporary Impact Area
- Vegetation Community
- 5: Coastal Sage Scrub
- 6: Coastal Sage Scrub-Disturbed
- 8: Coastal Sage Scrub-Sparse
- 10: Disturbed Habitat
- 12: Freshwater Marsh
- 16: Nonnative Grassland
- 18: Ornamental/Developed Lands
- 19: Ornamental/Developed Lands with Scattered Native Shrubs
- 20: Riparian Scrub-Disturbed
- 21: Riparian Woodland

Scale: 0 150 300 600 Feet

Inset Map: A small map showing the project location within a larger regional context, with a red box indicating the area shown in the main map.



- Legend**
- ⊕ Poles
 - Proposed Project (Overhead)
 - Biological Study Area
 - Temporary Impact Area
 - Vegetation Community
 - 5: Coastal Sage Scrub
 - 6: Coastal Sage Scrub-Disturbed
 - 8: Coastal Sage Scrub-Sparse
 - 10: Disturbed Habitat
 - 16: Nonnative Grassland
 - 18: Ornamental/Developed Lands
 - 19: Ornamental/Developed Lands with Scattered Native Shrubs
 - 21: Riparian Woodland
 - 22: Bare Ground





Appendix A
 Sycamore to Peñasquitos,
 230kV Transmission Line Project
 Project Components and Vegetation Mapping
 Page 5 of 28

Name: 20807 RESTOR App A Proj & Veg Atlas.mxd
 Print Date: 6/8/2017 Author: stonide

Legend

- Poles
- Proposed Project (Overhead)
- Proposed Project (Underground)
- Biological Study Area
- Temporary Impact Area
- Permanent Impact Area
- Vegetation Community
- 5: Coastal Sage Scrub
- 6: Coastal Sage Scrub-Disturbed
- 7: Coastal Sage Scrub-Restored
- 10: Disturbed Habitat
- 16: Nonnative Grassland
- 18: Ornamental/Developed Lands
- 21: Riparian Woodland

Scale: 0 150 300 600 Feet

Inset Map: A small map showing the project location within a larger regional context, with a red box indicating the area shown in the main map.



Appendix A
Sycamore to Peñasquitos, 230kV Transmission Line Project
Project Components and Vegetation Mapping
 Page 6 of 28

Name: 20807 RESTOR App A Proj & Veg Atlas, env.Mid, env.Mid
 Print Date: 6/8/2017, Author: stonide

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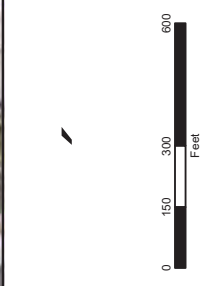
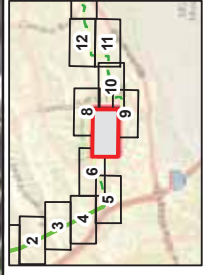
- Proposed Project (Underground): Yellow dashed line
- Biological Study Area: Yellow hatched area
- Potential Staging Yard: Yellow hatched area
- Temporary Impact Area: Yellow hatched area
- Vegetation Community:
 - 5: Coastal Sage Scrub
 - 6: Coastal Sage Scrub-Disturbed
 - 10: Disturbed Habitat
 - 16: Nonnative Grassland
 - 17: Open Oak woodland
 - 18: Ornamental/Developed Lands
 - 21: Riparian Woodland

Scale: 0 150 300 600 Feet

Inset Map: A small map showing the project location within a larger regional context, with a red box indicating the area shown in the main map.



Appendix A
 Sycamore to Peñasquitos,
 230kV Transmission Line Project
 Project Components and Vegetation Mapping
 Page 7 of 28



- Legend**
- Proposed Project (Underground): ---
 - Biological Study Area: ---
 - Potential Staging Yard: ---
 - Temporary Impact Area: ---
 - Vegetation Community
 - 5: Coastal Sage Scrub
 - 6: Coastal Sage Scrub-Disturbed
 - 10: Disturbed Habitat
 - 16: Nonnative Grassland
 - 17: Open Oak woodland
 - 18: Ornamental/Developed Lands
 - 21: Riparian Woodland



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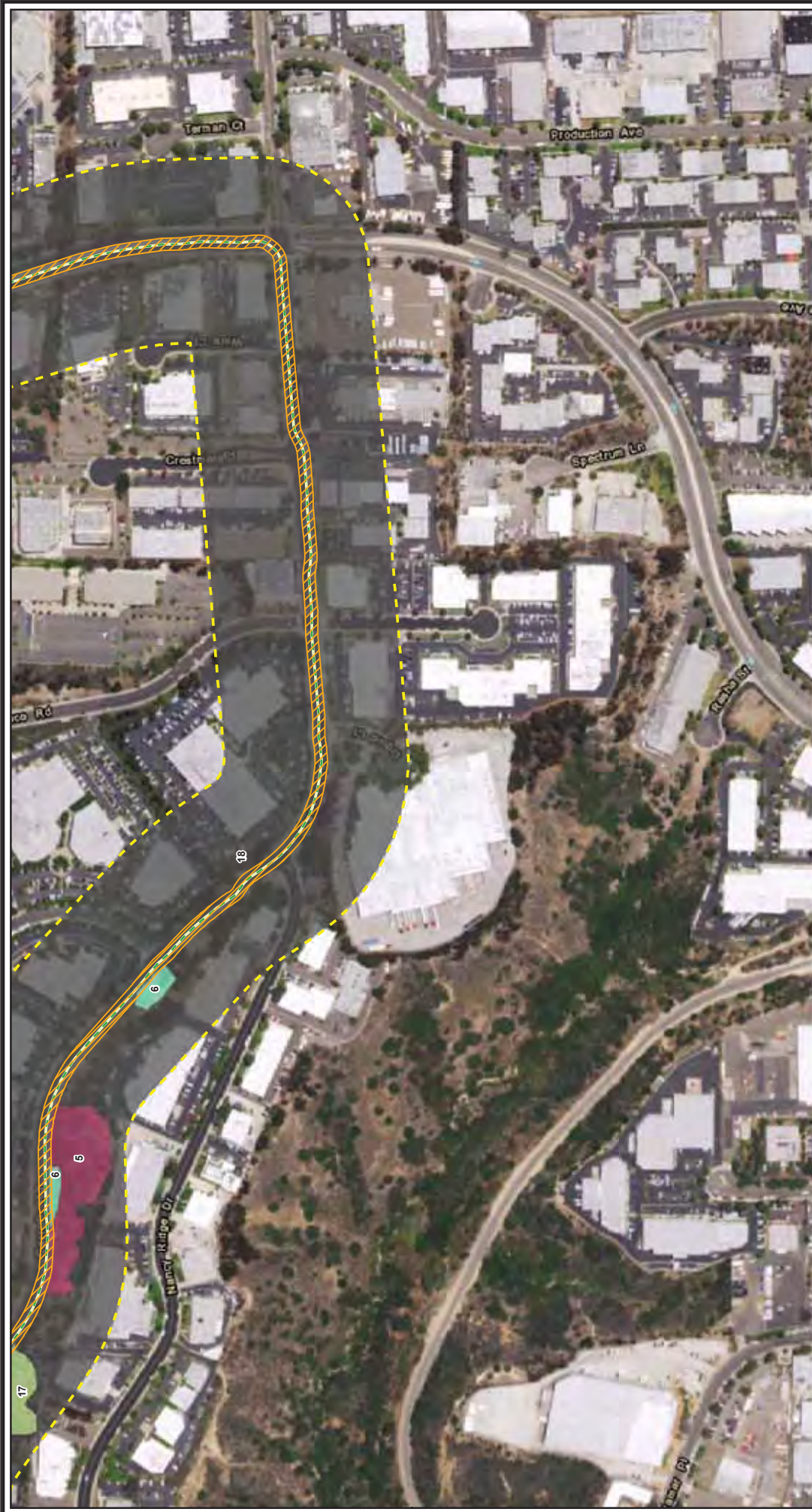
- Biological Study Area
- Potential Staging Yard
- Temporary Impact Area
- Vegetation Community
- 10: Disturbed Habitat
- 18: Ornamental/Developed Lands

Scale: 0 150 300 600 Feet

Inset Map: A small map showing the project location within a larger grid of numbered rectangles (3-13). A red box highlights the area shown in the main map, corresponding to rectangles 10, 11, and 12.

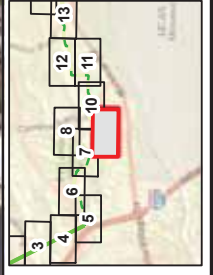
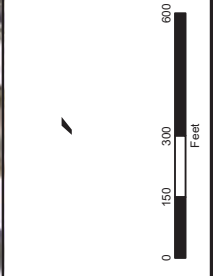
Appendix A
 Sycamore to Peñasquitos,
 230kV Transmission Line Project
 Project Components and Vegetation Mapping
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 Print Date: 6/8/2017, Author: stonide



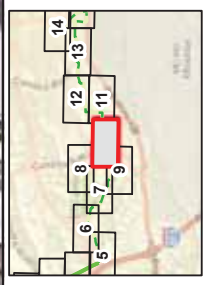
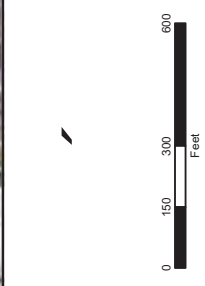
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- Proposed Project (Underground)
- Biological Study Area
- Temporary Impact Area
- Vegetation Community**
- 5: Coastal Sage Scrub
- 6: Coastal Sage Scrub-Disturbed
- 17: Open Oak woodland
- 18: Ornamental/Developed Lands





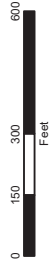
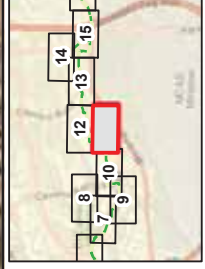
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- Proposed Project (Underground)
 - Biological Study Area
 - Temporary Impact Area
 - Vegetation Community**
 - 18: Ornamental/Developed Lands





Legend

- Proposed Project (Underground) —
- Biological Study Area
- Temporary Impact Area
- Vegetation Community**
- 5: Coastal Sage Scrub
- 18: Ornamental/Developed Lands





Legend

- Proposed Project (Underground)
- Biological Study Area
- Potential Staging Yard
- Temporary Impact Area
- Vegetation Community
- 18: Ornamental/Developed Lands
- 2: Chaparral

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Name: 20807 RESTOR App A Proj & Veg Atlas.mxd
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 Author: stordie



Legend

- Proposed Project (Underground)
- Biological Study Area
- Temporary Impact Area
- Vegetation Community**
 - 6: Coastal Sage Scrub-Disturbed
- 10: Disturbed Habitat
- 18: Ornamental/Developed Lands

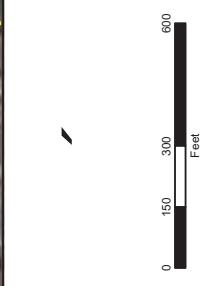
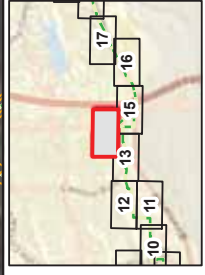
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 Sycamore to Peñasquitos,
 230kV Transmission Line Project
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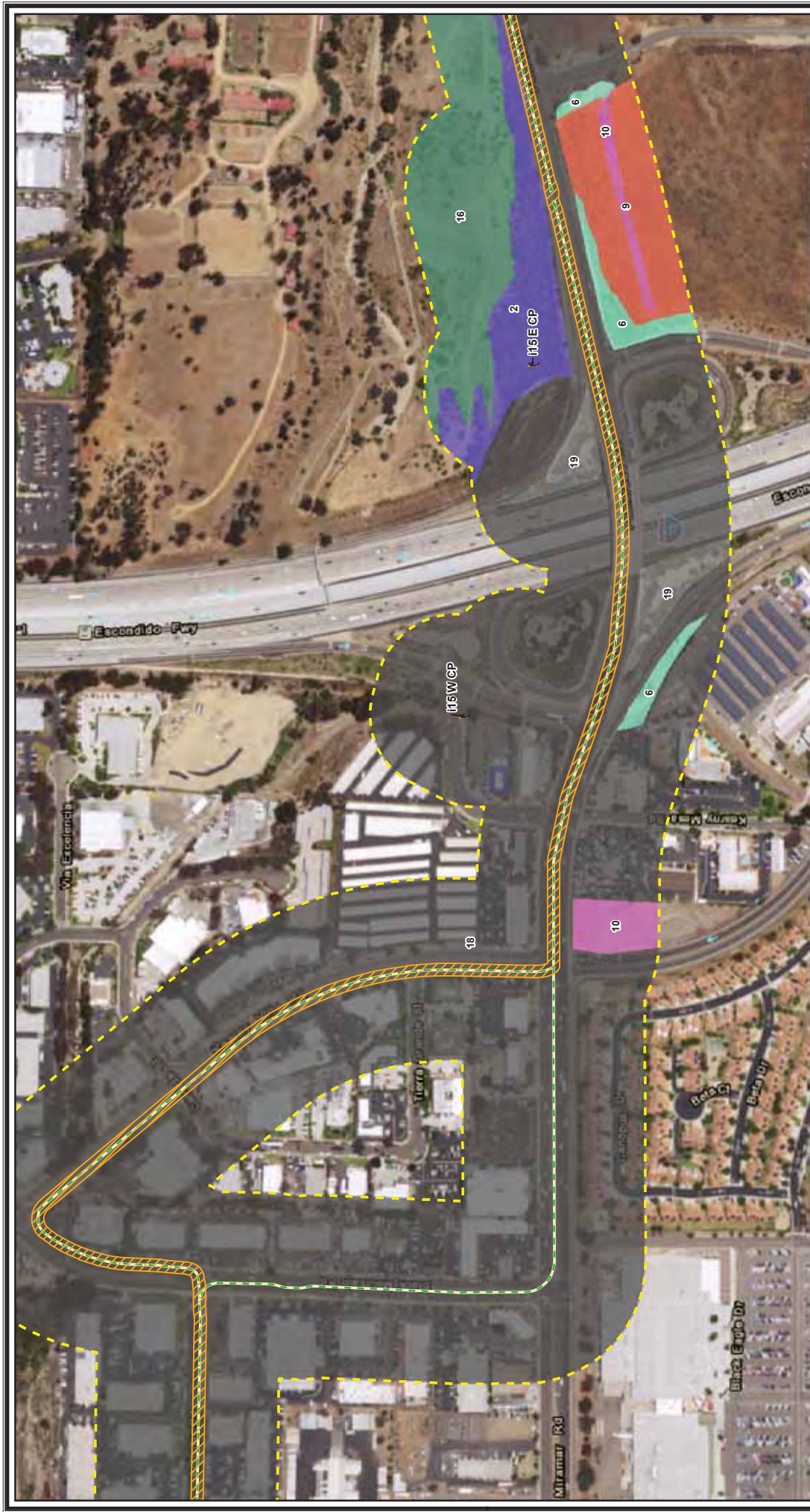
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Appendix A
 Sycamore to Peñasquitos,
 230kV Transmission Line Project
 Project Components and Vegetation Mapping
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- Legend**
- Proposed Project (Underground)
 - Biological Study Area
 - Potential Staging Yard
 - Temporary Impact Area
 - Vegetation Community
 - 10: Disturbed Habitat
 - 18: Ornamental/Developed Lands



Legend

- ⌘ Poles
- ⌘ Proposed Project (Underground)
- ⌘ Biological Study Area
- ⌘ Temporary Impact Area
- ⌘ Vegetation Community
- 2: Chaparral
- 6: Coastal Sage Scrub-Disturbed
- 10: Disturbed Habitat
- 9: Coastal Sage Scrub-Sparse-Disturbed
- 16: Nonnative Grassland
- 18: Ornamental/Developed Lands
- 19: Ornamental/Developed Lands with Scattered Native Shrubs

Scale: 0 150 300 600 Feet

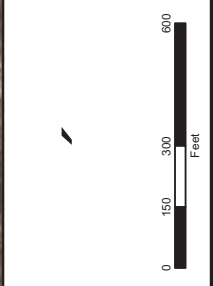
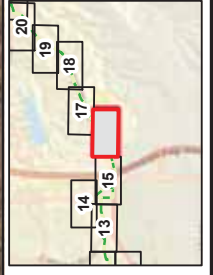
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Appendix A
 Sycamore to Peñasquitos,
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 Project Components and Vegetation Mapping
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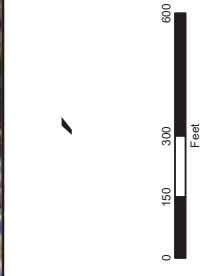
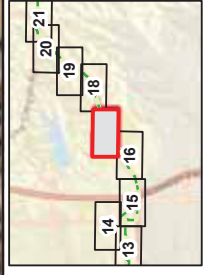
Appendix A
 Sycamore to Peñasquitos,
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 Project Components and Vegetation Mapping
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- Legend**
- Proposed Project (Underground)
 - 2: Chaparral
 - Biological Study Area
 - 5: Coastal Sage Scrub
 - 6: Eucalyptus Forest with Nongrassland
 - Temporary Impact Area
 - 11: Riparian Woodland Understory
 - Vegetation Community
 - 16: Nonnative Grassland
 - 18: Chaparral/Coastal Sage Scrub Mix
 - 21: Ornamental/Developed Lands



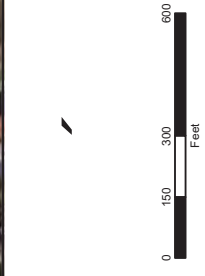
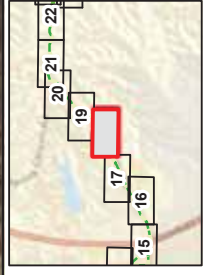
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 230kV Transmission Line Project
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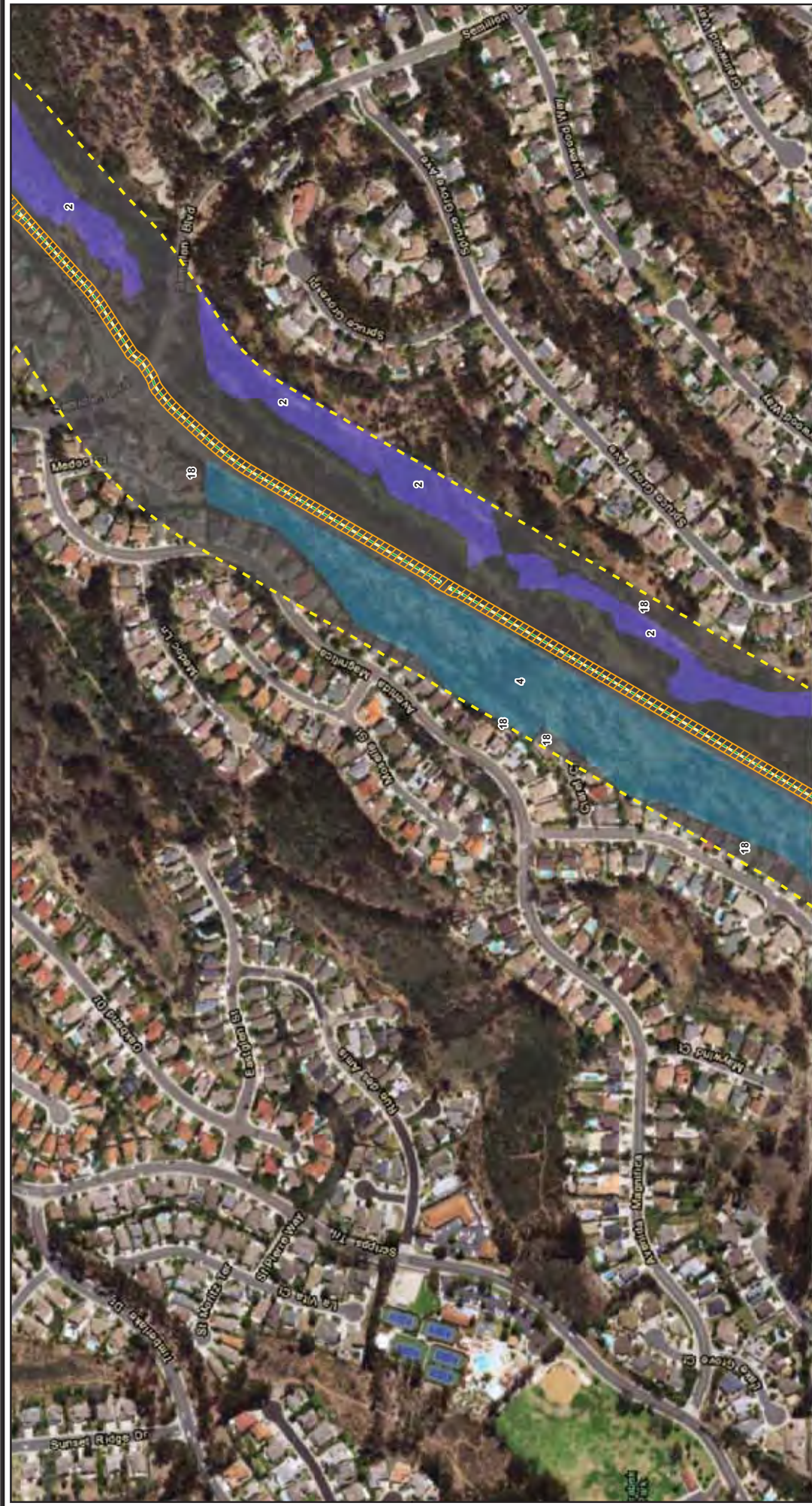
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 - Biological Study Area [Yellow solid line]
 - Temporary Impact Area [Orange dashed line]
 - Vegetation Community**
 - 4: Chaparral/Coastal Sage Scrub Mix [Blue]
 - 5: Coastal Sage Scrub [Pink]
 - 11: Eucalyptus Forest with Nongrassland Understory [Yellow]
 - 16: Nonnative Grassland [Green]
 - 18: Ornamental/Developed Lands [Grey]
 - 19: Ornamental/Developed Lands with Scattered Native Shrubs [Dark Grey]



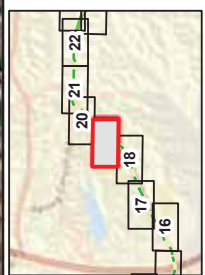
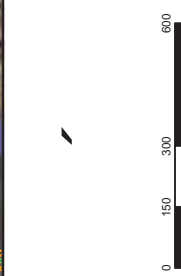
Appendix A
 Sycamore to Peñasquitos,
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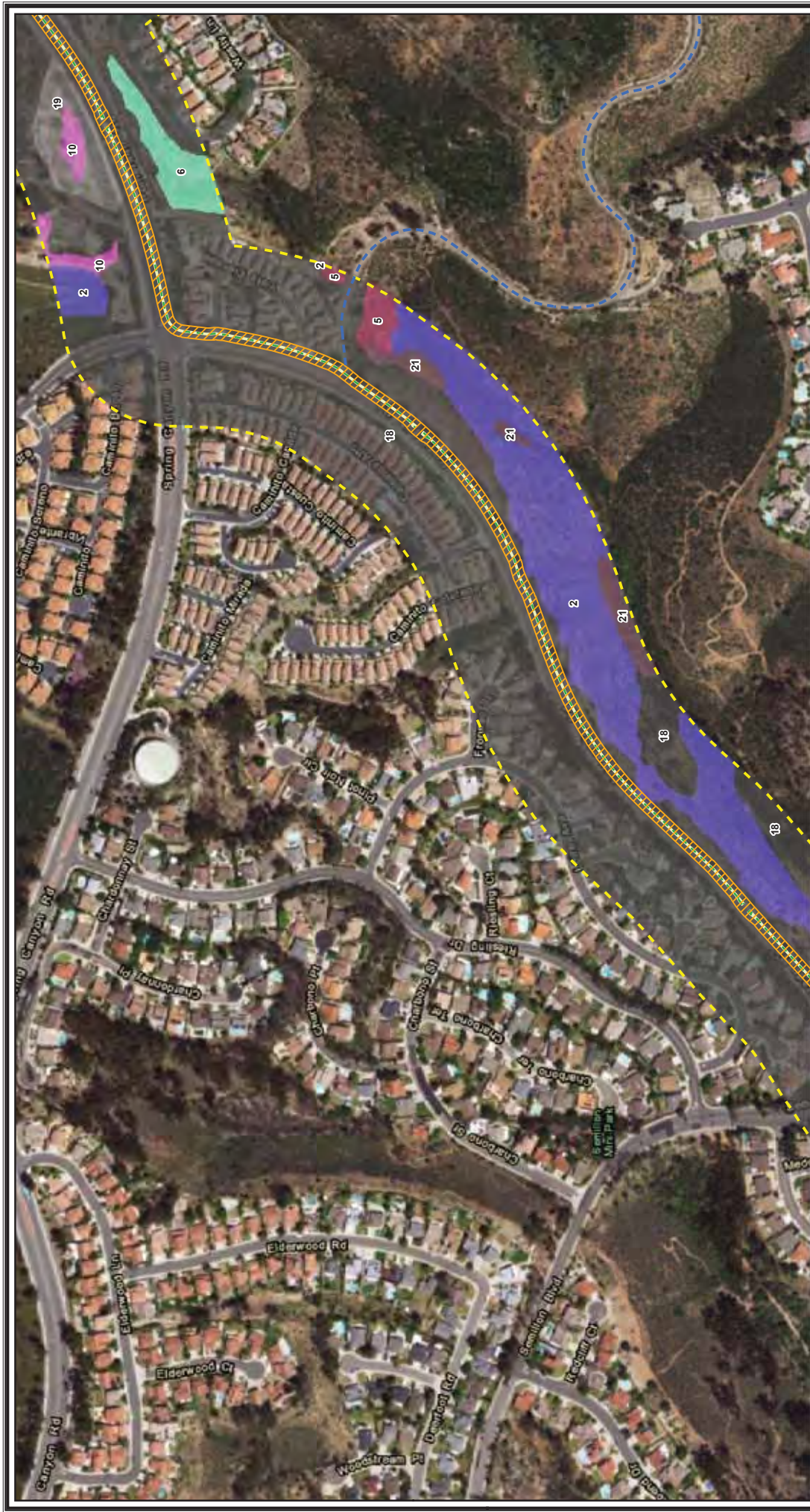
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 - Biological Study Area
 - Temporary Impact Area
 - Vegetation Community**
 - 2: Chaparral
 - 4: Chaparral/Coastal Sage Scrub Mix
 - 5: Coastal Sage Scrub
 - 16: Nonnative Grassland
 - 18: Ornamental/Developed Lands



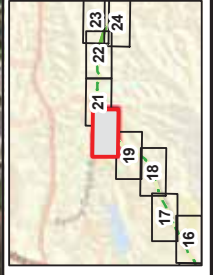
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- Proposed Project (Underground) ---
 - Biological Study Area ■
 - Temporary Impact Area ■
 - Vegetation Community**
 - 2: Chaparral ■
 - 4: Chaparral/Coastal Sage Scrub Mix ■
 - 18: Ornamental/Developed Lands ■



Appendix A
 Sycamore to Peñasquitos,
 230kV Transmission Line Project
 Project Components and Vegetation Mapping
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- Legend**
- Proposed Project (Underground)
 - Biological Study Area
 - Access Road
 - Temporary Impact Area
 - Vegetation Community
 - 2: Chaparral
 - 5: Coastal Sage Scrub
 - 6: Coastal Sage Scrub-Disturbed
 - 10: Disturbed Habitat
 - 18: Ornamental/Developed Lands
 - 19: Ornamental/Developed Lands with Scattered Native Shrubs
 - 21: Riparian Woodland



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 Sycamore to Peñasquitos,
 230kV Transmission Line Project
 Project Components and Vegetation Mapping
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Legend

- Proposed Project (Underground)
- Biological Study Area
- Access Road
- Temporary Impact Area
- Vegetation Community
- 2: Chaparral
- 3: Chaparral-Sparse
- 4: Chaparral/Coastal Sage Scrub Mix
- 5: Coastal Sage Scrub
- 6: Coastal Sage Scrub-Disturbed
- 8: Coastal Sage Scrub-Sparse
- 10: Disturbed Habitat
- 15: Native Grassland
- 18: Ornamental/Developed Lands
- 19: Ornamental/Developed Lands with Scattered Native Shrubs
- 21: Riparian Woodland

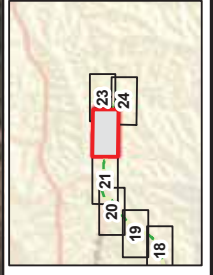
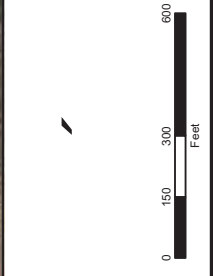
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Inset Map: Shows the project location within a larger regional context, with a red box highlighting the area shown in the main map.

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 Sycamore to Peñasquitos,
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 Project Components and Vegetation Mapping
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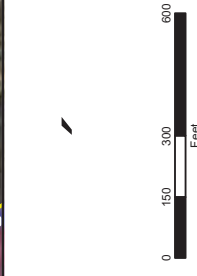
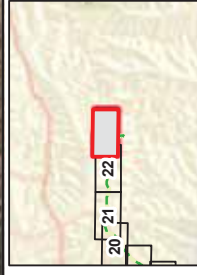


- Legend**
- Poles
 - Proposed Project (Overhead)
 - Proposed Project (Underground)
 - Biological Study Area
 - Access Road
 - 10: Temporary Impact Area
 - 16: Permanent Impact Area
 - 18: Ornamental/Developed Lands
 - 2: Chaparral
 - 5: Coastal Sage Scrub
 - 6: Coastal Sage Scrub-Disturbed





Appendix A
 Sycamore to Peñasquitos,
 230kV Transmission Line Project
 Project Components and Vegetation Mapping
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- Legend**
- Poles
 - Proposed Project (Overhead)
 - Proposed Project (Underground)
 - Potential Staging Yard
 - Temporary Impact Area
 - Permanent Impact Area
 - Vegetation Community
 - Access Road
 - 6: Coastal Sage Scrub-Disturbed
 - 10: Disturbed Habitat
 - 16: Nonnative Grassland
 - 18: Chaparral
 - 2: Coastal Sage Scrub
 - 5: Ornamental/Developed Lands
 - 21: Riparian Woodland



Legend

- ☐ Poles
- ☐ Proposed Project (Overhead)
- ☐ Proposed Project (Underground)
- ☐ Biological Study Area
- ☐ Access Road
- ☐ Potential Staging Yard
- ☐ Temporary Impact Area
- ☐ Permanent Impact Area
- Vegetation Community**
- ☐ 2: Chaparral
- ☐ 5: Coastal Sage Scrub
- ☐ 6: Coastal Sage Scrub-Disturbed
- ☐ 10: Disturbed Habitat
- ☐ 16: Nonnative Grassland
- ☐ 18: Ornamental/Developed Lands

☐ Sycamore Substation

☐ PO3A

☐ PO3B

☐ 2

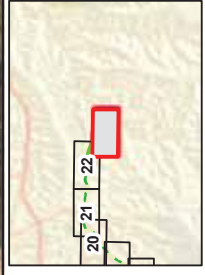
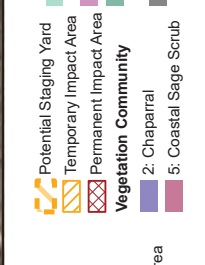
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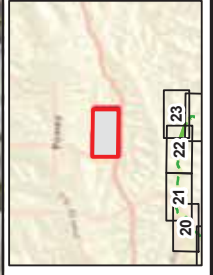
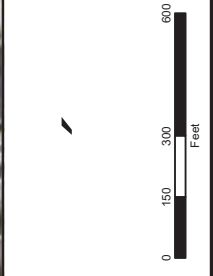
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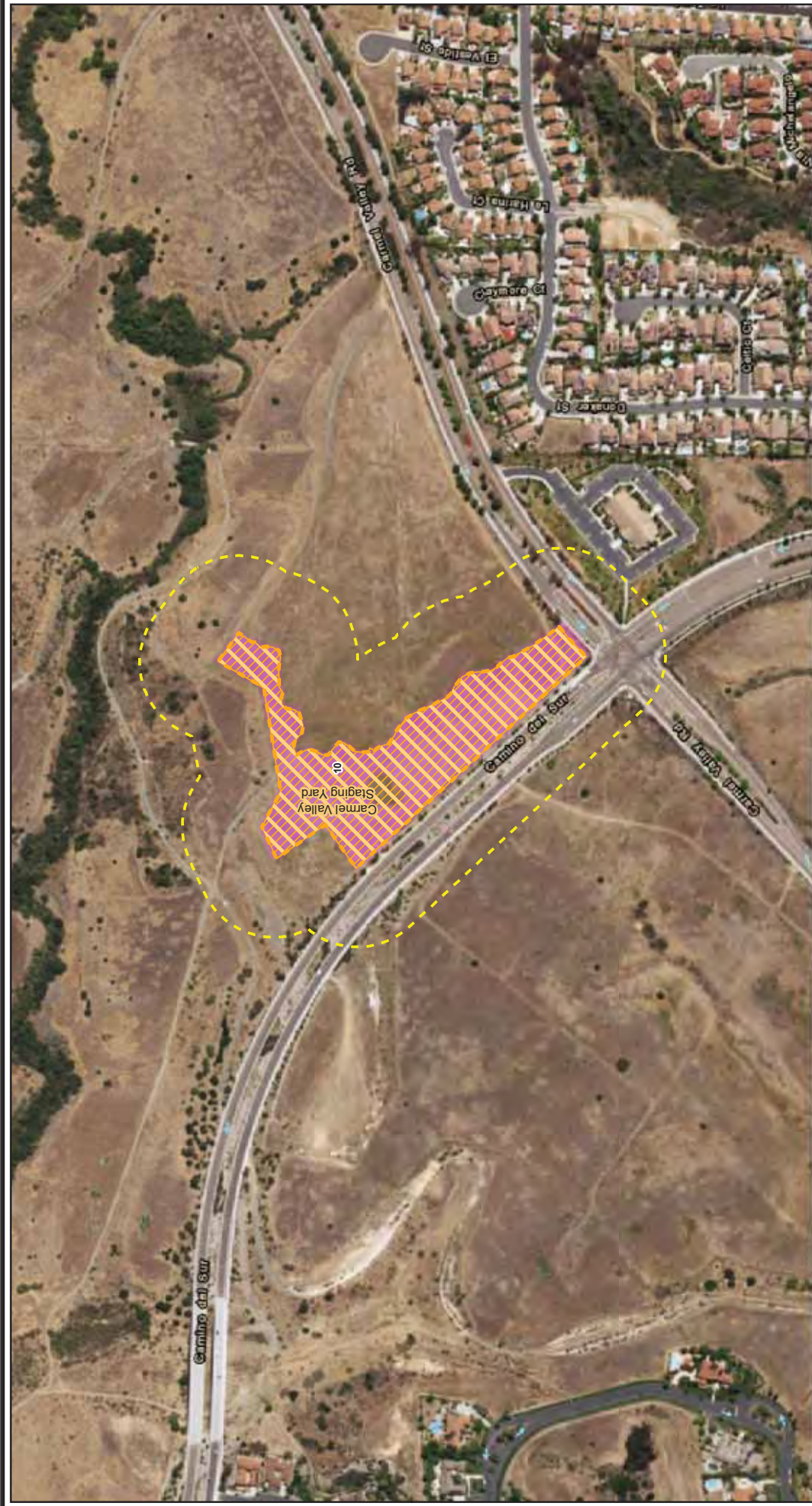




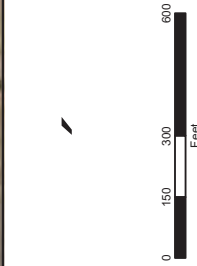
- Legend**
- Biological Study Area
 - Potential Staging Yard
 - Temporary Impact Area
 - Vegetation Community
 - 10: Disturbed Habitat



Appendix A
 Sycamore to Peñasquitos,
 230kV Transmission Line Project
 Project Components and Vegetation Mapping
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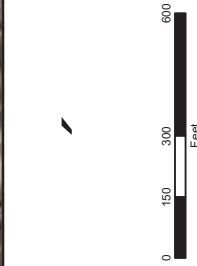
- Legend**
- Biological Study Area
 - Potential Staging Yard
 - Temporary Impact Area
 - Vegetation Community
 - 10: Disturbed Habitat



Appendix A
 Sycamore to Peñasquitos,
 230kV Transmission Line Project
 Project Components and Vegetation Mapping
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- Legend**
- Biological Study Area
 - Potential Staging Yard
 - Ornamental/Developed Lands
 - Temporary Impact Area
 - Vegetation Community
- 18: Ornamental/Developed Lands



APPENDIX B: PRESCRIBED SEED MIXES

SEED MIX FOR COASTAL SAGE SCRUB AREAS

Scientific Name	Common Name	Seeding Rate (Bulk Pounds per Acre) ^{1, 2}
<i>Acmispon glaber</i>	Deerweed	1.50
<i>Artemisia californica</i>	California sagebrush	4.00
<i>Atriplex canescens</i>	four-wing salt scale	0.50
<i>Baccharis pilularis</i>	coyote brush	0.50
<i>Bahiopsis laciniata</i>	San Diego county viguiera	1.00
<i>Castilleja exserta</i> subsp. <i>exserta</i> ³	purple owl's-clover	0.25
<i>Collinsia concolor</i> ³	southern Chinese houses	0.50
<i>Deinandra fasciculata</i> ³	fascicled tarweed	2.00
<i>Diplacus puniceus</i>	coast monkey flower	3.00
<i>Encelia californica</i>	California bush sunflower	2.00
<i>Eriogonum fasciculatum</i>	California buckwheat	4.00
<i>Isocoma menziesii</i>	coast goldenbush	0.50
<i>Lasthenia gracilis</i> ³	common goldfields	0.50
<i>Malosma laurina</i>	laurel sumac	2.00
<i>Melica imperfecta</i>	coast range melic	0.75
<i>Mirabilis laevis</i> var. <i>crassifolia</i>	coastal wishbone bush	1.50
<i>Plantago erecta</i> ³	dot-seed plantain	0.25
<i>Salvia apiana</i>	white sage	1.00
<i>Salvia mellifera</i>	black sage	2.00
<i>Stipa pulchra</i>	purple needlegrass	1.00
Total		28.75

¹ Species will be of local genetic stock collected from within 20 miles of the Project area.

² At the discretion of the Habitat Restoration Specialist, the final seed mixes will be refined to include at least 8 to 10 native species and a minimum of 25 pounds of pure live seed per acre based on specific vegetation characteristics of the impact sites, availability of seed from appropriate sources, and the results of the germination/purity testing.

³ These annual species may be utilized if seeding for SWPPP soil stabilization at restoration sites occurs outside of restoration planting window (mid-October through mid-January).

SEED MIX FOR CHAPARRAL AREAS

Scientific Name	Common Name	Seeding Rate (Bulk Pounds per Acre) ^{1, 2}
<i>Adenostoma fasciculatum</i>	Chamise	3.50
<i>Artemisia californica</i>	California sagebrush	0.50
<i>Ceanothus tomentosus</i>	Ramona lilac	2.50
<i>Cordylanthus rigidus</i> subsp. <i>setigerus</i>	dark-tip bird's beak	0.50
<i>Eriodictyon crassifolium</i>	thick-leaved yerba santa	1.00
<i>Eriogonum fasciculatum</i>	California buckwheat	1.00

SEED MIX FOR CHAPARRAL AREAS

Scientific Name	Common Name	Seeding Rate (Bulk Pounds per Acre) ^{1, 2}
<i>Eschscholzia californica</i>	California poppy	2.00
<i>Deinandra fasciculata</i>	fascicled tarweed	2.00
<i>Heteromeles arbutifolia</i>	Toyon	3.00
<i>Lupinus bicolor</i>	miniature lupine	2.00
<i>Malosma laurina</i>	laurel sumac	4.50
<i>Mirabilis laevis</i> subsp. <i>crassifolia</i>	coastal wishbone plant	3.00
<i>Salvia apiana</i>	white sage	0.50
<i>Salvia mellifera</i>	black sage	2.00
<i>Xylococcus bicolor</i>	mission manzanita	4.50
Total		32.50

¹ Species will be of local genetic stock collected from within 20 miles of the Project area.

² At the discretion of the Habitat Restoration Specialist, the final seed mixes will be refined to include at least 8 to 10 native species and a minimum of 25 pounds of pure live seed per acre based on specific vegetation characteristics of the impact sites, availability of seed from appropriate sources, and the results of the germination/purity testing.

³ These annual species may be utilized if seeding for SWPPP soil stabilization at restoration sites occurs outside of restoration planting window (mid-October through mid-January).

Prescribed seed mixes for the coastal sage scrub and chaparral areas may be revised following pre-construction data collection from the reference sites to better tailor the mixes to the individual temporary impact areas. All species will be selected from the mixes provided here, but may be modified per location. Quantities per individual impact area will be determined upon final calculation of actual impacts.

APPENDIX C: WEED CONTROL PLAN

WEED CONTROL PLAN

Sycamore-Peñasquitos 230 Kilovolt (kV) Transmission Line Project

December 2016

Prepared for:

San Diego Gas & Electric Company
8315 Century Park Court
San Diego, California 92123-1548
Phone: (858) 654-1239

Prepared by:

Chambers Group, Inc.
6920 Chesapeake Drive, Suite 202
San Diego, California 92123
Phone: (949) 261-5414 Ext. 7288

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Figure 2: Weed Zones

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Table 2: Major Weed Zones

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Appendix A: Non-Native/Invasive Species Observed

Appendix B: Weed Community Maps

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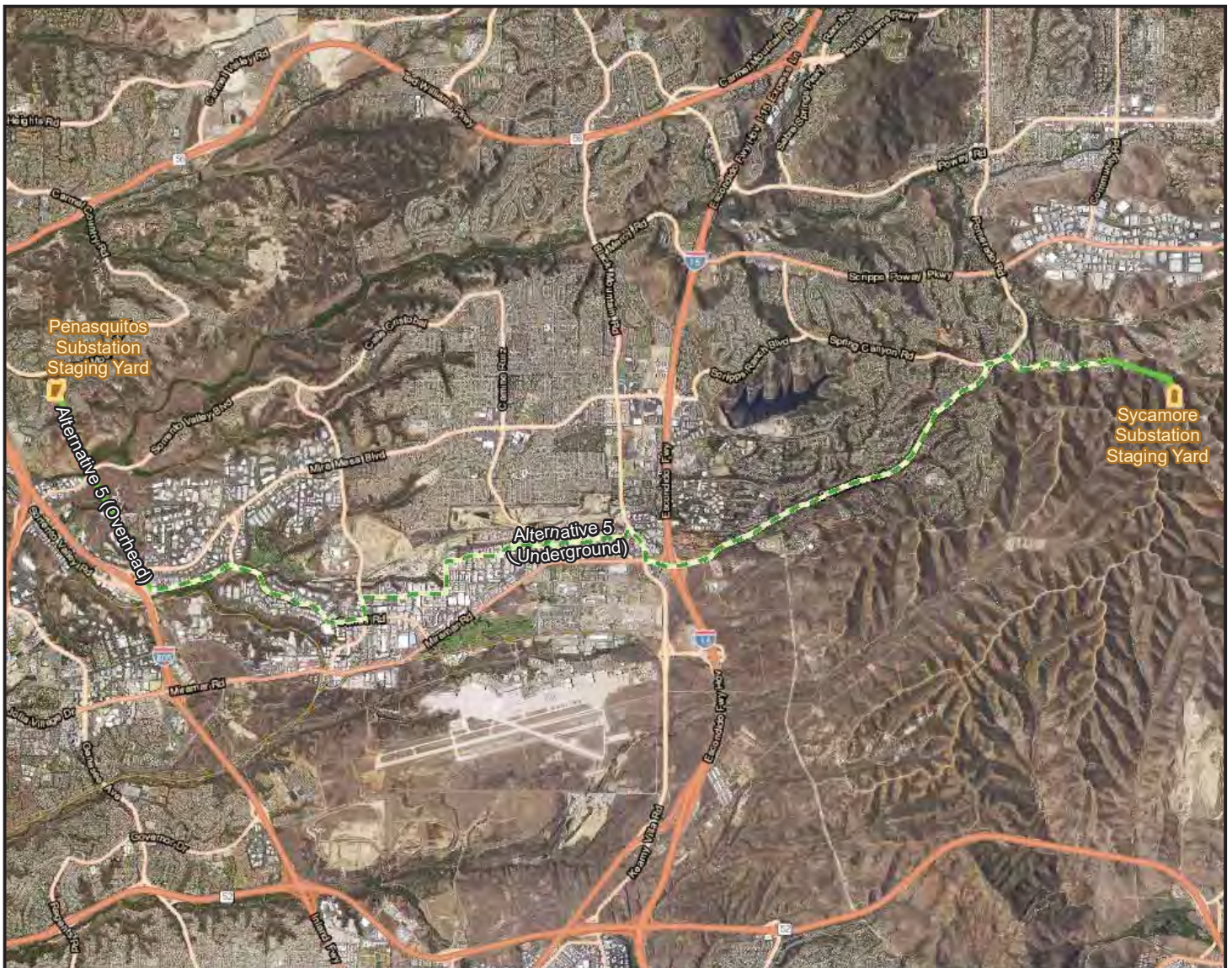
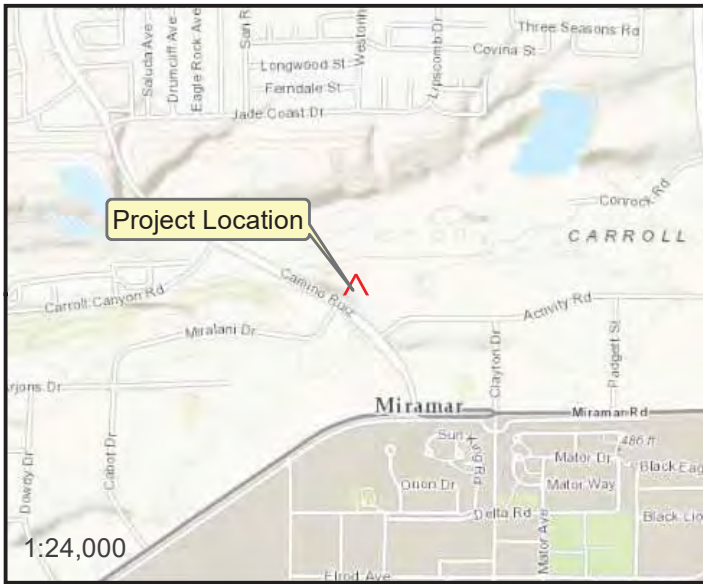
1.0 INTRODUCTION

This adaptive Weed Control Plan (Plan) describes the measures and best management practices (BMPs) that will be implemented by San Diego Gas & Electric Company (SDG&E) and its contractors to avoid and minimize the establishment and spread of noxious and invasive plant species during construction of the 230-kilovolt (kV) transmission line between the existing Sycamore Canyon and Peñasquitos Substations). This Plan will satisfy Mitigation Measure (MM) Biology-3 (Weed Control Plan), as described in the Final Environmental Impact Report (FEIR) Mitigation Monitoring, Compliance and Reporting Program (MMCRP). This Plan also addresses compliance with Applicant Proposed Measure HAZ-4: SDG&E Protocol for Herbicide Application and SDG&E's Subregional Natural Community Conservation Plan (NCCP). For the purpose of this document, noxious weeds and invasive plant species, collectively referred to as "weeds," are invasive, non-native plant species that have been identified by the California Invasive Plant Council (Cal-IPC). Appendix A: Non-Native/Invasive Species Observed includes a list of non-native plant species known to occur within the Project limits compiled as part of a floristic inventory in 2016.

PROJECT DESCRIPTION

SDG&E is proposing the construction and operation of a 230kV transmission line between the existing Sycamore Canyon and Peñasquitos Substations. The Project consists of approximately 14-miles traversing through developed residential and commercial areas as well as undeveloped areas (Figure 1) and includes the following components:

- Segment A - Construction of approximately 0.74 mile of new 230 kV transmission line and relocated 138kV power line on new tubular steel poles (mono-pole structures) and steel H-frame structures all within existing SDG&E Right-of-Way (ROW) located between the existing Sycamore Canyon Substation and a trail originating at Stonebridge Parkway. Construction of a new cable pole at the transition point from overhead to underground.
- Segment B - Construction of approximately 11.45 miles of 230 kV underground transmission line in existing roads and bridges.
- Segment C — Construction of approximately 2.2 miles of new 230 kV transmission line and all-dielectric self-supporting (ADSS) communication cable on existing 230 kV tubular steel poles within existing SDG&E ROW from Scranton Road to Peñasquitos Substation. Construction of a new cable pole at the transition point from underground to overhead.
- Minor modifications of the existing Sycamore Canyon and Peñasquitos Substations to allow for connection of the new 230 kV transmission line.



Legend

- Project Alignment (Overhead)
- - - Project Alignment (Underground)
- Substation



OBJECTIVES

The purpose of this Plan is to identify weed control and abatement methods, practices and recommend treatment timing for all areas of earth disturbance where weeds could establish. The management practices and activities in this Plan are intended to accomplish the following objectives:

- Identify Project areas where earth disturbance is proposed and whether there are weed populations that have the potential to establish and spread outside of the area.
- Describe weed-control and abatement methods and practices to be employed during construction, and operation/maintenance, to minimize the establishment and spread of weed species.
- Prevent the introduction of new invasive species that are not currently known to occur in the Project area.

2.0 APPLICABLE MITIGATION MEASURE AND APPLICANT PROPOSED MEASURES

MITIGATION MONITORING, COMPLIANCE, AND REPORTING PROGRAM

MITIGATION MEASURE (MM) BIOLOGY-3: WEED CONTROL PLAN states the following:

“SDG&E shall prepare and implement a comprehensive, adaptive Weed Control Plan for pre-construction and long-term invasive, non-native species abatement. Developed land shall be excluded from weed control. Where SDG&E owns the property, the Weed Control Plan shall include specific weed abatement methods, practices, and treatment timing developed specifically for the Project area by qualified individuals with at least 5 years of weed control experience within San Diego County. The Weed Control Plan shall address control methods and issues controlling invasive non-native species within all vegetation communities and land cover types found along the Project alignment. On ROW easement on MCAS Miramar, the Weed Control Plan shall incorporate all appropriate and legal U.S. Marine Corps-stipulated regulations. The Weed Control Plan shall be submitted to MCAS Miramar for final authorization of weed control methods, practices, and timing prior to implementation of weed control on MCAS Miramar. The Weed Control Plan shall be submitted to the City of San Diego for final authorization of weed control methods, practices, and timing prior to implementation of any weed control within the City of San Diego MHPA.

The Weed Control Plan shall include the following:

- *A pre-construction weed inventory shall be conducted by surveying the entire ROW and areas immediately adjacent to the ROW where access permission is obtained as well as at all ancillary facilities associated with the Project for weed populations that: are considered by the San Diego County Agriculture Commissioner or, MCAS Miramar (for ROW on MCAS Miramar), or City of San Diego (for ROW within the City of San Diego MHPA) as being a priority for control, (2) are weed populations that are rated High or Moderate for negative ecological impact in the California Invasive Plant Inventory (online) Database (Cal-IPC 2006 [and 2007 update]; <http://www.cal-ipc.org/ip/inventory/index.php>) or are weed species of concern to MCAS Miramar (for ROW on MCAS Miramar), and (3) aid and promote the spread of wildfires in San Diego County.*
- *Prolific wildfire promoting species such as brome grasses (Bromus spp.) shall be mapped but not targeted for control outside of Project impact areas. These populations shall be mapped and described according to density and area covered. These plant species shall be treated prior to construction or at a time when treatments would be most effective based on phenology according to control methods and practices for invasive weed populations included in the Weed Control Plan, or required by MCAS Miramar, or City of San Diego.*
- *Weed control treatments shall include all legally permitted methods to be used in the following prioritized order: preventative, manual, mechanical, and chemical.*
- *All treatments shall be applied with the authorization of MCAS Miramar and City of San Diego as appropriate.*

- *The application of herbicides shall be in compliance with all state and federal laws and regulations under the prescription of a Pest Control Advisor (PCA) and implemented by a Licensed Qualified Applicator.*
- *Where manual and/or mechanical methods are used, disposal of the plant debris will be within an approved landfill area within San Diego County.*
- *The timing of the weed control treatment shall be determined for each plant species in consultation with the PCA for the Project, and with MCAS Miramar, and City of San Diego as appropriate, with the goal of controlling populations before they start producing seeds. For the lifespan of the project (i.e., as long as the project is physically present), long-term measures to control the introduction and spread of weeds in the project area shall be taken as follows.*
 - *From the time construction begins until 2 years after construction is complete, annual surveying for new invasive weed populations and the monitoring of identified and treated populations shall be required in the survey areas described above. After this time, surveying for new invasive weed populations and monitoring of identified and treated populations shall be required at an interval of every two years. However, the treatment of weeds shall occur on a minimum annual basis, unless otherwise approved by the PCA, MCAS Miramar, and City of San Diego as appropriate.*
 - *During project construction and operation/maintenance, all seeds and straw materials shall be certified weed free, and all gravel and fill material shall also be certified weed free.*
 - *During project construction, vehicle and boot wash stations shall be provided.”*

APPLICANT PROPOSED MEASURE HAZ-4: SDG&E PROTOCOL FOR HERBICIDE APPLICATION states:

“All herbicides utilized during maintenance around transmission and power line structures would follow SDG&E’s existing procedures for application of herbicides.”

3.0 PLAN IMPLEMENTATION

SDG&E and its contractors will take all reasonable measures to control the spread of noxious and invasive plants during Project construction. SDG&E and its contractors will adhere to the requirements of the MMCRP, and implement all applicable methods and practices within the Plan. Once the Project components become energized, operation and maintenance activities will be conducted in accordance with SDG&E’s Natural Communities Conservation Plan.

PRECONSTRUCTION WEED SURVEY RESULTS

Weed Species Observations

A pre-construction weed inventory survey was conducted on and immediately adjacent to the Project ROW to identify weed species that are rated ‘High’ or ‘Moderate’ for negative ecological impact in the California Invasive Plant Inventory (online) Database, are weed species of concern to MCAS Miramar, or aid and promote the spread of wildfires in San Diego County. Weed species were mapped within undeveloped areas of the Project ROW Appendix B: Weed Community Maps. The areas surveyed are depicted in yellow on the overview map (Appendix B) with detailed maps provided for areas containing weed populations. Surveyed areas lacking weeds are not displayed in the detailed mapset to reduce the overall size of the mapset. Of the seven staging yards included with this Project (1A, 1B, 2, 3, Shire, Driving Range and Stonebridge), only the Stonebridge staging yard had recorded weed polygons and therefore is the only staging yard included in the detailed mapset.

Weed species were mapped according to one of three vegetative cover classes based on visual estimates of absolute cover within a mapped polygon. These classes include:

- **(L)** = represents **Low** vegetative coverage values, from an estimated 1-9 percent.
- **(M)** = represents **Moderate** vegetative coverage values, from an estimated 10-24 percent.
- **(H)** = represents **High** vegetative coverage values, from an estimated 25-100 percent.

Weed species mapped as part of the weed inventory survey (Table 1; and depicted on Appendix B: Weed Community Maps) include those species identified with a high priority for removal or whose total area occupied on site is greater than 0.001 acre. The “†” symbol after the scientific name designates species identified as a priority for control with a Moderate or High designation by Cal-IPC (Cal-IPC 2006); that are considered invasive by MCAS Miramar (MCAS 2011); that have an impact score greater than 10 from the City of San Diego (CISAC 2010); or are on the San Diego County’s Watch List (SDWMA 2016; CDEA 2016). Where applicable, the recommended timing for herbicide application is also provided in Table 1.

Table 1: Non-Native/Invasive Plant Species Mapped within the Project ROW

Common Name	Scientific Name	Area Occupied Onsite (Acres) ¹	Timing for Herbicide Treatment ²
ripgut grass	<i>Bromus diandrus</i>	4.938	Treat postemergence from late fall

Table 1: Non-Native/Invasive Plant Species Mapped within the Project ROW

Common Name	Scientific Name	Area Occupied Onsite (Acres) ¹	Timing for Herbicide Treatment ²
			to early spring
Russian thistle	<i>Salsola tragus</i> †	2.829	Postemergence to small, rapidly growing plants before seed set from early to mid-summer
shortpod mustard	<i>Hirschfeldia incana</i> †	1.216	Early spring postemergence prior to bolting
pampas grass	<i>Cortaderia selloana</i> †	1.055	Postemergence. Best in late summer or fall, after flowering
Mediterranean schismus	<i>Schismus barbatus</i>	1.054	Postemergence in early spring when plants are growing rapidly
tamarisk	<i>Tamarix</i> sp. †	0.857	Broadcast spraying should be conducted in late summer or early fall; cut stump treatments can be made year-round outside of severe drought conditions
blackwood acacia	<i>Acacia melanoxylon</i> †	0.758	Cut stump treatment can be made year-round
foxtail chess	<i>Bromus madritensis</i> subsp. <i>rubens</i>	0.347	Treat postemergence from late fall to early spring
natal grass	<i>Melinis repens</i>	0.344	Postemergence to rapidly growing plants from mid-summer to fall at time of flowering
Italian thistle	<i>Carduus pycnocephalus</i> †	0.234	Postemergence to rapidly growing plants in bud stage
totalote	<i>Centaurea melitensis</i> †	0.231	Postemergence from bolting to beginning of flowering
fennel	<i>Foeniculum vulgare</i> †	0.212	Postemergence to fully developed leaves but before flowering/bolting
fountain grass	<i>Pennisetum</i> † <i>setaceum</i>	0.193	Postemergence to rapidly growing plants from mid-summer to fall at time of flowering
bristly ox-tongue	<i>Helminthotheca echioides</i>	0.190	Postemergence to seedlings or plants before bolting
blue gum	<i>Eucalyptus globulus</i> †	0.171	Late summer to early fall
Mexican fan palm	<i>Washingtonia robusta</i> †	0.124	Late summer to early fall
tree tobacco	<i>Nicotiana glauca</i> †	0.075	Postemergence when plants are growing rapidly
slender wild oat	<i>Avena barbata</i> †	0.065	Postemergence when plants are less than 18 inches in height and rapidly

Table 1: Non-Native/Invasive Plant Species Mapped within the Project ROW

Common Name	Scientific Name	Area Occupied Onsite (Acres) ¹	Timing for Herbicide Treatment ²
			growing
cardoon; artichoke thistle	<i>Cynara cardunculus</i> †	0.059	Postemergence in winter to early spring before bolting
Perez's marsh-rosemary; statice	<i>Limonium perezii</i>	0.040	Postemergence when plants are growing rapidly
stinkwort	<i>Dittrichia graveolens</i> †	0.033	Postemergence to rapidly growing plants in late spring to early summer
soft chess	<i>Bromus hordeaceus</i>	0.029	Treat postemergence from seedling to tiller stage when plants are growing rapidly
hottentot fig	<i>Carpobrotus edulis</i> †	0.028	Apply herbicide when the plant is rapidly growing
Australian saltbush	<i>Atriplex semibaccata</i> †	0.027	Postemergence to seedlings or to mature plants that are growing rapidly
purple rock rose	<i>Cistus incanus</i>	0.020	Postemergence when plants are growing rapidly
flax-leaved horseweed	<i>Erigeron bonariensis</i>	0.016	Postemergence when plants are growing rapidly in late summer, before bolting
white sweetclover	<i>Melilotus albus</i>	0.015	Postemergence when plants are growing rapidly
filaree	<i>Erodium</i> spp. †	0.011	Postemergence to rapidly growing plants
crystalline ice plant	<i>Mesembryanthemum crystallinum</i> †	0.010	Apply herbicide when the plant is rapidly growing
black mustard	<i>Brassica nigra</i> †	0.010	Postemergence when weeds are small and rapidly growing, but before flowering
crab grass	<i>Digitaria sanguinalis</i>	0.008	Postemergence from late spring to summer; or during fall after flowering and before dormancy
lamb's quarters	<i>Chenopodium album</i>	0.001	Postemergence when plants are growing rapidly

¹ Species have been arranged in decreasing order of coverage within the overhead transmission ROW and immediate vicinity of underground transmission and access roads.

² Generally, herbicide application is conducted from January through March on newly germinating seedlings for most species. Herbicide treatment listed here is presumed to be a glyphosate-based means of chemical control. Non-chemical control through use of manual pulling and mechanical cutting or disking may be performed at any time of the year prior to seed set.

† Species identified as a priority for control by Cal-IPC, the San Diego County Agriculture Commissioner, MCAS Miramar or the City of San Diego.

PREVENTION MEASURES

Flagging and Signage

Prior to conducting any ground-disturbing activities, survey crews and/or Project personnel will mark portions of approved work areas that contain localized populations of those species targeted for removal (i.e., species identified with a “†” symbol in Table 1). Areas will be marked using lath, signage, ribbon, and/or fencing to delineate avoidance and treatment areas.

Vegetation and Soil Management

Clearing and grading activities will be limited to the approved work limits. In areas along the north-south underground portion of the 230-kV transmission line and the overhead portion of the 230-kV transmission line that contain invasive species, cleared vegetation and the top 2 to 4 inches of soil will only be stockpiled adjacent to the area from which it was removed. Stockpiling of vegetative material and topsoil at staging yards or other work sites will not be authorized. This will reduce the transport of soil that may contain noxious weed seeds, roots, rhizomes, or other propagules. If the vegetative material and topsoil are to be hauled off site, the loads will be covered to prevent seed dispersal during transport to approved disposal facilities. Material will not be recycled or reused.

CONTROL MEASURES

Species Eradication and Removal

Weed control treatments shall include all legally permitted methods to be used in the following prioritized order: preventative, manual, mechanical, and chemical. Treatments shall not be applied without the authorization of the MCAS Miramar and City of San Diego, as appropriate. The application of herbicides shall be in compliance with all state and federal laws and regulations under the prescription of a Pest Control Advisor (PCA) and implemented by a Licensed Qualified Applicator. Where manual and/or mechanical methods are used, disposal of the plant debris will be within an approved landfill area within San Diego County following the regulations set by the San Diego County Agriculture Commissioner.

In undeveloped Project areas where weeds will not be removed (e.g., areas not designated for clearing, grading or excavation), weeds shall be treated prior to construction. SDG&E will endeavor to administer the weed control treatment for each plant species based on individual species' phenology (Table 1), with the goal of controlling populations before they start producing seeds; however, this may not be feasible based on the construction schedule. Where manual or mechanical removal is not feasible or in pure stands of invasive species that occupy large areas, weeds will be treated chemically. Herbaceous species will be treated with a foliar application of herbicide (e.g., 3 percent), and woody species will be treated using the cut-stump method, in which the plant is cut near ground level first and a concentrated form (e.g., 30 percent) of herbicide is applied within 5 minutes to the cut stump. Non-native brome grasses (*Bromus* spp.) were mapped, but are not targeted for control outside Project impact areas due to the ubiquitous nature of such species in San Diego County.

Cleaning

In order to control the introduction of new weed species, all construction equipment will be clean and free of all soil and vegetative material prior to mobilizing on the Project. Prior to entering the Project, equipment will be inspected by SDG&E to verify the equipment is free of soil or vegetative materials.

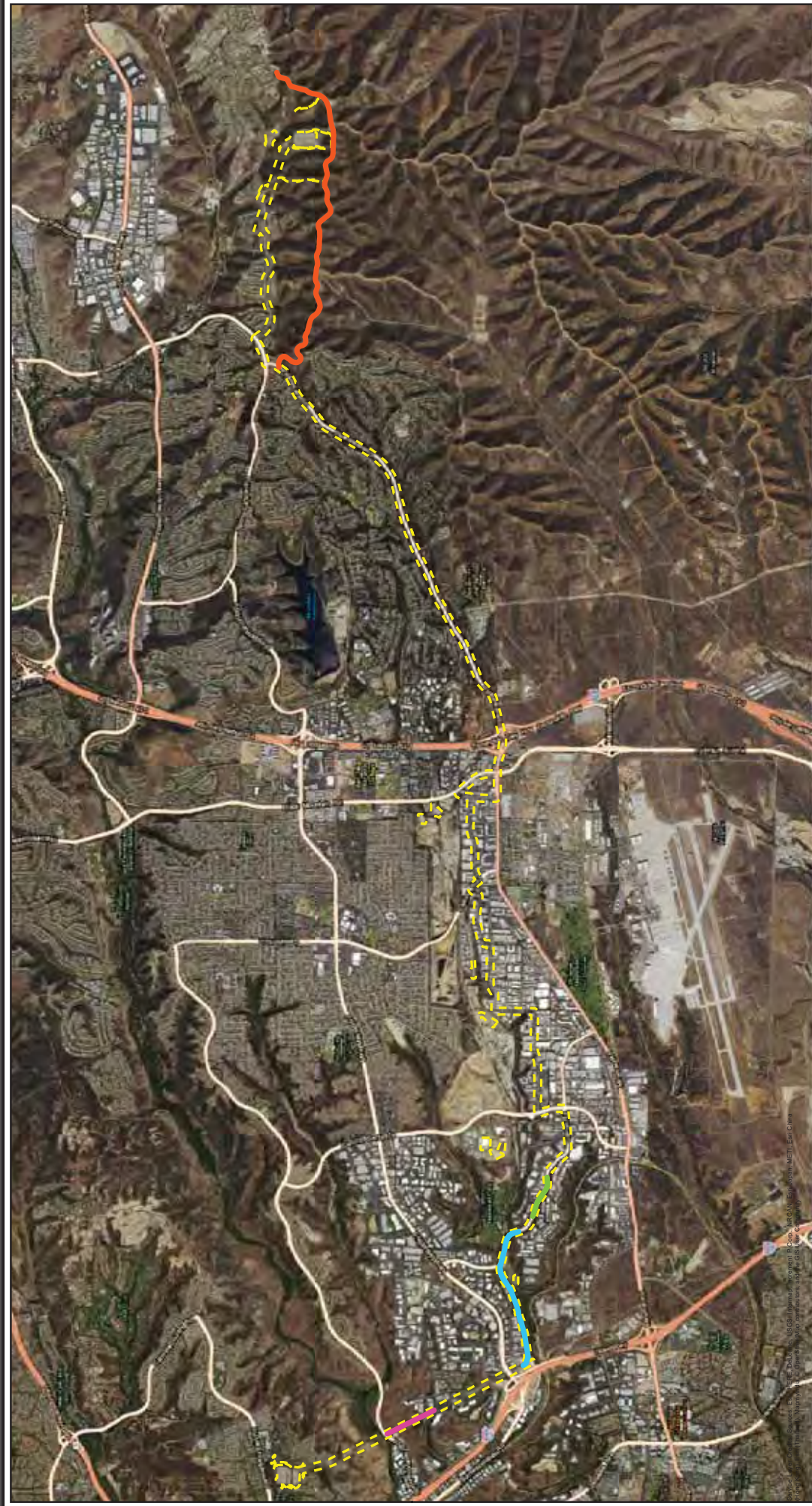
In order to reduce the threat of spreading weed species (Table 1), all heavy equipment used for clearing or grading will be cleaned prior to moving between or out of any designated weed zone(s) so as not to re-infest or add additional weed species to an already infested area. Weed zones will be delineated based on similar weedy species composition. The Project has been divided into four major zones (Table 2) where select weed species are currently confined to a particular area and occur in much lower densities or not at all along other sections of the alignment. The weed species identified in the designated weed zones are neither more invasive nor more abundant than any other weed species along the alignment; rather, the weed species used to identify zones are found exclusively in these locations. These weed zones are visually represented on Figure 2 and will be clearly marked in the field at the time of construction where appropriate. SDG&E or its designated representative will ensure that this equipment is cleaned prior to moving to uninfested areas and between zones.

Table 2: Major Weed Zones

Weed Zone	General Location	Select Weed Species
A	Northwest section of the alignment. The zone is located in an overhead portion between Sorrento Valley Boulevard and Lusk Boulevard.	Italian thistle
B	Southwestern section of the alignment. Zone begins at the western-most end of Carroll Canyon Road and extends to approximately 500 feet south of Fenton Road.	pampas grass, tamarisk, blackwood acacia
C	Southwestern section of the alignment. Zone is along Carroll Canyon Road. From west to east, the zone begins approximately 500 feet west of Brown Deer Road and extends to 800 feet west of Carroll Park Drive.	fennel
D	Eastern section of the alignment. The zone is located along the access road between Pomerado Road and Maple Grove Lane (just northeast of the Sycamore Substation).	natal grass and fountain grass

Cleaning methods may include the use of cleaning stations, as described below, located within Project staging yards or on paved/lined areas that can be swept clear of loose soil and debris. Soil will remain on site within the weed zone where it originated or disposed of off-site at a landfill or approved waste-management facility. Cleaning of equipment (e.g., shoes, tires, undercarriages, etc.) will consist of manual removal of potential seed-containing soil, debris, and vegetative material using hand tools such as brushes, picks, or shovels; and/or removal of the equipment to an off-site equipment cleaning facility. Once a noxious and invasive plant control area has been treated or cleared, and the topsoil has been stockpiled or removed from site, subsequent work and travel within the area can be conducted without cleaning.

In addition, a cleaning area will be provided at Project staging yards for Project personnel to remove mud from their boots.



Legend

- Weed Mapping Survey Area
- Weed Zones - Zone A
- Zone B
- Zone C
- Zone D



Figure 2
Weed Community Map
Proposed Project
Weed Zone

Weed-Free Products

All imported soil and material will be clean and weed-free. The Construction Contractor will use straw wattles, gravel, mulch, and soil that are free of weeds. If straw wattles are used, they must be certified “weed-free” by the manufacturer.

Noxious Weed Management

In accordance with Section 5.0 below, disturbed areas will be surveyed to detect new populations of any species targeted for removal (†) in Appendix A: Non-Native/Invasive Plant Species Observed. If new populations are detected, they will be removed as soon as practicable using hand tools or using other accepted management techniques.

4.0 MONITORING AND REPORTING

Implementation of this Plan will be monitored by SDG&E’s Environmental Inspectors and documented in daily and weekly monitoring reports and checklists. Monitoring reports will be provided to the California Public Utilities Commission as required by the Project’s MMCRP.

5.0 ONGOING WEED MANAGEMENT

SURVEYING

Annual weed inventory surveys of work areas in natural habitats where weeds could establish (e.g., undeveloped areas) will be conducted by a qualified biological monitor knowledgeable in applicable species identification starting one year after the start of construction and continue for two years after construction is complete. Surveys will not be conducted on areas where SDG&E does not have access permission from the landowner or entity with jurisdictional authority. Surveys will identify weed species considered by the San Diego County Agriculture Commissioner, MCAS Miramar or City of San Diego as a priority for control, rated ‘High’ or ‘Moderate’ for negative ecological impact in the California Invasive Plant Inventory (online) Database, are of concern to MCAS Miramar, or aid and promote the spread of wildfires in San Diego County. Surveys will also identify any weed species not present prior to construction.

SDG&E will monitor and control weeds to prevent establishment and limit the spread of localized invasive plant species that were not present prior to construction. Qualified biological monitors will have a minimum of 2 years’ experience identifying native and non-native plant species common in San Diego County. Monitors will have a working knowledge of dichotomous keys (e.g., Baldwin et al. 2012) or be able to consult with a more experienced botanist on a regular basis for any unknown species. Noxious weed management will include abatement efforts within the Project area and a 0-percent establishment criterion will be implemented for species with a Cal-IPC Alert status or “A” rating for weeds that were not known to occur within the Project site prior to construction. At year three, post-construction, surveys will continue every two years until no new weed species or populations (i.e., not previously documented prior to construction) are identified within undeveloped areas of the Project ROW. Once the Project

components become energized, operation and maintenance activities will be conducted in accordance with SDG&E's NCCP¹.

TREATMENT AND PREVENTION

SDG&E will treat weed populations identified in the surveys described above on an annual basis starting one year after construction is complete until no new weed species are identified within undeveloped areas of the Project ROW and existing weed populations along Project access roads and work areas are at or below their pre-Project coverage (as depicted in Appendix B: Weed Community Maps), unless otherwise approved by PCA, MCAS Miramar, or City of San Diego, as appropriate.

Treatment methods will consist of manual and/or mechanical removal and/or application of a pre-emergent herbicide. If chemical weed abatement methods are determined to be required, the application of these methods will be conducted in a manner that minimizes potential impacts to sensitive plant and wildlife species, such as the timing of implementation, the application rate for chemical controls, and the utilization of site-specific measures. In addition, herbicide use will be limited to pre-emergent, non-persistent herbicides and will be applied in accordance with label and application permit directions for terrestrial applications. Any weed control measures that require herbicide use will be applied by a licensed or certified applicator, under the recommendation of a licensed PCA. The timing of the weed control treatment shall be determined in coordination with a PCA, and with MCAS Miramar and the City of San Diego, as appropriate.

All seeds, straw materials, gravel and fill material used in the Project area during operations and maintenance will be certified weed free. All herbicides utilized during maintenance around transmission and power line structures will follow SDG&E's existing procedures for application of herbicides.

¹ Section 2.1.3.9 of the NCCP describes specific vegetation control techniques that will be utilized during operation and maintenance activities.

6.0 REFERENCES CITED

- Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken (editors)
2012 *The Jepson Manual: Vascular Plants of California, Second Edition*. University of California Press, Berkeley, CA.
- California Public Utilities Commission.
2016 Sycamore to Peñasquitos 230-KV Transmission Line Project Final Environmental Impact Report. March 2016.
- California Invasive Plant Council (Cal-IPC)
2006 California Invasive Plant Inventory. Cal-IPC Publication 2006-02 and Update February 2007. California Invasive Plant Council: Berkeley, CA. Accessed online on September 29, 2016 from <http://www.cal-ipc.org/ip/inventory/index.php>.
- California Invasive Species Advisory Committee (CISAC)
2010 Invasive Species List and Scorecard for California. Invasive Species Council of California: Sacramento, CA. Invasive Species List accessed online on September 30, 2016 from http://ice.ucdavis.edu/invasives/home/species?term_node_tid_depth=2 and Scorecard Information accessed online <http://www.iscc.ca.gov/docs/CaliforniaInvasiveSpeciesList.pdf>.
- Marine Corps Air Station (MCAS) Miramar
2011 Integrated Natural Resources Management Plan (INRMP) for MCAS Miramar, CA. Accessed online on September 29, 2016, from <http://www.miramar-ems.marines.mil/Divisions/Natural-Resources-Division/Natural-Resources/>.
- San Diego Weed Management Area (SDWMA)
2016 Invasive Weed Watch. County of San Diego Department of Agriculture, Weights and Measures. San Diego, CA. Accessed online on September 30, 2016, from http://www.sandiegocounty.gov/content/sdc/awm/ipm_sdwma.html.
- State of California Department of Food and Agriculture (CDFA)
2016 Division of Plant Health & Pest Prevention Services, Pest Ratings of Noxious Weed Species and Noxious Weed Seed. Encycloweedia: Data Sheets, California Noxious Weeds. Accessed online on September 30, 2016 from https://www.cdfa.ca.gov/plant/IPC/encycloweedia/weedinfo/wininfo_table-sciname.html.

APPENDIX A
Non-Native/Invasive Species Observed

Appendix A – Non-Native/Invasive Plant Species Observed

Scientific Name	Common Name	Cal-IPC Rating ¹	Cal-IPC Scores			MCAS ²	CISAC Scorecard ³	CDFA San Diego ⁴
			Impact	Invasiveness	Distribution			
ANGIOSPERMS (EUDICOTS)								
AIZOACEAE	FIG-MARIGOLD FAMILY							
<i>Aptenia cordifolia</i> *	baby sun rose	NR	--	--	--	--	--	
<i>Carpobrotus edulis</i> **†	hottentot-fig	Moderate	B	B	Present, NN/I	Widespread, 9, 16	--	
<i>Mesembryanthemum crystallinum</i> **†◇	crystalline iceplant	Moderate	B	B	Present, NN/I	Widespread, 1, 9	--	
<i>Mesembryanthemum nodiflorum</i> †*	slender-leaved iceplant	NR	--	--	Present, NN/I	--	--	
ANACARDIACEAE	SUMAC OR CASHEW FAMILY							
<i>Rhus lancea</i> *	African sumac	--	--	--	--	--	--	
<i>Schinus molle</i> *	Peruvian pepper tree	Limited	C	B	Present, NN	Limited, 3, 8	--	
<i>Schinus terebinthifolius</i> *	Brazilian pepper tree	Limited	C	B	--	Limited, 2, 8	--	
APIACEAE	CARROT FAMILY							
<i>Conium maculatum</i> **†	poison hemlock	Moderate	B	B	Present, NN	Widespread, 16, 5	--	
<i>Foeniculum vulgare</i> **†	fennel	High	A	B	Present, NN/I	Widespread, 8, 10	Watch List, N/I	
ASTERACEAE	SUNFLOWER FAMILY							
<i>Bidens pilosa</i> *	common beggar-ticks	--	--	--	--	--	--	
<i>Carduus pycnocephalus</i> subsp. <i>pycnocephalus</i> **†	Italian thistle	Moderate	B	B	Present, NN/I	Widespread	Watch List	
<i>Centaurea melitensis</i> **†	totalote	Moderate	B	B	Present, NN/I	Widespread	Watch List	
<i>Cirsium vulgare</i> **†	bull thistle	Moderate	B	B	Present, NN	Widespread, 18, 12	Watch List	

Scientific Name	Common Name	Cal-IPC Rating ¹	Cal-IPC Scores			MCAS ²	CISAC, Scorecard ³	CDFA/San Diego ⁴
			Impact	Invasiveness	Distribution			
<i>Cynara cardunculus</i> **†	cardoon	Moderate	B	B	B	Present, NN/I	Widespread	Watch List, B
<i>Dimorphotheca aurantiaca</i> *	African daisy	--	--	--	--	--	--	--
<i>Dittrichia graveolens</i> **†◇	stinkwort	Moderate	B	A	C	Present, NN/I	Widespread	Watch List, N/I
<i>Erigeron bonariensis</i> *	flax-leaved horseweed	--	--	--	--	Present, NN	Widespread	--
<i>Erigeron sumatrensis</i> *	asthmaweed	--	--	--	--	--	--	--
<i>Glebionis coronaria</i> **†	garland daisy	--	--	--	--	--	--	Watch List, N/I
<i>Hedypnois cretica</i> *	Crete hedynois	--	--	--	--	Present, NN	--	--
<i>Helminthotheca echioides</i> *	bristly ox-tongue	Limited	C	B	B	Present, NN	Widespread	--
<i>Hypochaeris glabra</i> *	smooth cat's-ear	Limited	C	B	B	Present, NN	Widespread	--
<i>Lactuca serriola</i> *	prickly lettuce	NL	D	C	B	Present, NN	Widespread	--
<i>Logfia gallica</i> *	narrow-leaf filago	--	--	--	--	Present, NN	--	--
<i>Pseudognaphalium luteoalbum</i> *	everlasting cudweed	--	--	--	--	Present, NN	--	--
<i>Senecio vulgaris</i> *	common groundsel	--	--	--	--	Present, NN	Widespread	--
<i>Silybum marianum</i> **†	milk thistle	Limited	C	C	A	Present, NN/I	Widespread	Watch List, N/I
<i>Sonchus asper</i> subsp. <i>asper</i> *	prickly sow thistle	NL	D	B	B	Present, NN	--	--
<i>Sonchus oleraceus</i> *	common sow thistle	--	--	--	--	Present, NN	Widespread	--
<i>Taraxacum officinale</i> *	common dandelion	--	--	--	--	Present, NN	--	--

Scientific Name	Common Name	Cal-IPC Rating ¹	Cal-IPC Scores			MCAS ²	CISAC, Scorecard ³	CDFA/San Diego ⁴
			Impact	Invasiveness	Distribution			
BRASSICACEAE	MUSTARD FAMILY							
<i>Brassica nigra</i> **†	black mustard	Moderate	B	B	A	Present, NN/I	Widespread, 9, 4	--
<i>Brassica rapa</i> *	field mustard	Limited	C	B	B	--	Widespread	--
<i>Brassica tournefortii</i> **†	Sahara mustard	High	A	A	B	--	Limited, 10, 6	--
<i>Hirschfeldia incana</i> **†	shortpod mustard	Moderate	B	B	A	Present, NN	Widespread	--
<i>Raphanus sativus</i> **†	radish	Limited	C	C	B	Present, NN	Widespread, 12, 10	--
<i>Sisymbrium altissimum</i> *	tumble mustard	NR	--	--	--	--	--	--
<i>Sisymbrium irio</i> **†	London rocket	Moderate	B	B	A	--	Widespread	--
BUXACEAE	BOXWOOD FAMILY							
<i>Buxus</i> sp*	boxwood	--	--	--	--	--	--	--
CACTACEAE	CACTUS FAMILY							
<i>Opuntia ficus-indica</i> *	Indian fig	--	--	--	--	--	--	--
CARYOPHYLLACEAE	PINK FAMILY							
<i>Cerastium glomeratum</i> *	mouse-ear chickweed	--	--	--	--	Present, NN	--	--
<i>Polycarpon tetraphyllum</i> var. <i>tetraphyllum</i> *	four-leaf allseed	--	--	--	--	Present, NN	--	--
<i>Silene gallica</i> *	common catchfly	--	--	--	--	Present, NN	--	--
<i>Spergularia bocconi</i> *	Boccone's sandspurrey	--	--	--	--	Present, NN	--	--
CHENOPODIACEAE	GOOSEFOOT FAMILY							
<i>Atriplex semibaccata</i> **†	Australian saltbush	Moderate	B	B	B	Present, NN	Widespread	--
<i>Chenopodium album</i> *	lamb's quarters	--	--	--	--	Present, NN	--	--
<i>Salsola tragus</i> **†	Russian thistle	Limited	C	B	B	Present, NN/I	Widespread, 18, 9	Watch List

Scientific Name	Common Name	Cal-IPC Rating ¹	Cal-IPC Scores			MCAS ²	CISAC, Scorecard ³	CDFA/San Diego ⁴
			Impact	Invasiveness	Distribution			
CISTACEAE	ROCK-ROSE FAMILY							
<i>Cistus incanus</i> *	purple rock-rose	--	--	--	--	--	--	--
<i>Cistus salviifolius</i> *	sage leaf rockrose	--	--	--	--	--	--	--
CRASSULACEAE	STONECROP FAMILY							
<i>Crassula ovata</i> *	jade plant	--	--	--	--	--	--	--
EUPHORBIACEAE	SPURGE FAMILY							
<i>Euphorbia lathyris</i> *	caper spurge, gopher plant	NL	C	B	--	--	--	--
<i>Euphorbia tirucalli</i> *	pencil plant	--	--	--	--	--	--	--
FABACEAE	LEGUME FAMILY							
<i>Acacia melanoxylon</i> **†	blackwood acacia	Limited	C	B	Present, NN/I	Limited	--	--
<i>Medicago polymorpha</i> *	bur clover	Limited	C	A	Present, NN	Widespread	--	--
<i>Melilotus albus</i> *	white sweetclover	NR	--	--	Present, NN	--	--	--
<i>Melilotus indicus</i> *	Indian sweetclover	NR	--	--	Present, NN	--	--	--
<i>Trifolium hirtum</i> **†	rose clover	Moderate	C	B	Present, NN	Widespread	--	--
<i>Vicia sativa</i> subsp. <i>sativa</i> *	spring vetch	--	--	--	Present, NN	Widespread	--	--
<i>Vicia villosa</i> *	winter vetch	NL	D	B	Present, NN	Widespread	--	--
GERANIACEAE	GERANIUM FAMILY							
<i>Erodium botrys</i> **†	broad-lobed filaree	NL	C	A	Present, NN/I	Widespread	--	--
<i>Erodium cicutarium</i> **†	red-stemmed filaree	Limited	C	A	Present, NN/I	Widespread	--	--
<i>Erodium moschatum</i> *	white-stemmed filaree	NL	D	A	Present, NN	Widespread	--	--

Scientific Name	Common Name	Cal-IPC Rating ¹	Cal-IPC Scores			MCAS ²	CISAC, Scorecard ³	CDFA/San Diego ⁴
			Impact	Invasiveness	Distribution			
<i>Geranium dissectum</i> *	cut-leaf geranium	Limited	C	B	A	Present, NN	Widespread	--
LAMIACEAE	MINT FAMILY							
<i>Marrubium vulgare</i> *	horehound	Limited	C	C	B	Present, NN	Widespread	--
<i>Rosmarinus officinalis</i> *	rosemary	--	--	--	--	--	--	--
<i>Salvia greggii</i> *	autumn sage	--	--	--	--	--	--	--
LYTHRACEAE	LOOSESTRIFE FAMILY							
<i>Lagerstroemia indica</i> *	Grape myrtle	--	--	--	--	--	--	--
MALVACEAE	MALLOW FAMILY							
<i>Malva parviflora</i> *	cheeseweed	--	--	--	--	Present, NN	Widespread	--
MYRSINACEAE	MYRSINE FAMILY							
<i>Anagallis arvensis</i> *	scarlet pimpernel	--	--	--	--	Present, NN	--	--
MYRTACEAE	MYRTLE FAMILY							
<i>Corymbia ficifolia</i> *	red flowering gum	--	--	--	--	--	--	--
<i>Eucalyptus globulus</i> *†	blue gum	Moderate	B	B	B	Present, NN	Widespread, 13, 11	--
<i>Melaleuca viminalis</i> *	bottlebrush	--	--	--	--	--	--	--
NYCTAGINACEAE	FOUR O'CLOCK FAMILY							
<i>Bougainvillea spectabilis</i> *	bougainvillea	--	--	--	--	--	--	--
OLEACEAE	OLIVE FAMILY							
<i>Ligustrum lucidum</i> *	glossy privet	NL	D	B	C	--	--	--
<i>Olea europaea</i> *	olive	Limited	C	B	B	Present, NN	Limited	--
OXALIDACEAE	OXALIS FAMILY							
<i>Oxalis pes-caprae</i> *†	Bermuda buttercup	Moderate	B	B	B	Present, NN/I	Widespread	--

Scientific Name	Common Name	Cal-IPC Rating ¹	Cal-IPC Scores			MCAS ²	CISAC, Scorecard ³	CDFA/San Diego ⁴
			Impact	Invasiveness	Distribution			
PLANTAGINACEAE	PLANTAIN FAMILY							
<i>Plantago lanceolata</i> *	English plantain	Limited	C	C	B	Widespread	--	
PLUMBAGINACEAE	LEADWORT FAMILY							
<i>Limonium perezii</i> *	Perez's marsh-rosemary	--	--	--	--	--	--	
POLYGONACEAE	BUCKWHEAT FAMILY							
<i>Polygonum arenastrum</i> *	common knotweed	--	--	--	--	Widespread	--	
<i>Rumex conglomeratus</i> *	dock	--	--	--	--	--	--	
ROSACEAE	ROSE FAMILY							
<i>Photinia serrulata</i> *	Chinese photinia	--	--	--	--	--	--	
<i>Rhaphtiolepis indica</i> *	Indian hawthorne	--	--	--	--	--	--	
<i>Spiraea douglasii</i> *	rock spirea	--	--	--	--	--	--	
SAPINDACEAE	SOAPBERRY FAMILY							
<i>Cupaniopsis anacardioides</i> *	carrotwood	--	--	--	--	--	--	
<i>Koeleruteria bipinnata</i> *	Chinese flame tree	--	--	--	--	--	--	
SCROPHULARIACEAE	FIGWORT FAMILY							
<i>Myoporium parvifolium</i> *	creeping myoporium	--	--	--	--	--	--	
SOLANACEAE	NIGHTSHADE FAMILY							
<i>Nicotiana glauca</i> *†	tree tobacco	Moderate	B	B	B	Widespread	--	
TAMARICACEAE	TAMARISK FAMILY							
<i>Tamarix</i> sp.*†	tamarisk	High	A	A	A	Widespread, 16, 13	Watch List	
URTICACEAE	NETTLE FAMILY							
<i>Urtica urens</i> *	dwarf nettle	--	--	--	--	--	--	

Scientific Name	Common Name	Cal-IPC Rating ¹	Cal-IPC Scores			MCAS ²	CISAC, Scorecard ³	CDFA/San Diego ⁴
			Impact	Invasiveness	Distribution			
VERBENACEAE	VERVAIN FAMILY							
<i>Lantana montevidensis</i> *	trailing lantana	--	--	--	--	--	--	--
ANGIOSPERMS (MONOCOTS)								
AGAVACEAE	AGAVE FAMILY							
<i>Agave americana</i> *	century plant	--	--	--	--	--	--	--
<i>Phormium tenax</i> *	New Zealand flax	--	--	--	--	--	--	--
ARECACEAE	PALM FAMILY							
<i>Phoenix canariensis</i> *	Canary Island date palm	Limited	C	B	D	--	Limited	--
<i>Washingtonia robusta</i> **†◇	Mexican fan palm	Moderate	B	B	C	Present, NN	Limited	--
ASPHODELACEAE	ASPHODEL FAMILY							
<i>Aloe vera</i> *	medicinal aloe	--	--	--	--	--	--	--
<i>Asphodelus fistulosus</i> **†◇	hollow-stem asphodel	Moderate	B	A	C	Present, NN	Limited	Watch List
CYPERACEAE	SEDGE FAMILY							
<i>Cyperus involucratus</i> *	umbrella-plant	--	--	--	--	Present, NN	--	--
IRIDACEAE	IRIS FAMILY							
<i>Iris pseudacorus</i> **†	pale yellow iris	Limited	C	B	C	--	--	Watch List, Q
LILIACEAE	LILY FAMILY							
<i>Diets iridoides</i> *	fortnight lily	--	--	--	--	--	--	--
POACEAE	GRASS FAMILY							
<i>Agrostis stolonifera</i> *	redtop	Limited	C	B	C	--	Limited	--
<i>Avena barbata</i> **†	slender wild oat	Moderate	B	B	A	Present, NN/I	Widespread, 4, 8	--
<i>Brachypodium distachyon</i> **†	false-brome	Moderate	--	--	--	Present, NN	Widespread	Watch List, N/I
<i>Bromus diandrus</i> *	ripgut grass	Moderate	B	B	A	Present,	Widespread,	--

Scientific Name	Common Name	Cal-IPC Rating ¹	Cal-IPC Scores			MCAS ²	CISAC, Scorecard ³	CDFA/San Diego ⁴
			Impact	Invasiveness	Distribution			
<i>Bromus hordeaceus</i> *	soft chess	Limited	B	C	A	NN/I	18, 8	--
<i>Bromus madritensis</i> subsp. <i>madritensis</i> *	foxtail chess	High	A	B	A	Present, NN/I	Widespread, 8, 8	--
<i>Cortaderia seloana</i> **†	pampas grass	High	A	A	B	Present, NN/I	Widespread, 17, 7	--
<i>Cynodon dactylon</i> **†	Bermuda grass	Moderate	B	B	B	Present, NN/I	Widespread, 9, 14	Watch List, B
<i>Digitaria sanguinalis</i> *	crab grass	--	--	--	--	--	Widespread	--
<i>Festuca myuros</i> *	rat-tail fescue	--	--	--	--	Present, NN	Widespread	--
<i>Festuca perennis</i> **†	Italian ryegrass	Moderate	B	B	A	Present, NN	Widespread, 10, 8	--
<i>Gastridium phleoides</i> *	nit grass	--	--	--	--	Present, NN	--	--
<i>Hordeum murinum</i> **†	glaucous foxtail barley	Moderate	B	B	A	Present, NN	Widespread	--
<i>Lamarckia aurea</i> *	goldentop	--	--	--	--	Present, NN	--	--
<i>Melinis repens</i> subsp. <i>repens</i> *	natal grass	--	--	--	--	Present, NN	--	--
<i>Pennisetum setaceum</i> **†	fountain grass	Moderate	B	B	B	Present, NN/I	Widespread, 6, 8	--
<i>Phalaris canariensis</i> *	canary grass	--	--	--	--	--	--	--
<i>Schismus barbatus</i> *	Mediterranean schismus	Limited	B	C	A	--	Widespread	--
<i>Stipa miliacea</i> var. <i>miliacea</i> *	smilo grass	Limited	C	B	B	Present, NN	Widespread	--

Definitions:

An asterisk (*) after the scientific name are those species listed as non-native by *The Jepson Manual: Vascular Plants of California, Second Edition* (Baldwin et al., 2012). A dagger (†) designates those species that have been targeted for removal by the Project. A red diamond (◊) designates an Alert status with the

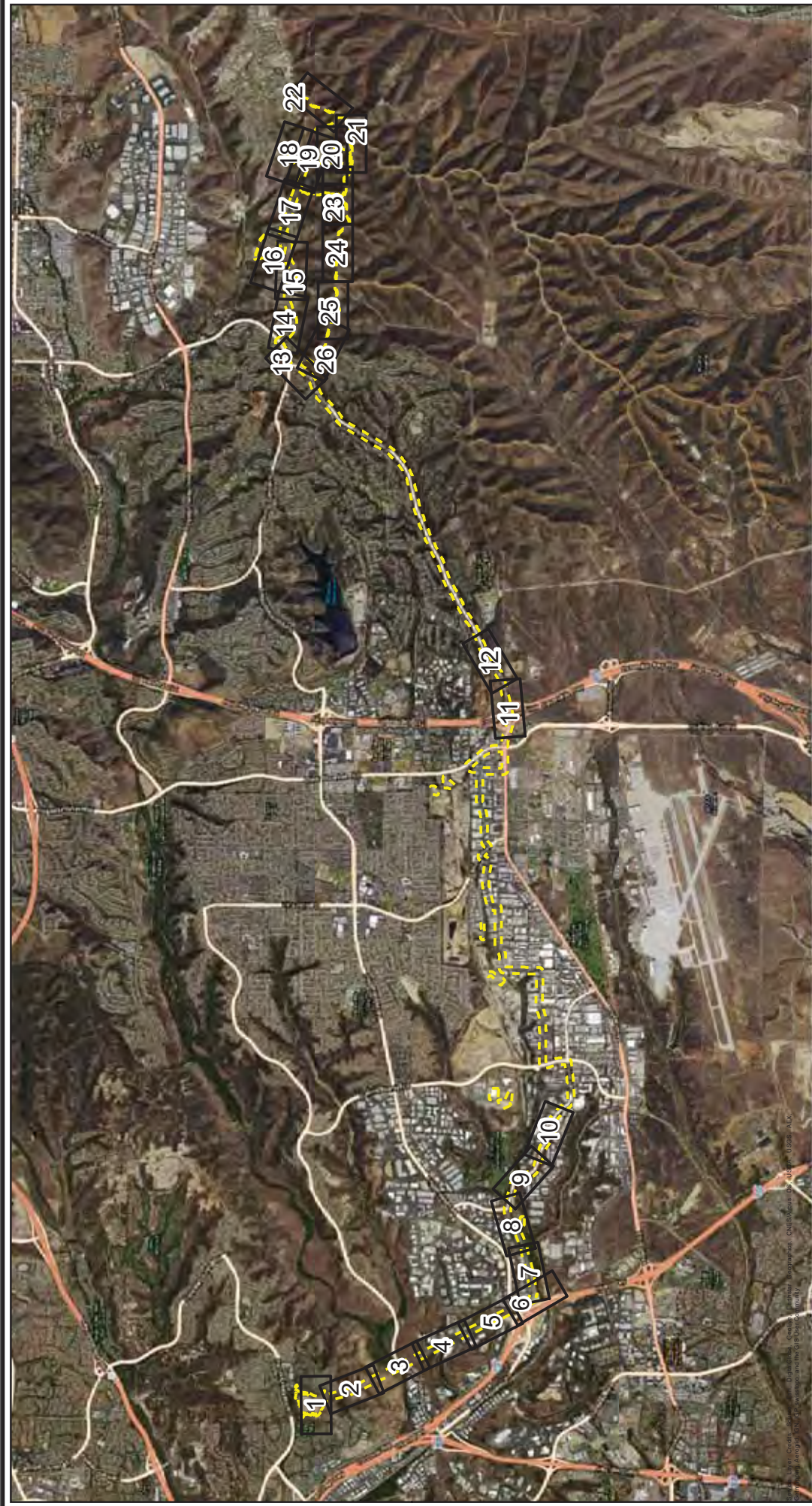
California Invasive Plant Council. ¹California Invasive Plant Council (Cal-IPC 2006) Invasiveness Rating with additional species nominated or evaluated, but where **NR** = Not Reviewed; **NL** = Not Listed; Scores: **A** = Severe, **B** = Moderate, **C** = Limited, **D** = None, **U** = Unknown.

²Marine Corps Air Station (MCAS) – species known to occur at MCAS Miramar within undeveloped areas (MCAS 2011); **NN** = Non-Native per Cal-IPC, growing beyond their natural range or natural zone of potential dispersal; **I** = Invasive per Cal-IPC, non-native species that displaces natives or brings about changes in species composition, community structure, or ecosystem function.



³California Invasive Species Advisory Committee (CISAC 2010) in association with the California Department of Agriculture and the City of San Diego Scorecards – the highest score for impacts is 27 (meaning a very high level of impact), and the highest score for ability to respond is 23 (meaning CISAC is currently very well equipped to respond).

⁴California Department of Food and Agriculture (CDFA) Pest Health and Pest Prevention Services Encyclopedic Weed Ratings on the San Diego County Watch List or deemed N/I = Noxious or Invasive by CDFA (SDWMA 2016; CDFA 2016). CDFA Ratings include: **A** = A pest of known economic or environmental detriment and is either not known to be established in California or it is present in a limited distribution that allows for the possibility of eradication or successful containment; **B** = An pest of known economic or environmental detriment and is of limited distribution; **C** = A pest of known economic or environmental detriment and is usually widespread; **Q** = An organism or disorder suspected to be of economic or environmental detriment, but whose status is uncertain because of incomplete identification or inadequate information.

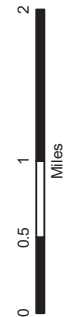
APPENDIX B
Weed Community Maps



Legend

-  Map Page
-  Weed Mapping Survey Area

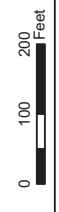
Surveyed areas without weed populations mapped are provided in the overview map, but were not displayed in the detailed mapset to reduce overall size of the mapset.



Appendix B
Weed Community Map
Proposed Project
Overview Map



Appendix B
Weed Community Map
Proposed Project
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Name: 2007 WEED Map, 2016, Page B.A.3 Map
 Print Date: 11/09/16, Author: dcooper

- Legend**
- Proposed Project (Overhead)
 - Poles
 - Substations
 - Access Road
 - Temporary Impact Area
 - Weed Mapping Survey Area
 - Weed Community
 - 140: Shortpod Mustard (L), Russian Thistle (L), Stalce (L)
 - 141: Brome Grass (M), Russian Thistle (L), Shortpod Mustard (L)
 - 142: Russian Thistle (L), Stalce (M)
 - 143: Brome Grass (M)



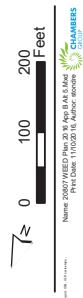


Appendix B

Weed Community Map

Proposed Project

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Name: 2007 WEED Map, 2016, Page B.A.3.M.2
 Print Date: 11/09/16, Author: dcooper

Legend

- Proposed Project (Overhead)
- Poles
- Access Road
- Temporary Impact Area
- Weed Mapping Survey Area
- Weed Community
- 135: Bromo Grass (L), Shortpod Mustard (L), Russian Thistle (L)
- 136: Russian Thistle (H)

- 137: Bromo Grass (H), Russian Thistle (L)
- 142: Russian Thistle (L), Statice (M)

- 138: Bromo Grass (M), Shortpod Mustard (M), Russian Thistle (M), Tree Tobacco (L)
- 139: Bromo Grass (M), Shortpod Mustard (L), Russian Thistle (H)
- 140: Shortpod Mustard (L), Russian Thistle (L), Statice (L)
- 141: Bromo Grass (M), Russian Thistle (L), Shortpod Mustard (L)



Appendix B
Weed Community Map
Proposed Project
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- Legend**
- Proposed Project (Overhead)
 - Poles
 - Temporary Impact Area
 - Weed Mapping Survey Area
 - Weed Community
 - 124: Russian Thistle (H), Shortpod Mustard (L)
 - 125: Brome Grass (H), Shortpod Mustard (M), Tocalote (L)

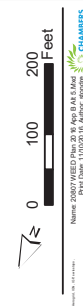
- 127: Russian Thistle (L), Shortpod Mustard (L), Italian Thistle (L), Tocalote (L)
- 128: Italian Thistle (L)
- 129: Shortpod Mustard (L), Fennel (L), Ox-tongue (L)
- 130: Italian Thistle (L), Russian Thistle (L)
- 131: Ox-Tongue (M), Fennel (L)

- 132: Brome Grass (H), Artichoke Thistle (L), Russian Thistle (L), Fennel (L), Shortpod Mustard (L)
- 133: Ox-Tongue (L), Fennel (L), Russian Thistle (M), Artichoke Thistle (L), Tree Tobacco (L)
- 134: Brome Grass (M), Shortpod Mustard (L), Russian Thistle (M)
- 135: Brome Grass (L), Shortpod Mustard (L), Russian Thistle (L)

- 137: Brome Grass (H), Russian Thistle (L)
- 138: Brome Grass (M), Shortpod Mustard (M), Russian Thistle (M), Tree Tobacco (L)
- 144: Russian Thistle (L), Italian Thistle (M), Fennel (L)
- 145: Russian Thistle (L), Italian Thistle (M), Fennel (L)



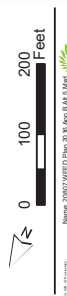
Appendix B
Weed Community Map
Proposed Project
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- Legend**
- Proposed Project (Overhead)
 - Poles
 - Temporary Impact Area
 - Weed Mapping Survey Area
 - Weed Community
 - 123: Russian Thistle (L), Fennel (L), Aust. Saltbush (L), Italian Thistle (M)
 - 124: Russian Thistle (H), Shortpod Mustard (L)
 - 125: Bromo Grass (H), Shortpod Mustard (M), Tocalote (L)
 - 126: Shortpod Mustard (H), Italian Thistle (H)
 - 127: Russian Thistle (L), Shortpod Mustard (L), Italian Thistle (L), Tocalote (L)
 - 144: Russian Thistle (L), Italian Thistle (M), Fennel (L)
 - 145: Russian Thistle (L), Italian Thistle (M), Fennel (L)



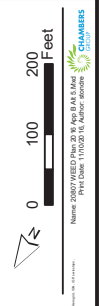
Appendix B
Weed Community Map
Proposed Project
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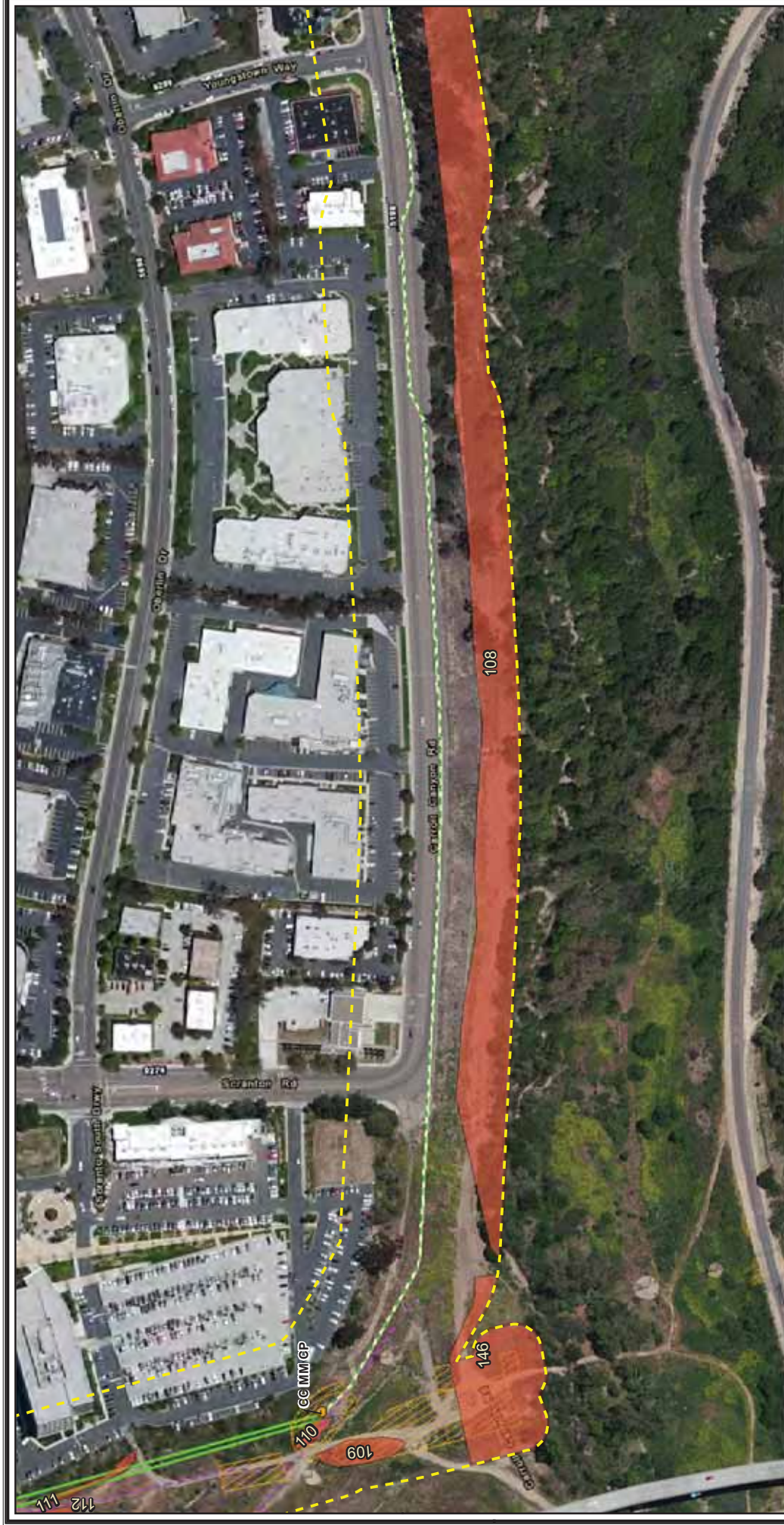
- Legend**
- Proposed Project (Overhead)
 - Poles
 - Temporary Impact Area
 - Weed Mapping Survey Area
 - Weed Community
 - 113: Black Mustard (M)
 - 114: Bromo Grass (M), Shortpod Mustard (M), Antioke Thistle (L), Fennel (L)
 - 115: Black Mustard (L)
 - 116: Acacia (H)
 - 117: Bromo Grass (L), Shortpod Mustard (L), Russian Thistle (M)
 - 118: Bromo Grass (L), Shortpod Mustard (L), Russian Thistle (L)
 - 119: Shortpod Mustard (L), Russian Thistle (M), Tocalote (L)
 - 120: Bromo Grass (M), Russian Thistle (H), Aust. Salbush (L)
 - 121: Bromo Grass (M), Shortpod Mustard (L), Russian Thistle (L), Aust. Salbush (L), Crystalline Iceplant (L)
 - 122: Bromo Grass (L), Shortpod Mustard (L), Russian Thistle (L)



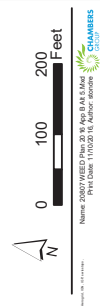
Appendix B
Weed Community Map
Proposed Project
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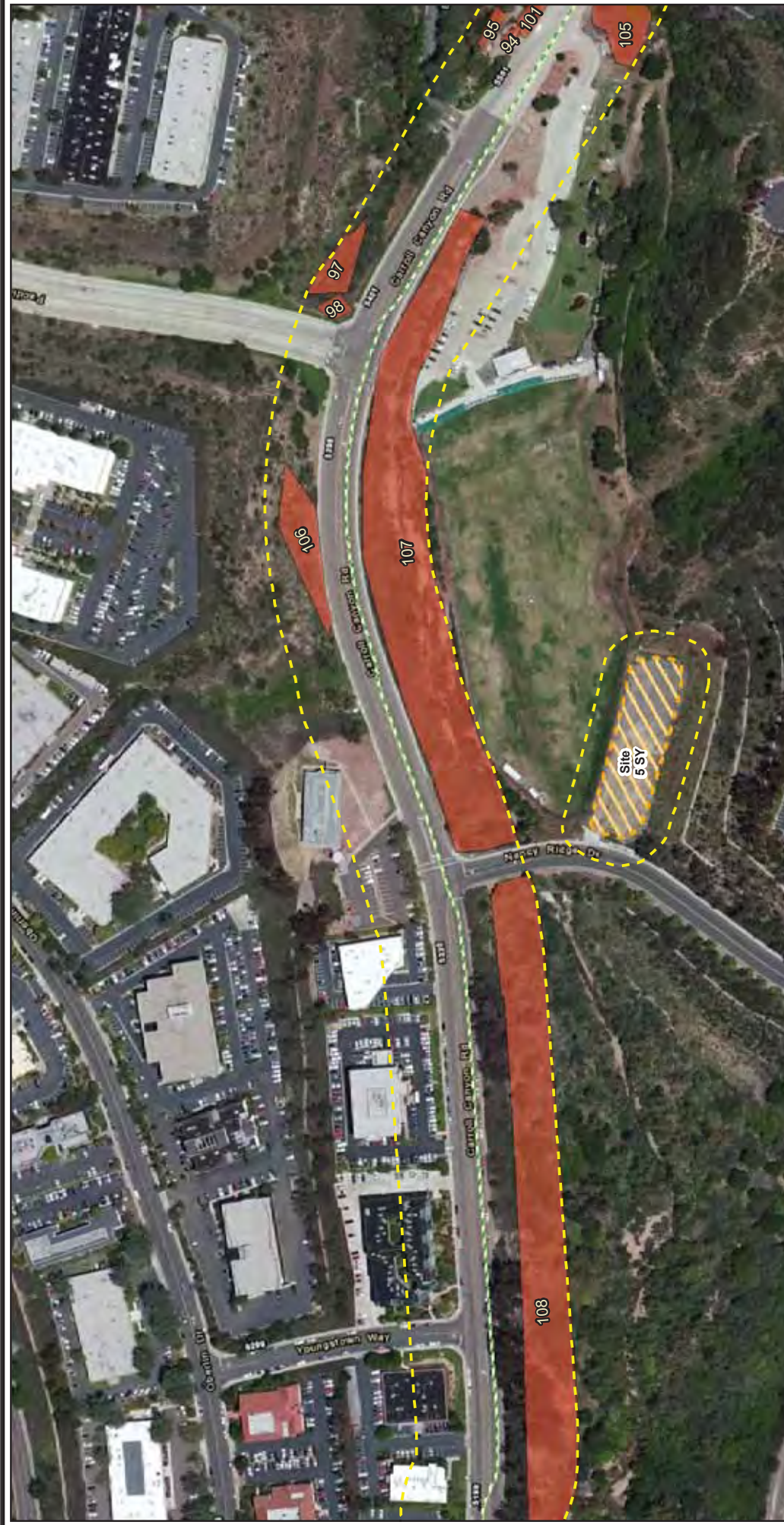
- Legend**
- Proposed Project (Overhead)
 - Proposed Project (Underground)
 - Poles
 - Temporary Impact Area
 - Weed Mapping Survey Area
 - Weed Community
 - 108: Pampas Grass (L), Tamarisk (L), Acacia (L), Eucalyptus (L), Fan Palm (L)
 - 109: Russian Thistle (H)
 - 110: Russian Thistle (M), Tocalote (L), Acacia (L)
 - 111: Russian Thistle (L), Aust. Saltbush (L), Crystalline Iceplant (L)
 - 112: Brome Grass (M), Russian Thistle (M), Shortpod Mustard (L), Fennel (L)
 - 113: Black Mustard (M)
 - 114: Brome Grass (M), Shortpod Mustard (M), Artichoke Thistle (L), Fennel (L)
 - 146: Russian Thistle (H), Fennel (L), Lamb's Quarters (L)



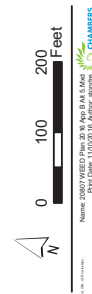
Appendix B
Weed Community Map
Proposed Project
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- Legend**
- Proposed Project (Overhead)
 - Proposed Project (Underground)
 - Poles
 - Temporary Impact Area
 - Weed Mapping Survey Area
 - Weed Community
 - 108: Pampas Grass (L), Tamarisk (L), Acacia (L), Eucalyptus (L), Fan Palm (L)
 - 109: Russian Thistle (H)
 - 110: Russian Thistle (M), Tocalote (L), Acacia (L)
 - 111: Russian Thistle (L), Aust. Saltbush (L), Crystalline Iceplant (L)
 - 112: Brome Grass (M), Russian Thistle (M), Shortpod Mustard (L), Fennel (L)
 - 146: Russian Thistle (H), Fennel (L), Lamb's Quarters (L)



Appendix B
Weed Community Map
Proposed Project
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- Legend**
- Proposed Project (Underground)
 - Potential Staging Yard
 - ▨ Weed Mapping Survey Area
 - █ Weed Community
- 94: Tamarisk (L)
 - 95: Pampas Grass (L), Acacia (M), Eucalyptus (L), Fan Palm (L)
 - 97: Fan Palm (L)
 - 98: Pampas Grass (M), Tamarisk (M)
 - 101: Acacia (H)
 - 105: Brome Grass (L), Russian Thistle (M), Fennel (L)
 - 106: Pampas Grass (L), Acacia (L)
 - 107: Pampas Grass (M), Tamarisk (M), Acacia (M), Eucalyptus (L), Hottentot (L)
 - 108: Pampas Grass (L), Tamarisk (L), Acacia (L), Eucalyptus (L), Fan Palm (L)



Appendix B

Weed Community Map

Proposed Project

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Name: 2007 WEED Map, 26, Page 9 of 26
 Print Date: 11/09/16
 Author: [unreadable]

Legend

- Proposed Project (Underground)
- Weed Mapping Survey Area
- Weed Community

- 83: Bromes Grass (H), Shortpod Mustard (M), Fennel (L)
- 84: Bromes Grass (M), Fountain Grass (L), Fennel (L)
- 85: Bromes Grass (H), Fennel (M)
- 86: Bromes Grass (H), Fennel (L)

- 87: Tamarisk (H)
- 88: Bromes Grass (L), Shortpod Mustard (L), Wild Oat (M), Horseweed (L)
- 89: Pampas Grass (H)
- 90: Bromes Grass (H), Fennel (M)
- 91: Acacia (H)
- 92: Pampas Grass (L), Fennel (L)

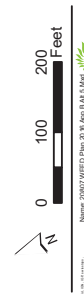
- 93: Pampas Grass (L), Acacia (L)
- 94: Tamarisk (L)
- 95: Pampas Grass (L), Acacia (M), Eucalyptus (L), Fan Palm (L)
- 96: Bromes Grass (L), Pampas Grass (L), Shortpod Mustard (L), Fennel (L)
- 99: Bromes Grass (H), Ox-Tongue (L)

- 100: Bromes Grass (M)
- 101: Acacia (H)
- 102: Acacia (H)
- 103: Pampas Grass (L), Fennel (L)
- 104: Bromes Grass (L), Pampas Grass (L), Fennel (L), Slinkwort (L)
- 105: Bromes Grass (L), Russian Thistle (M), Fennel (L)

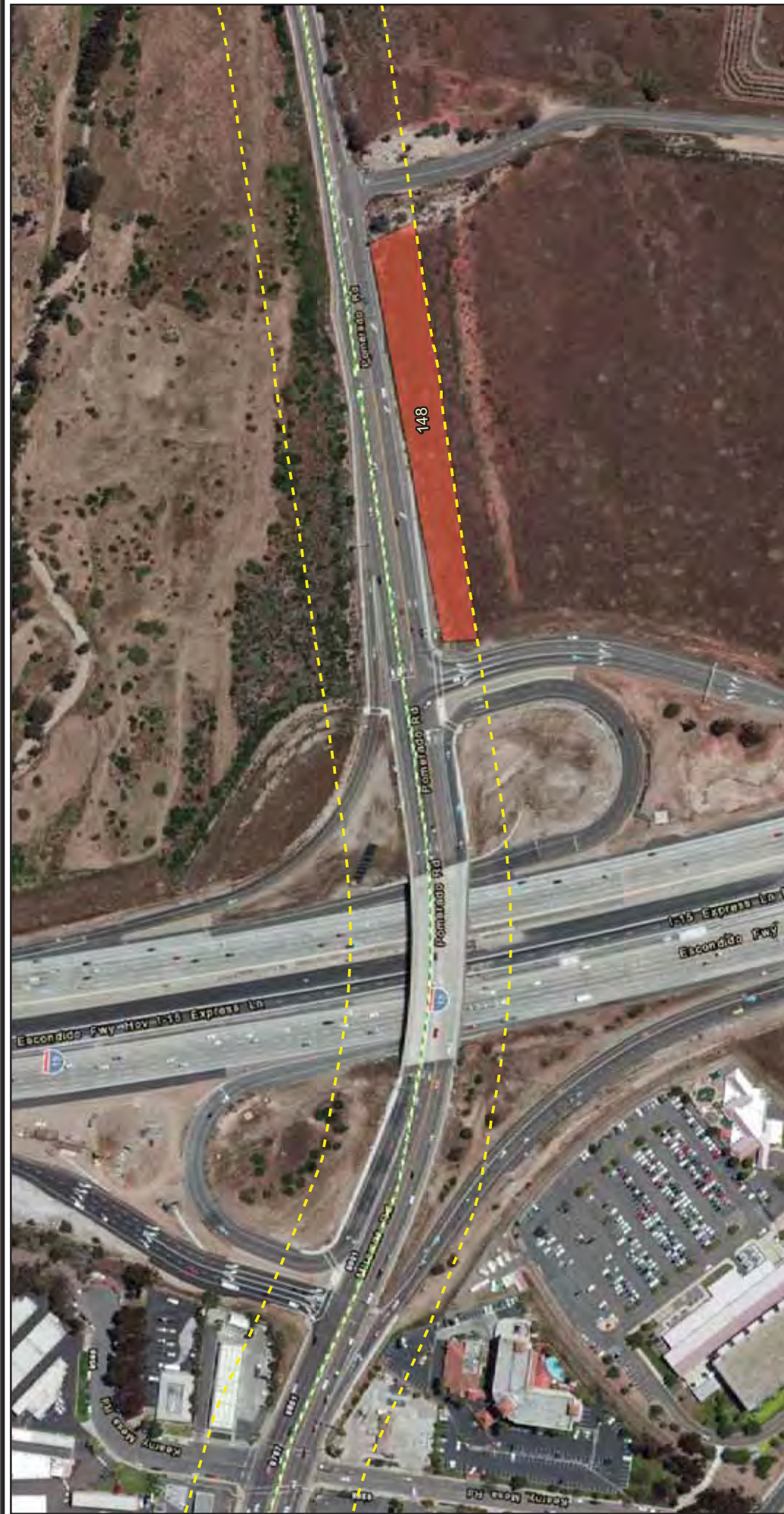
- 107: Pampas Grass (M), Tamarisk (M), Acacia (M), Eucalyptus (L), Hottentot (L)
- 147: Pampas Grass (M), Fennel (L)



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Weed Community Map
Proposed Project
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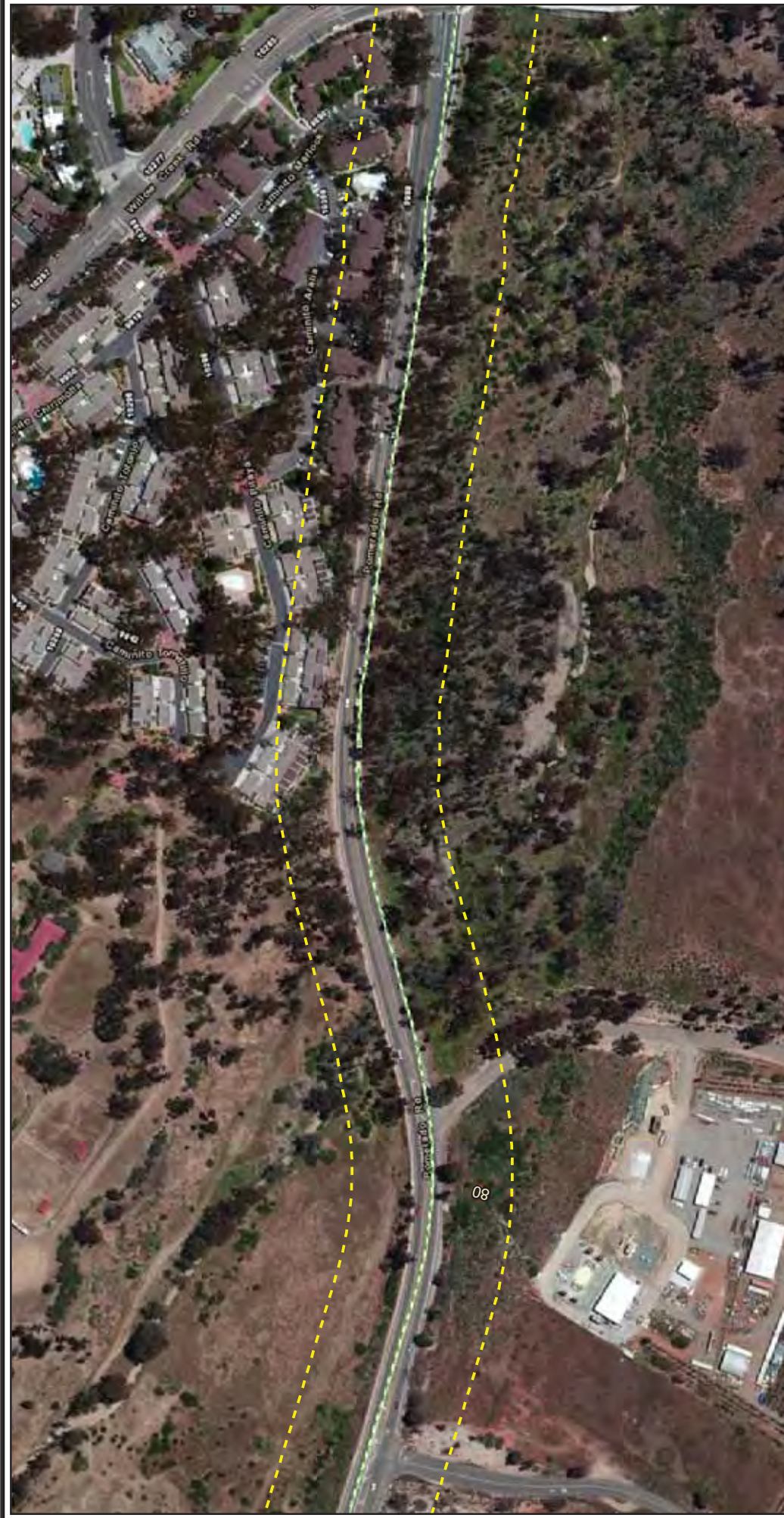
- Legend**
- Proposed Project (Underground)
 - Weed Mapping Survey Area
 - Weed Community
 - 81: Brome Grass (H), Fountain Grass (L), Fennel (H)
 - 82: Brome Grass (M), Pampas Grass (L), Fennel (L)
 - 83: Brome Grass (H), Shortpod Mustard (M), Fennel (M)
 - 84: Brome Grass (M), Fountain Grass (L), Fennel (L)
 - 85: Brome Grass (H), Fennel (M)
 - 99: Brome Grass (H), Ox-Tongue (L)



- Legend**
- Proposed Project (Underground)
 - - - Weed Mapping Survey Area
 - Weed Community
 - 148: Bromegrass (H)

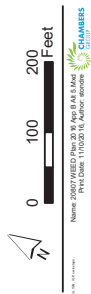
Appendix B
 Weed Community Map
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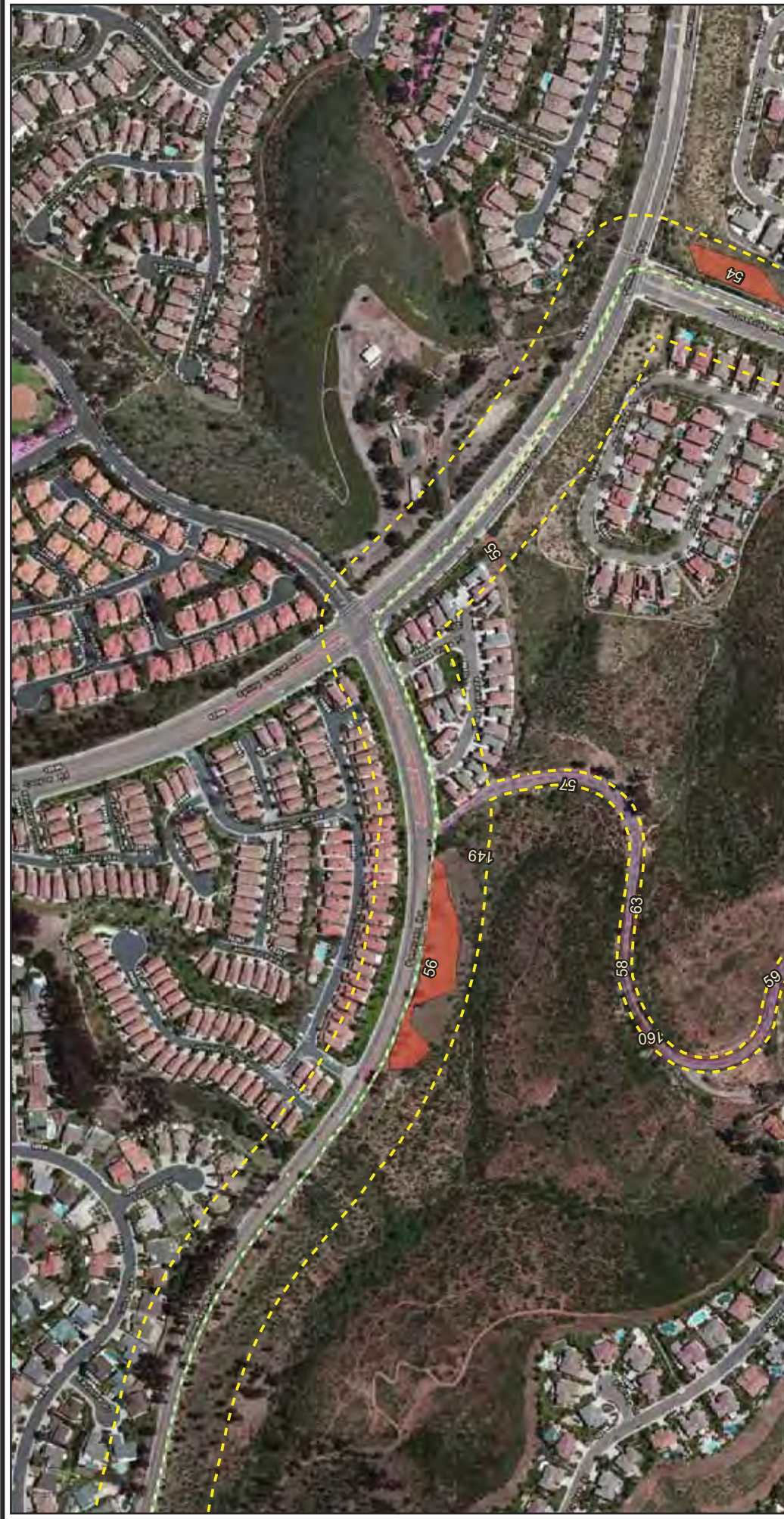




Appendix B
 Weed Community Map
 Proposed Project
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- Legend**
- Proposed Project (Underground)
 - Weed Mapping Survey Area
 - Weed Community
 - 80: Toxicide (M)
 - 148: Bromo Grass (H)





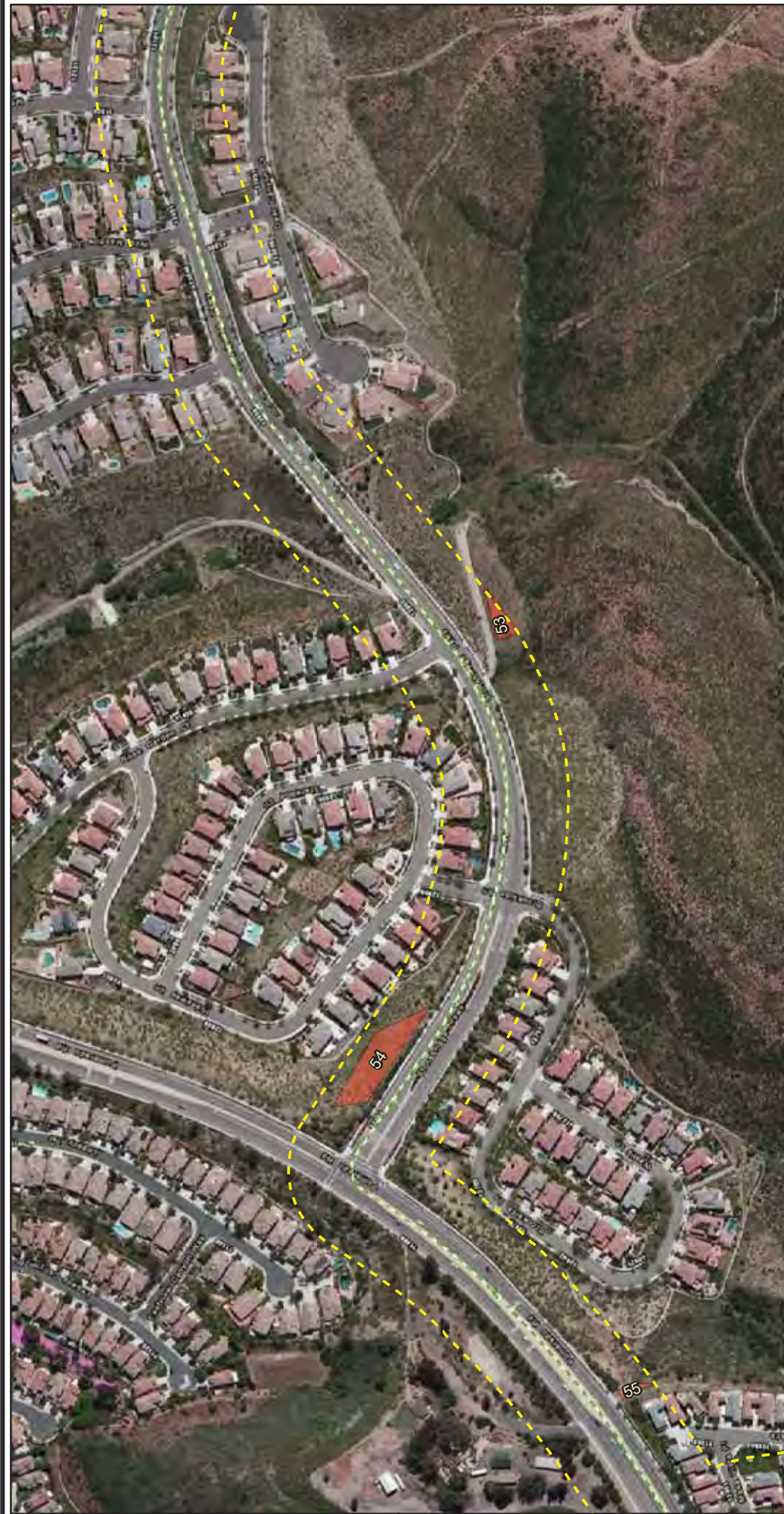
Appendix B
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Name: 2007 WEED Map, 2016, Page B.A.3.M.3
 Print Date: 11/09/16, Author: dcooper

- Legend**
- Proposed Project (Underground)
 - Access Road
 - Weed Mapping Survey Area
 - Weed Community
 - 54: Rock Rose (L)
 - 55: Fountain Grass (L), Russian Thistle (L)
 - 56: Russian Thistle (M)
 - 57: Natal Grass (L)
 - 58: Natal Grass (L), Fountain Grass (M), Slinkwort (L)
 - 59: Natal Grass (H)
 - 63: Fountain Grass (M), Russian Thistle (L)
 - 149: Pampas Grass (H)
 - 160: Natal Grass (L)
 - 161: Natal Grass (L)

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Appendix B
 Weed Community Map
 Proposed Project
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- Legend**
- Proposed Project (Underground)
 - Weed Mapping Survey Area
 - Weed Community
 - 53: Brome Grass (L), Tocalote (L)
 - 54: Rock Rose (L)
 - 55: Fountain Grass (L), Russian Thistle (L)



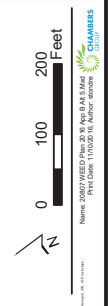


Appendix B
Weed Community Map
Proposed Project
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- Legend**
- Proposed Project (Overhead)
 - Proposed Project (Underground)
 - Poles
 - Access Road
 - Permanent Impact Area
 - Temporary Impact Area
 - Weed Mapping Survey Area
 - Weed Community
- 49: Bromo Grass (L), Tocalote (L)
 - 50: Fountain Grass (L)
 - 52: Natal Grass (L)



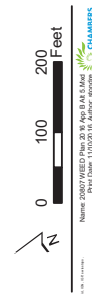
Appendix B
Weed Community Map
Proposed Project
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- Legend**
- Proposed Project (Overhead)
 - Proposed Project (Underground)
 - Poles
 - Access Road
 - Permanent Impact Area
 - Temporary Impact Area
 - Weed Mapping Survey Area
 - Weed Community
- 38: Brome Grass (L), Shortpod Mustard (L), Wild Oat (L)
 - 39: Brome Grass (L), Fountain Grass (L)
 - 42: Brome Grass (L), Wild Oat (L), Nit Grass (L)
 - 43: Slinkwort (L)
 - 44: Slinkwort (L)
 - 45: Med. Schismus (L)
 - 47: Brome Grass (L)
 - 48: Natal Grass (L), Statice (L)
 - 49: Brome Grass (L), Tocalote (L)
 - 50: Fountain Grass (L)
 - 51: Brome Grass (L), Fountain Grass (L), Tocalote (L)
 - 162: Brome Grass (L), Shortpod Mustard (L), Wild Oat (L)
 - 182: Brome Grass (L), Shortpod Mustard (L), Wild Oat (L)



Appendix B
Weed Community Map
Proposed Project
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Name: 2007 WEED Map, 2016, Page B.A.3.M.2
 Print Date: 11/08/16, Author: [unreadable]

- Legend**
- Potential Staging Yard
 - Access Road
 - Weed Mapping Survey Area
 - Weed Community
 - 32: Brome Grass (L), Russian Thistle (L), Wild Oat (L), Filaree (L), Sweet Clover (L)
 - 46: Brome Grass (M), Wild Oat (L), Fountain Grass (L), Tocalote (L), Slinkwort (L)
 - 166: Brome Grass (L), Wild Oat (L), Italian Thistle (L), Slinkwort (L), Sweet Clover (L), Tocalote (L), Shortpod Mustard (L), Filaree (L), Med. Schismus (L)





Appendix B Weed Community Map Proposed Project Page 19 of 26

Legend

- Proposed Project (Overhead)
- - - Proposed Project (Underground)
- Poles
- Substations
- Potential Staging Yard
- Access Road
- Permanent Impact Area
- Temporary Impact Area
- Weed Mapping Survey Area
- Weed Community

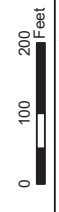
<p>3: Brome Grass (L), Fountain Grass (L)</p> <p>4: Brome Grass (L), Fountain Grass (L)</p> <p>5: Brome Grass (L), Fountain Grass (L)</p> <p>6: Brome Grass (L), Fountain Grass (L)</p> <p>7: Fountain Grass (L)</p> <p>8: Brome Grass (L), Fountain Grass (L), Sweet Clover (L)</p> <p>9: Med. Schismus (M)</p>	<p>10: Brome Grass (L), Fountain Grass (L)</p> <p>11: Brome Grass (L), Tocalote (L), Sweet Clover (L)</p> <p>12: Brome Grass (L), Tocalote (L), Russian Thistle (L)</p> <p>15: Mustard (L), Fountain Grass (L)</p> <p>16: Brome Grass (L), Crab Grass (L), Fountain Grass (L)</p> <p>17: Brome Grass (L), Tocalote (L)</p>	<p>18: Brome Grass (L)</p> <p>19: Brome Grass (L), Med. Schismus (L), Tocalote (L)</p> <p>20: Brome Grass (L), Tocalote (L), Med. Schismus (L)</p> <p>21: Brome Grass (L), Russian Thistle (L)</p> <p>22: Brome Grass (L), Tocalote (L), Wild Oat (M)</p> <p>23: Brome Grass (L), Tocalote (L), Russian Thistle (L), Fountain Grass (L)</p>	<p>24: Brome Grass (L), Shortpod Mustard (L)</p> <p>25: Brome Grass (L)</p> <p>26: Brome Grass (L), Russian Thistle (L)</p> <p>27: Brome Grass (M), Med. Schismus (L), Mustard (L), Tocalote (L)</p> <p>28: Brome Grass (L), Tocalote (L), Wild Oat (L)</p> <p>29: Brome Grass (L), Russian Thistle (L), Wild Oat (L)</p>	<p>30: Brome Grass (L), Shortpod Mustard (L), Wild Oat (L)</p> <p>31: Brome Grass (L), Wild Oat (L)</p> <p>32: Brome Grass (L), Russian Thistle (L), Wild Oat (L), Filaree (L), Sweet Clover (L)</p> <p>38: Brome Grass (L), Shortpod Mustard (L), Wild Oat (L)</p> <p>46: Brome Grass (M), Wild Oat (L), Fountain Grass (L), Tocalote (L), Slinkwort (L)</p>	<p>150: Fountain Grass (L)</p> <p>151: Brome Grass (L), Tocalote (L), Sweet Clover (L)</p> <p>152: Fountain Grass (L)</p> <p>166: Brome Grass (L), Wild Oat (L), Italian Thistle (L), Slinkwort (L), Sweet Clover (L), Tocalote (L), Shortpod Mustard (L), Filaree (L), Med. Schismus (L)</p>
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0 100 200 Feet

Map Date: 10/26/16; Author: mmmmmmm
Project: 10/26/16; Title: Weed Community Map



Appendix B
Weed Community Map
Proposed Project
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North Arrow
 Scale: 1" = 100 Feet
 Name: 2007 WEED Map, 2016, Page B.A.3.3 Map
 Print Date: 11/09/16, Author: dcooper

Legend

- Proposed Project (Underground)
- Substations
- Access Road
- Temporary Impact Area
- Weed Mapping Survey Area
- Weed Community
- 1: Brome Grass (L), Fountain Grass (L)

- 2: Brome Grass (L), Fountain Grass (L)
- 3: Brome Grass (L), Fountain Grass (L)
- 4: Brome Grass (L), Fountain Grass (L)
- 5: Brome Grass (L), Fountain Grass (L)
- 6: Brome Grass (L), Fountain Grass (L)

- 9: Med. Schismus (M)
- 11: Brome Grass (L), Tocalote (L), Sweet Clover (L)
- 12: Brome Grass (L), Tocalote (L), Russian Thistle (L)
- 13: Brome Grass (L), Med. Schismus (M), Tocalote (L), Fountain Grass (L), Filaree (L)
- 14: Fountain Grass (L)

- 34: Crab Grass (L), Shortpod Mustard (L), Fountain Grass (L)
- 150: Fountain Grass (L)
- 151: Brome Grass (L), Tocalote (L), Sweet Clover (L)
- 152: Fountain Grass (L)
- 153: Brome Grass (L), Sweet Clover (L)
- 154: Brome Grass (M), Fountain Grass (L)

- 158: Fountain Grass (L)
- 159: Brome Grass (L), Fountain Grass (L), Stinkwort (L)

Map of Weed Community Mapping Project
 Name: 2007 WEED Map, 2016, Page B.A.3.3 Map
 Print Date: 11/09/16, Author: dcooper



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Weed Community Map
Proposed Project
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Legend

- Access Road
- Temporary Impact Area
- Weed Mapping Survey Area
- Weed Community
- 1: Brome Grass (L), Fountain Grass (L)
- 2: Brome Grass (L), Fountain Grass (L)

- 13: Brome Grass (L), Med. Schismus (M), Tocalole (L), Fountain Grass (L), Filaree (L)
- 33: Crab Grass (L)
- 75: Natal Grass (M), Stinkwort (L)
- 76: Fountain Grass (L), Tocalole (L), Stinkwort (L)
- 77: Natal Grass (M)

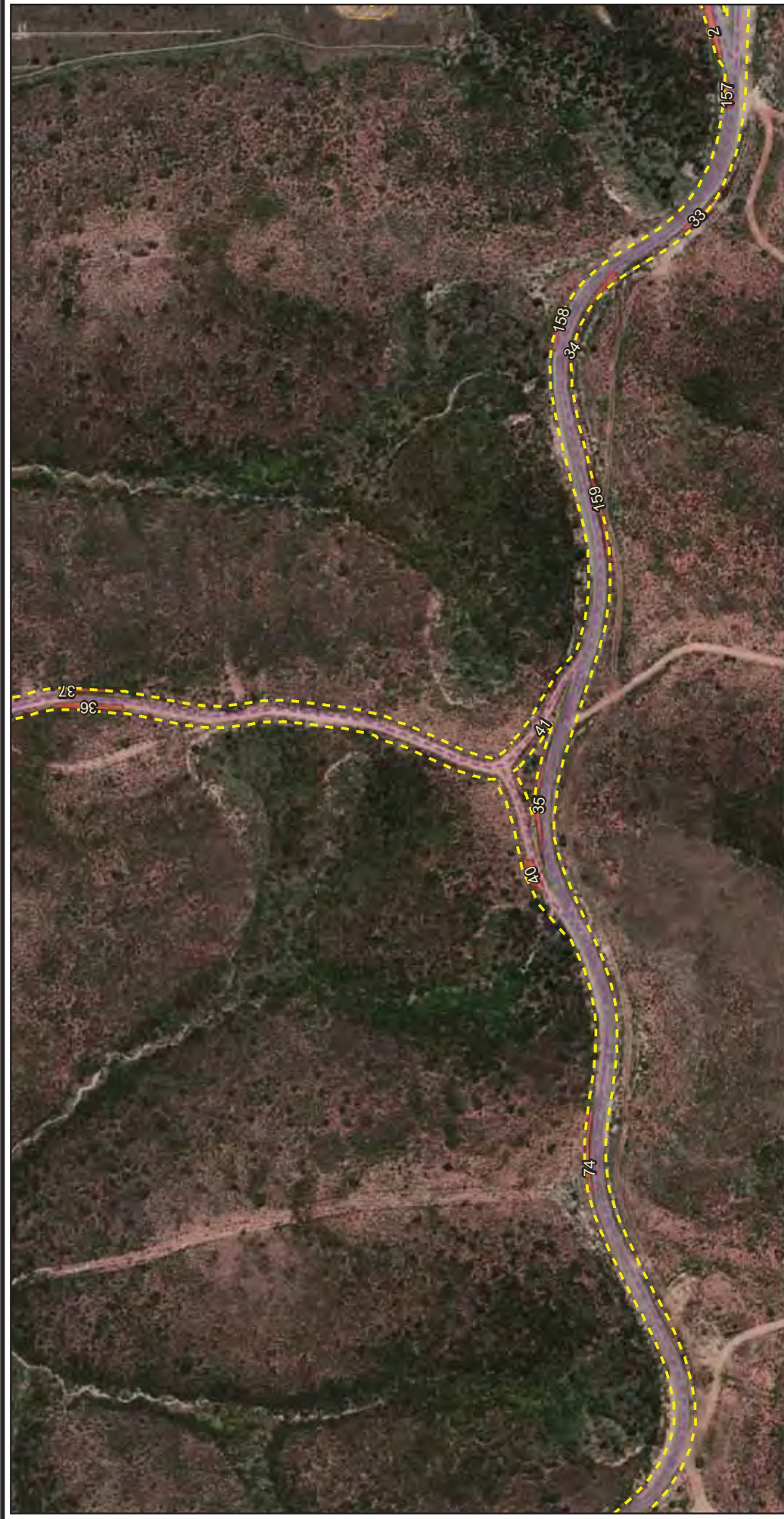
- 153: Brome Grass (L), Sweet Clover (L)
- 154: Brome Grass (M), Fountain Grass (L)
- 155: Fountain Grass (L)
- 156: Fountain Grass (L)
- 157: Brome Grass (L), Fountain Grass (L)



Appendix B
Weed Community Map
Proposed Project
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- Legend**
- Access Road
 - Weed Mapping Survey Area
 - Weed Community
 - 76: Fountain Grass (L), Tocalote (L), Stinkwort (L)
 - 77: Natal Grass (M)
 - 78: Fountain Grass (L), Stinkwort (L)
 - 79: Stinkwort (L)
 - 163: Fountain Grass (M), Stinkwort (L)
 - 164: Fountain Grass (M), Stinkwort (L)
 - 165: Natal Grass (M), Stinkwort (L)

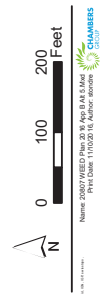


Appendix B

Weed Community Map

Proposed Project

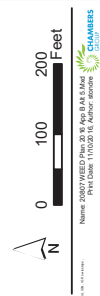
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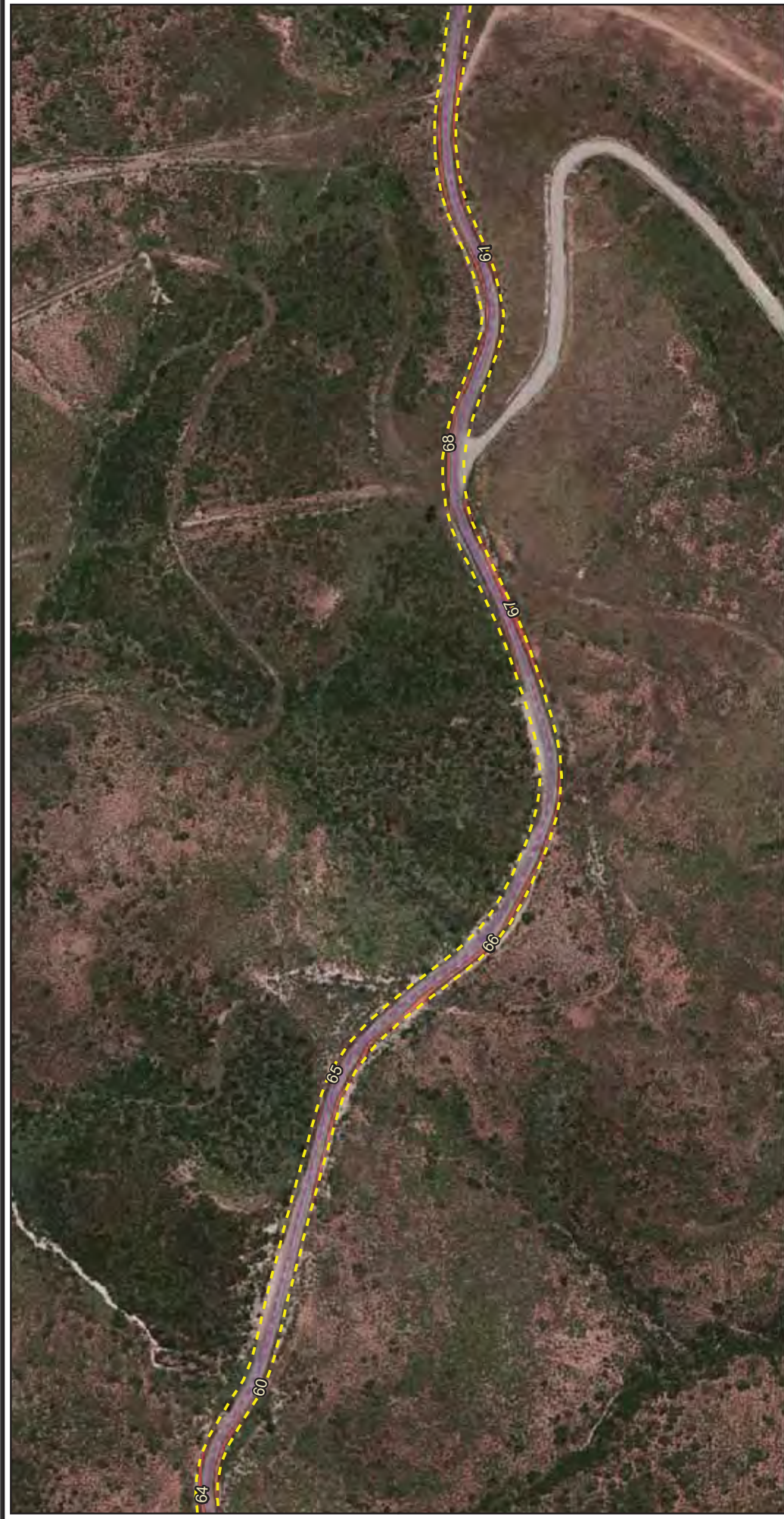
- Legend**
- Access Road
 - Temporary Impact Area
 - Weed Mapping Survey Area
 - Weed Community
 - 2: Brome Grass (L), Fountain Grass (L)
 - 33: Crab Grass (L)
 - 34: Crab Grass (L), Shortpod Mustard (L), Fountain Grass (L)
 - 35: Natal Grass (L), Fountain Grass (L)
 - 36: Brome Grass (L)
 - 37: Brome Grass (L), Tocalole (L), Wild Oat (L)
 - 40: Brome Grass (L), Shortpod Mustard (L)
 - 41: Brome Grass (L), Wild Oat (L)
 - 74: Natal Grass (M)
 - 157: Brome Grass (L), Fountain Grass (L)
 - 158: Fountain Grass (L)
 - 159: Brome Grass (L), Fountain Grass (L), Slinkwort (L)



Appendix B
Weed Community Map
Proposed Project
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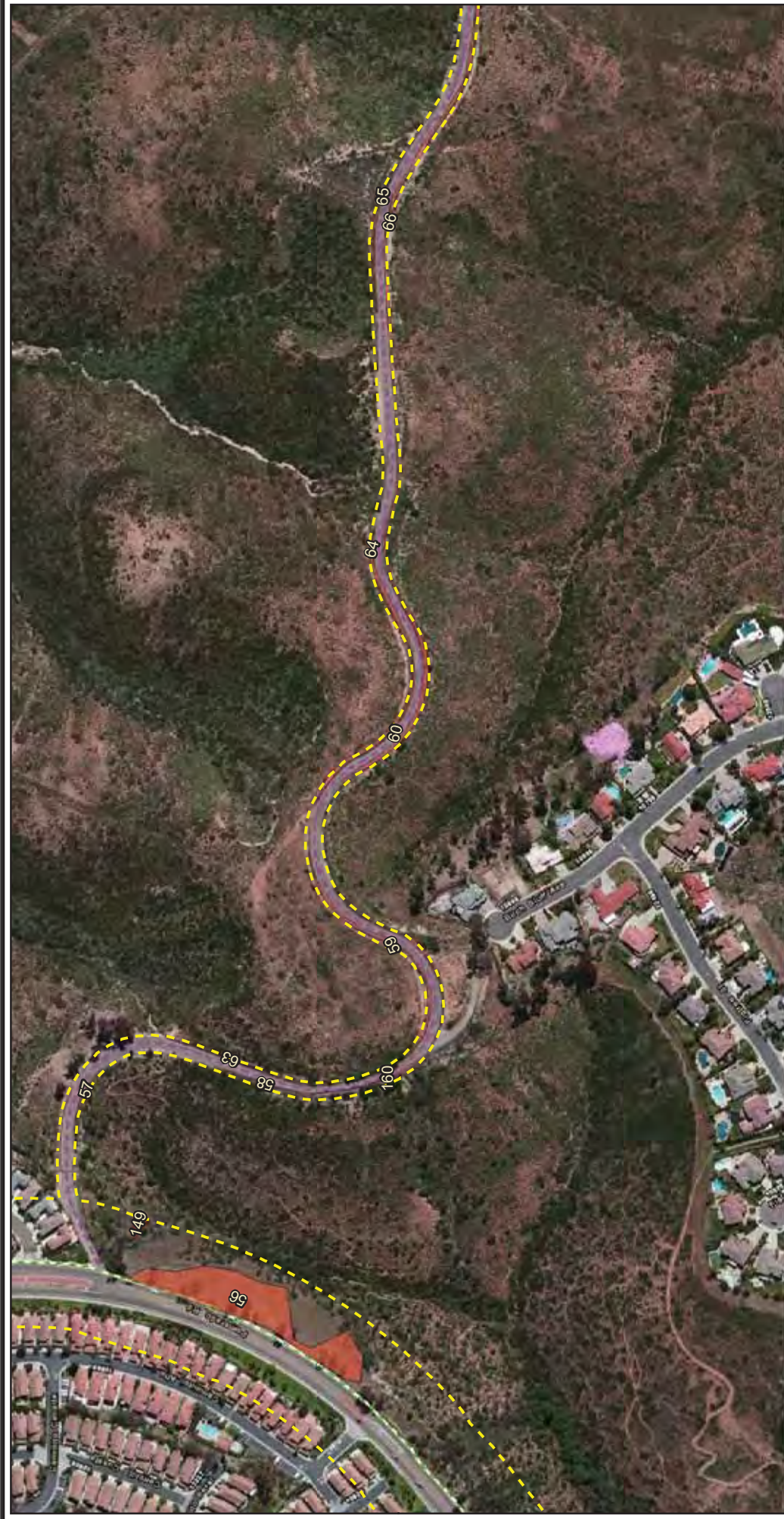
- Legend**
- Access Road
 - Weed Mapping Survey Area
 - Weed Community
 - 61: Natal Grass (L), Fountain Grass (M), Slinkwort (L)
 - 62: Natal Grass (L), Fountain Grass (M)
 - 69: Natal Grass (M), Fountain Grass (L)
 - 70: Natal Grass (M), Fountain Grass (M), Slinkwort (L)
 - 71: Fountain Grass (M)
 - 72: Fountain Grass (M)
 - 73: Fountain Grass (H)



Appendix B
Weed Community Map
Proposed Project
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- Legend**
- Access Road
 - Weed Mapping Survey Area
 - Weed Community
 - 60: Natal Grass (M), Fountain Grass (L)
 - 61: Natal Grass (L), Fountain Grass (M), Slinkwort (L)
 - 64: Natal Grass (H)
 - 65: Natal Grass (H), Fountain Grass (L)
 - 66: Natal Grass (M), Fountain Grass (M), Slinkwort (L)
 - 67: Fountain Grass (M)
 - 68: Fountain Grass (M), Natal Grass (H)



Appendix B

Weed Community Map

Proposed Project

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0 100 200 Feet

- Legend**
- Proposed Project (Underground)
 - Access Road
 - Weed Mapping Survey Area
 - Weed Community
 - 56: Russian Thistle (M)
 - 57: Natal Grass (L)
 - 58: Natal Grass (L), Fountain Grass (M), Slinkwort (L)
 - 59: Natal Grass (H)
 - 60: Natal Grass (M), Fountain Grass (L)
 - 63: Fountain Grass (M), Russian Thistle (L)
 - 64: Natal Grass (H)
 - 65: Natal Grass (H), Fountain Grass (L)
 - 66: Natal Grass (M), Fountain Grass (M), Slinkwort (L)
 - 149: Pampas Grass (H)
 - 160: Natal Grass (L)
 - 161: Natal Grass (L)

Map Date: 11/08/16, Author: [unreadable]

