

SOUTHERN CALIFORNIA EDISON VALLEY-IVYGLEN PROJECT HABITAT RESTORATION AND REVEGETATION PLAN LOCATED IN RIVERSIDE COUNTY, CALIFORNIA DRAFT

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DEFINITIONS

Adaptive Management—Management decisions comprised of adjustments and remedial measures to the restoration activities if the success criteria and/or objectives of this plan are not being met based on periodic monitoring and reporting trends and/or outcomes.

Annual Report—Report that covers the progress of the restoration/revegetation sites at the end of one year toward achieving established success criteria and summarizes maintenance/monitoring activities and remedial measures for the previous year.

Biological Monitoring—Qualitative and quantitative monitoring conducted at regular intervals to evaluate the development of habitat progress within the restoration/revegetation sites including, but not limited to, collection of vegetation coverage data; survival, species diversity, and plant density data; and photo-documentation.

Broadcast Seeding—A method of seeding that is completed either mechanically using a seed spreader or by hand using a belly-grinder to evenly distribute seed over restoration/revegetation sites.

Density—Number of species in a defined area.

Diversity—An index that incorporates the different types and abundance of species in a given area.

Fiber Rolls—Tubes of weed-free (rice or wheat) straw enclosed in jute or other photodegradable material, typically 8-12 inches in diameter and 20-25 feet long, used for erosion control, sediment control, and stormwater runoff control.

Hydroseed—A seeding technique that involves spraying a slurry of seed, mulch, and typically a binding agent/dye onto an area to establish a native vegetation and prevent erosion and/or revegetate the site.

Impact—To affect or influence in a significant or undesirable manner.

Imprinting—V-shaped troughs or indentations furrowed into the ground (typically by machine) to increase the moisture retention of restoration/revegetation sites and improve seed germination and/or seedling establishment.

Invasive—Any species that is non-native to the ecosystem and whose introduction causes or is likely to cause economic or environmental harm.

Jute Netting—A fine netting made from biodegradable natural plant fiber that is used for erosion control and soil stabilization on slopes and hillsides.

Maintenance and Monitoring Period —The period during which the maintenance needs of the restoration/revegetation sites are addressed, and biological monitoring is conducted to evaluate the progression toward specified success criteria. The monitoring component concentrates on the overall performance of the restoration/revegetation sites, with consideration of various factors and conditions. Data collected typically include plant health and vigor, plant growth and cover, seed germination, the need for supplemental hand watering, the presence of volunteer native or non-native plant species, significant disease or pest problems, and soil erosion problems.

Mitigation—The process of creating, restoring, reclaiming, or enhancing habitat to compensate for impacts on existing habitat.

Non-Native—A species that is found outside of its native distributional range.

Pest—An organism that is considered detrimental to restoration/revegetation sites because of its negative effect on plant growth, establishment, or survival.

Photo-documentation—A technique utilizing photographs or other imagery to monitor or document changes over time within restoration/revegetation sites.



Pure Live Seed (PLS)—A measure used by the seed industry to describe the percentage of a quantity of seed that would germinate. This is obtained by multiplying the purity percentage by the percentage of total viable seed, then dividing by 100.

Qualitative—Ocular assessment or evaluation of a particular condition, factor, or aspect of restoration/ revegetation sites.

Quantitative—Numerical assessment or evaluation of a particular condition, factor, or aspect of restoration/revegetation sites using defined sampling and measurement techniques, such as transects and quadrats.

Remedial Measures—Action(s) to repair or correct a fault or deficiency at the restoration/revegetation sites.

Revegetation Contractor—A person and/or company that provides services or equipment to implement the restoration/revegetation sites.

Restoration—Process of reestablishing plants in the restoration/revegetation sites by planting container stock.

Revegetation—Process of reestablishing plants in the restoration/revegetation sites by applying seed.

Soil Amendment—Any material added to soil to improve its physical properties, including aeration, water retention/infiltration, permeability, drainage, and structure. Soil amendments could be organic (moss, grass clippings, wood chips, straw, compost, sawdust) or inorganic (vermiculite, perlite, gravel, sand).

Success Criteria—Specific performance standards or thresholds.

Topsoil—Upper layer of soil, typically 2 to 10 inches deep, with a high concentration of nutrients and organic matter. This layer is commonly referred to as the "A Horizon."

Work Area—The disturbance footprint for a given Project component.



Environmental Intelligence, LLC

1.0 INTRODUCTION

The purpose of this Habitat Restoration and Revegetation Plan (HRRP) is to comply with the habitat restoration requirements for Southern California Edison's (SCE) Valley-Ivyglen 115-kilovolt (kV) Subtransmission Line Project (Project). This HRRP describes the restoration and revegetation methods for vegetation communities temporarily impacted and disturbed during Project construction activities, and the monitoring methods. as described by *Project Commitment D* (*Habitat Restoration and Revegetation Plan*) in Chapter 4.4.4 and *Mitigation Measure BR-7* (Habitat Restoration and Revegetation Plan Requirements) in Chapter 9 of the Project Final Environmental Impact Report (FEIR; California Public Utilities Commission [CPUC] 2017).

1.1 **Project Overview**

The Project would involve construction of a new, single circuit 115-kV subtransmission line to connect the existing Valley Substation (near Perris, California) to the existing Ivyglen Substation (near Lake Elsinore, California) in western Riverside County. The Project would be constructed in two phases: Phase 1 (approximately 13 miles) and Phase 2 (approximately 11.5 miles).

The Project route has been segmented to include a total of eight segments across the two phases. Phase 1 includes Segments 1-3 and Phase 2 includes Segments 4-8. As described in the FEIR, there were two optional routes being proposed for Segment 5: 1) West of Lake Street Option; and 2) Utility Corridor Option. The Project will only permit and construct the West of Lake Street Option and the HRRP will only cover impacts associated with this option.

Both Phase 1 and Phase 2 of the Project would include the following elements:

- Construction of a new single-circuit 115-kV subtransmission line and fiber optic line;
- Installation of wood, lightweight steel (LWS), hybrid poles, and tubular steel poles (TSP);
- Excavation work and trenching for new conduits, underground duct banks, and underground vaults which would be used for construction of the new 115-kV and fiber optic line;
- Installation of fiber optic lines overhead on the proposed new poles and also underground in new (approximately 5,400 feet) and existing (approximately 13,600 feet) conduit;
- Transfer of existing distribution circuits along portions of the proposed subtransmission line to new 115 kV structures or to underground positions;
- Installation of new 115 kV switching and protective equipment at Valley and Ivyglen Substations;
- The widening and creation of a total of approximately 14 miles of access roads;
- Temporary laydown areas for assembly of poles and equipment storage;
- Grading areas for site preparation, foundation work, and footing construction; and
- Shoefly construction.

Fiber optic lines would be installed within existing or new SCE easements and fee-owned property, public franchise areas, and Public/Quasi-Public (PQP) and Additional Reserved Lands (ARL) related to the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP).

1.2 **Project Location**

The Project is located within western Riverside County, California and traverses through the cities of Menifee, Perris, Lake Elsinore, and portions of unincorporated Riverside County. The Project would parallel and cross Interstate 215 (I-215), State Route 74 (SR-74), and Interstate 15 (I-15; Appendix A, Exhibit 1).

Throughout this report, the "work area" refers to the Project footprint (i.e., the actual impact area for all structures and associated sites). The work area occurs within the MSHCP and is located within the northern portion of the U.S. Geological Survey (USGS) Romoland Quadrangle (7.5-minute series [USGS 1979]), the northern portion of the Lake Elsinore Quadrangle (7.5-minute series [USGS 1988a]), the northeast portion of the Alberhill Quadrangle (7.5-minute series [USGS 1988b]), and southwest portion of Lake Matthews Quadrangle (7.5-minute series [USGS 1988c]).



1.3 Applicable Mitigation Requirements

Under California Environmental Quality Act (CEQA) Guidelines Section 15097, the CPUC (Lead Agency) is responsible for developing a mitigation monitoring and reporting program to ensure that all Project mitigation measures described in the FEIR are implemented. SCE has agreed to implement the Mitigation Measures outlined in Table 1 below as part of this Project.

| Final Enviro | Final Environmental Impact Report: Mitigation Monitoring, Compliance, and Reporting Plan | |
|--------------|---|--|
| Measure | Description | |
| MM BR-1 | Limit Construction to Designated Areas and Avoid Riparian, Aquatic, and Wetland Areas: Vehicular traffic (including movement of all equipment) shall be restricted to approved access roads and established construction areas shown in Figure 2.6 of the EIR. These areas shall be delineated in the field with flagging and signage. If disturbance is required outside the established construction areas, CPUC notification and approval shall be required. Sensitive resources such as waterbodies, oak trees, and special status plant populations shall be clearly marked for avoidance with flagging and signage. Nighttime lighting, if necessary adjacent to aquatic areas, shall be shielded away from these areas to prevent impacts on aquatic wildlife. | |
| MM BR-4 | Limit Removal of Native Vegetation Communities and Trees: The removal of native vegetation and trees shall be limited to the minimum practicable area required for construction of the project. Grading, grubbing, graveling, or paving shall only occur where required for construction and operations. The applicant shall use temporary staging areas in a way that facilitates postconstruction restoration, and shall restore these areas to as close to pre-construction conditions as possible, or to the conditions agreed upon between the applicant and landowner. | |
| MM BR-6 | Oak Tree Protection Measures: This measure applies to oak trees in all project areas. Preventive measures shall be taken during construction activities to minimize impacts in the protected zone of each oak tree. The protected zone commences at a point 5 feet outside the dripline and extends inward to the trunk of the tree. All work conducted in the protected zone of oak trees shall be performed using hand implements and in the presence of a certified arborist. If it is determined that oak tree removal is necessary, the applicant shall relocate oak trees to a place outside of the area of anticipated impacts under the direction of the certified arborist. | |
| | If the applicant cannot feasibly relocate oak trees that are removed, 1-gallon oak trees shall be planted at a 12:1 ratio within the appropriate habitat to replace removed trees. These replacement trees shall be indigenous coast live oak trees that have been grown in a natural form (no topping or street tree forming). | |
| | The applicant shall be responsible for monitoring and maintaining the relocated or replacement trees for a minimum of two years (to include at least two complete California rainy seasons, here defined as the period of the year from November – May). | |
| | In addition, the following minimization measures shall be implemented under the direction of the certified arborist: | |
| | Equipment, materials, and vehicles shall not be stored, parked, or operated within the protected zone of an oak tree, except on sites approved for this use by a certified arborist. Removal of the natural leaf mulch within the protected zone of oak trees is prohibited except where absolutely necessary. All trees not approved for removal shall be fenced or flagged for avoidance and to designate the protected zone. | |

| Final Enviro | nmental Impact Report: Mitigation Monitoring, Compliance, and Reporting Plan |
|--------------|---|
| Measure | Description |
| | Any pruning, including removal of dead wood, shall be performed in compliance with the latest American National Standards Institute pruning standards by a certified arborist (or certified tree worker). Any root-pruning required within the protected zone of an oak shall be limited to the minimum amount necessary. All root-pruning shall consist of clean, 90-degree angle cuts utilizing sharp hand tools. Any major roots (2 inches or greater in diameter) encountered shall be preserved to the extent possible and wrapped in moist burlap until the soil is replaced. Soil shall be replaced around preserved roots as soon as possible |
| | To evaluate whether or not this type of mitigation is successful over the long-term, the relocated oak trees and replacement oaks will be revisited by a certified arborist in the fifth, tenth, and fifteenth years after relocation or planting to assess the survival/mortality rate of these oaks, and to evaluate the health of the surviving individuals. The applicant will prepare an initial report on the implementation of this measure after the second year of monitoring and maintenance has been completed. A Final Report will be prepared after the Year-15 assessment has been carried out; the Final Report will be submitted to the CPUC, and copies shall be sent to the USFWS (Palm Springs Fish and Wildlife Office), to the CDFW (Inland/Desert Regional Office), and to the California Native Plant Society's Conservation Program staff. |
| MM BR-7 | Habitat Restoration and Revegetation Plan Requirements: Pursuant to Project Commitment D, the applicant shall develop a Habitat Restoration and Revegetation Plan to address ground disturbance in all project areas. In addition to including the provisions set forth in Project Commitment D, the Habitat Restoration and Revegetation Plan shall detail topsoil segregation and conservation methodology; restoration of special status plant species habitat; vegetation removal and revegetation methods, including seed mixes, rates, and transplants; criteria to monitor and evaluate revegetation success; and alternative restoration and revegetation methods in the event that the revegetation success criteria are not initially reached. The applicant shall implement the Habitat Restoration and Revegetation Plan until the |
| | restoration success criteria are achieved. Appropriate agencies (CPUC, USFWS, and CDFW) shall be consulted during the preparation of the Habitat Restoration and Revegetation Plan. A copy of the final Habitat Restoration and Revegetation Plan, along with documentation of agency review and incorporation of comments into the final version, shall be provided to the CPUC, the USFWS, and the CDFW for approval prior to the CPUC issuing a notice to proceed. |
| | Special-Status Plant Avoidance and Mitigation Measures: For project areas not covered by the MSHCP, the applicant shall avoid the special status plant populations listed in Appendix G, Table 1. However, where avoidance is not feasible, special status plants in project work areas shall be identified in the field, and the following avoidance measures shall be implemented to minimize the possibility of inadvertent encroachment: |
| MM BR-8 | A qualified biologist shall flag or otherwise mark special status plants. Construction crews will avoid direct or indirect impacts on these flagged areas. Should impacts on special status plants be unavoidable, the applicant will implement the following measures: A qualified botanist shall determine if transplantation is feasible. If determined feasible, a qualified botanist shall develop and implement a transplantation plan in coordination with appropriate agencies (CDFW, USFWS, RCA). The special status plant transplantation plan shall identify a suitable transplant site, moving the plant material and seed bank to the transplant site, collecting seed material |



| Final Environmental Impact Report: Mitigation Monitoring, Compliance, and Reporting Plan | | |
|--|---|--|
| Measure | Description | |
| | and propagating it in a nursery, and monitoring the transplant sites to document recruitment and survival rates. If transplantation is infeasible, the applicant shall replace impacted special status plants at a 2:1 ratio within the project area within one year of the end of construction. Measures to restore special status plants shall be implemented in accordance with the Habitat Restoration and Revegetation Plan (MM BR-7). | |
| MM BR-9 | Invasive Plant Control Measures: The applicant shall develop an Invasive Plant Management Plan outlining measures to prevent the spread of invasive plants such as tamarisk (Tamarix sp.) and giant reed (Arundo donax) during construction of the projects. The Invasive Plant Management Plan shall include, but is not limited to, the following measures: All vehicles and equipment shall be cleaned prior to arrival at the work site. Straw or hay bales used for sediment barrier installations or mulch distribution shall be obtained from weed-free sources. | |
| | The Invasive Plant Management Plan will be submitted to the CDFW and CPUC for review and comment no more than three months prior to the start of construction. A copy of the final Invasive Plant Management Plan, along with documentation of agency review (CDFW and CPUC) and incorporation of comments into the final version, shall be provided to the CPUC for approval prior to the CPUC issuing a notice to proceed. | |
| MSHCP BMP-11 | The removal of native vegetation shall be avoided and minimized to the maximum extent practicable. Temporary impacts shall be returned to pre-existing contours and revegetated within appropriate native species. | |
| Project Commitment D | Habitat Restoration and Revegetation Plan: With input from the appropriate resource agencies, the applicant would develop and implement a Habitat Restoration and Revegetation Plan to restore temporarily impacted areas where construction of the projects would be unable to avoid impacts on native vegetation and sensitive resources, such as wetlands, wetland buffer areas, riparian habitat, and other sensitive natural communities. The applicant would restore all temporarily impacted areas disturbed during construction of the projects, including staging areas and pull, tension, and splicing sites, to as close to preconstruction conditions as possible, or to the conditions agreed upon between the applicant and landowner. Replanting and reseeding would be conducted under the direction the applicant or contract biologists. If revegetation would occur on private property, revegetation conditions would be part of the agreement between the applicant and the landowner. | |
| BIO-APM 9 | The removal of native vegetation shall be avoided and minimized to the maximum extent practicable during construction and O&M activities. Temporary impacts shall be returned to preexisting contours and revegetated with appropriate native species. | |
| BIO-APM 16 | Temporary impacts to MSHCP ARLs shall be restored to greatest extent practicable using species present prior to disturbance. Should any permanent impacts to ARL result during construction, the Applicant shall dedicate biologically equivalent or superior land to the MSHCP. The Applicant shall prepare an ARL equivalency analysis to be included as part of the MSHCP PSE submittal. This equivalency analysis shall compare the potential effects on the ARL to the benefits of proposed replacement land, including compensation for potentially lost conservation functions and values. The analysis shall consider specific project design features, siting and design, and MSHCP BMPs, as well as address effects on covered species and habitats, core areas, linkages, constrained linkages, MSHCP Conservation Area configuration and management, and ecotones. The replacement land ratio is anticipated to be not less than 2:1 within MSHCP Core 1 but shall ultimately be determined through MSHCP | |



| Final Environmental Impact Report: Mitigation Monitoring, Compliance, and Reporting Plan | | |
|--|--|--|
| Measure | Description | |
| | consistency findings made by RCA, CDFW and USFWS concurrence as part of the MSHCP PSE process. | |

2.0 IMPACT SUMMARY

2.1 Vegetation

Project impacts are classified as temporary or permanent. The Project's temporary impacts include disturbances associated with pole removal; construction of new (replacement) TSPs, wood poles, LWS poles, hybrid poles and guy poles; installation of anchors; stringing conductor/cable; installing underground conduit and cable; and underground vaults, temporary access roads (and/or driving through or over vegetation), vegetation trimming, and temporary laydown areas. Combined, the Project will temporarily affect 242.77 acres of upland vegetation and 0.51 acres of riparian vegetation for a total of 243.28 acres for both Phases 1 and 2 (see Appendix A, Exhibit 2). The exact acreage of impacts will be recalculated once construction activities have been completed. A summary of these temporary disturbances to upland habitats for Phases 1 and 2 are provided in Tables 2 and 3, below, respectively.

| Vegetation Community | Phase 1 Temporary Impacts (acres) ² |
|--|--|
| Non-Sensitive | |
| Developed/Disturbed (Residential/Urban/Exotic) | 28.32 |
| Agriculture – Field/Croplands | 6.00 |
| Sensitive ¹ | |
| Non-native Grassland | 24.68 |
| Disturbed Non-native Grassland | 11.11 |
| Riversidean Sage Scrub | 2.21 |
| Disturbed Riversidean Sage Scrub | 10.53 |
| Southern Willow Scrub | <0.01 |
| Tamarisk Scrub | <0.01 |
| Total Acres (Phase 1) | 82.86 |

¹California Natural Diversity Database (CNDDB) Sensitive Natural Community, MSHCP Sensitive Community and/or local/municipal sensitive community/resource.

² Totals may not add up due to rounding.

| TABLE 3: TEMPORARY IMPACTS FOR PHASE 2 |
|--|
|--|

| Vegetation Community | Phase 2 Temporary Impacts (acres) ² | |
|--|--|--|
| Non-Sensitive | | |
| Developed/Disturbed (Residential/Urban/Exotic) | 90.75 | |
| Tamarisk Scrub | 0.07 | |
| Sensitive ¹ | | |
| Non-native Grassland | 11.94 | |
| Disturbed Non-native Grassland | 18.42 | |



| Chamise Chaparral | 1.48 |
|--|--------|
| Riversidean Sage Scrub | 2.36 |
| Disturbed Riversidean Sage Scrub | 33.57 |
| Coast Live Oak Woodland | 0.55 |
| Riversidean Alluvial Fan Sage Scrub (upland/vestigial) | 0.85 |
| Coast Live Oak Riparian Forest | 0.01 |
| Mulefat Scrub | 0.06 |
| Riversidean Alluvial Fan Sage Scrub | 0.06 |
| Southern Arroyo Willow Riparian Forest | 0.01 |
| Southern Cottonwood-Willow Riparian Forest | 0.27 |
| Southern Riparian Scrub | 0.01 |
| Southern Willow Scrub | 0.01 |
| Total Acres (Phase 2) | 160.42 |

¹California Natural Diversity Database (CNDDB) Sensitive Natural Community, MSHCP Sensitive Community and/or local/municipal sensitive community/resource

² Totals may not add up due to rounding.

2.2 Non-covered Special-Status Plants

Per MM BR-8, if special-status plants are impacted in Project areas not covered by the MSHCP then the plants must be transplanted or otherwise restored. All Project areas will be covered by the MSHCP following receipt of the Participating Special Entity (PSE) Certificate of Inclusion.

3.0 MITIGATION STRATEGY

SCE's approach to compensate for impacts to sensitive biological resources due to construction of the VIG Project is to restore/revegetate temporarily impacted areas on site and provide compensatory mitigation offsite for permanent impacts and for temporary impact mitigation that exceeds a 1:1 ratio. The off-site mitigation program is not addressed in this HRRP. Off-site mitigation shall include the following:

- 1. MSHCP coverage for habitat mitigation includes payment of PSE fees into the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Conservation Area.
- 2. The 1.2-acre Wolfskill Mitigation Site which occurs within RCA Conserved lands, and as identified in the Phase 1 MSHCP Certificate of Inclusion, will provide offsite compensatory mitigation for Phase 1 Regional Water Quality Control Board (RWQCB) 401 Water Quality Certification, U.S. Army Corps of Engineers (USACE) 404 Nationwide permit, and California Department of Fish and Wildlife (CDFW) 1600 Streambed Alteration Agreement, and Phase 1 Riparian/Riverine impacts in the form of enhancement. The Wolfskill site is located off Gilman Springs Road approximately 1.7 miles west of Highway 79 and approximately 1.3 miles east of Bridge Street in Riverside County.
- 3. SCE intends to satisfy offsite compensatory mitigation for Phase 2 RWQCB 401, USACE 404, and CDFW 1600 permitting and Phase 2 Riparian/Riverine impacts at the 4.69-acre Wyroc site (aka Lake Street Mitigation Project Site). Wyroc is located within the County of Riverside southwest of the I-15 freeway and east of Lake Street, in the City of Lake Elsinore. The Wyroc site is intended to provide compensatory mitigation for permanent impacts to riparian vegetation and compensation of temporary impacts where mitigation ratios exceed 1:1. SCE is currently in negotiations with the Riverside-Corona Resource Conservation District (RCRCD) on implementation of the Permittee



Responsible Mitigation (PRM); once the site is secured, SCE will provide a final Habitat Mitigation and Monitoring Plan (HMMP). Mitigation at Wyroc will include restoration and enhancement.

4. An additional 50 willow cuttings will be planted as additional mitigation for the CDFW 1600 permit within the SCE Easement in the San Jacinto floodplain on Phase 1. Similar additional offsite enhancement may be conducted if additional mitigation is required for impacts to riparian vegetation on MSHCP conserved lands.

Temporary impacts to habitats dominated by non-native species and/or barren/developed areas (refer to non-sensitive habitats in Tables 2 and 3) will not be subject to restoration/revegetation requirements other than meeting the requirements of the Stormwater Pollution Prevention Plan (SWPPP). Temporary impacts to sensitive habitats (see Tables 2 and 3) will be subject to the restoration/ revegetation and will be mitigated at the site of disturbance at a 1:1 ratio. If oaks trees are removed, then replacement will occur at a 12:1 ratio per MM BR-6. The HRRP objectives for temporary impacts include the following:

- Control erosion and provide long-term stabilization; and
- Restore/revegetate native vegetation temporarily impacted by the Project per the performance standards/success criteria described in Section 6.2.

4.0 RESTORATION/REVEGETATION IMPLEMENTATION METHODS

This section describes the general methods that will be used to restore/revegetate sensitive upland vegetation communities and habitats impacted by the Project. During and following completion of construction, habitat restoration/revegetation and SWPPP teams will review site conditions and discuss the parameters of this HRRP, SWPPP, and the post-construction site conditions. Restoration/revegetation of temporary disturbance areas following construction will occur as soon as practical after completion of construction activities in the affected areas. Plan implementation will require the following steps:

- Site preparation;
- Materials;
- Installation; and
- Maintenance.

The potential activities and sequencing associated with Project restoration/revegetation are summarized in Table 4 below. Specifics of each activity are provided in Sections 4.1 through 4.4.

| Restoration/Revegetation Treatment | Timing |
|---|--|
| Documentation of Baseline Conditions | Prior to construction |
| Topsoil Salvage | At site grading initiation |
| Removal of Debris and Non-Native Plants | Prior to seeding |
| Soil Decompaction | Prior to seeding |
| Soil Recontouring | Prior to seeding |
| Spread of Salvaged Topsoil | Prior to seeding |
| Seeding/Planting | Fall/winter |
| Watering/Weeding | Spring/summer (or as appropriate for target species) |
| Annual Report | Annually |

TABLE 4: RESTORATION/REVEGETATION SEQUENCE



4.1 **Pre-Construction Assessment and Documentation of Baseline Conditions**

Documenting baseline conditions is an important component of the restoration program, as the success criteria for the 3-year maintenance and monitoring period will be based on this data. Baseline condition (pre-construction) data will be collected for temporary impact areas. Pre-impact data for the Project site will consist of identifying the vegetation community (native species, non-native species, dominant species, native cover, non-native cover); presence of special status species; soils present; slope aspect(s); any observed disturbance from previous or historic activities; and photographs. This data will be collected during preconstruction surveys conducted within two weeks of the start of construction per FEIR Mitigation Measure BR-2 and supplement the biological resource data collected for the Project between 2006 and 2019.

4.2 Site Preparation

This section below includes typical site preparation methods, but other methods may be employed, that are not covered here, based on the experience of the restoration contractors and advances in restoration research and techniques.

4.2.1 REMOVAL OF DEBRIS

All restoration and revegetation sites shall be free from trash and debris (MM BR-13, FEIR, CPUC 2017). SCE will make all reasonable efforts to remove trash and debris from every restoration site prior to installation and throughout the maintenance and monitoring period. This includes all human-caused materials and construction debris (e.g. concrete washout, wire, hardware, metal, plastic, glass, ceramic, rubber). Organic materials, including woody debris, plant material, straw, sand, and minor amounts of rock or gravel base materials may be incorporated into the site. SCE will be responsible for removing all trash and debris from the restoration site to an approved waste disposal site.

4.2.2 REMOVAL OF NON-NATIVE PLANTS

Prior to seed and/or plant installation at the restoration/revegetation sites any non-native plants will be removed by hand-pulling, mechanical removal, and/or non-toxic herbicide application. Plant materials containing viable seed will be immediately bagged, removed from the site and disposed of at an approved location. Rhizomatous species will be treated with herbicide to ensure that plants cannot re-sprout. All herbicides will be applied in a manner to minimize/avoid drift or transport of chemicals away from target plants and in accordance with all state and federal regulations and manufacturer's instructions.

4.2.3 SOIL DECOMPACTION

Soils in areas that are compacted or become compacted as a result of Project construction activities may be loosened prior to seeding and/or planting using a backhoe, equipment with ripping teeth, a disk harrow, or manually using shovels. The surface will be left rough-textured to provide micro-sites for seed germination and to reduce soil movement. Decompaction may be limited by the SWPPP requirements and site conditions.

4.2.3 SURFACE RECONTOURING

Temporary impact areas may need to be recontoured to restore the original land contour (e.g., will be restored to pre-project grade) and slope gradient, to the extent feasible, to restore a natural appearance. Recontouring will take place at the cessation of construction activities.

4.2.4 TOPSOIL SALVAGE, STORAGE, AND PLACEMENT

The practice of salvaging and stockpiling topsoil is intended to preserve the microbial network within the soil, and retain the native seed bank and organic material important to nutrient cycles within the soil. This treatment is most appropriate at sites with native vegetation in which severe disturbance to the soil will

occur, such as grading or excavating, and the protection of existing soil is not feasible. Potentially suitable sites for topsoil salvage must meet all of the following required criteria:

- Previously undisturbed areas;
- Construction activities such as underground trenching, heavy grading, or other excavation activities where natural soil horizons are substantially disrupted;
- No post-construction disturbance activities planned, such as Operations and Maintenance (O&M) activities that would cause future disturbance to the site; and
- Sites where salvaging can be implemented safely and feasibly (topographic limitations).

To maintain biotic components of the topsoil, salvaged topsoil will be stored in stockpiles less than 2 feet in height (or turned periodically if greater than 2 feet) and protected from wind erosion or other damage, such as through the use of tackifier or covering if stored for long periods. Cover material, duration of covering, and time of year will be considered to prevent solarization of the soil that would decrease the biotic components of the soil.

Stockpile locations should be identified in safe locations and restricted to existing approved disturbance areas and in compliance with other environmental and visual restrictions. Some of the limiting factors for topsoil salvage:

- Slopes greater than 25 percent;
- Sites with cultural resources; and
- Weed infestation areas.

4.2.5 EROSION CONTROL

SCE will maintain erosion control best management practices (BMPs) within restoration sites in compliance with SWPPP requirements. To prevent sediment from leaving the restoration areas or rills from forming, SCE shall ensure that the proper remedial measures are in place. This may include hydroseeding, and/or installation of erosion control measures such as silt fencing, straw or coir wattles, fiber rolls, hay bales, and jute netting. SCE will make every effort to integrate SWPPP treatments with restoration site preparation.

4.2.6 SOIL AMENDMENTS

The use of soil amendments is not anticipated; however, if topsoil replacement is not possible, SCE may add organic soil amendments such as a mycorrhizal inoculant, greenwaste compost, or slow-release fertilizers, to improve nutrient holding capacity, soil structure, and root development. In addition, native plants with tolerance for specific conditions may be substituted for species in the current palate.

4.3 Materials

4.3.1 SEED SOURCE AND COLLECTION

Seed may be obtained from onsite seed collection or from commercial vendors. Seed would comply with U.S. Department of Agriculture rules and regulations under the Federal Seed Act. Purity and germination rates would be warranted by the seed supplier (e.g., all seed mixtures will be certified "weed free"). All seed would be furnished in sealed standard containers. Native seed collections should be weed-free and stored in cool dry conditions until ready to use. Collection efforts will follow characterization of potential revegetation sites and determination of seed mixes based on the species listed in the seed palettes below in Tables 5-10. Collection will target as many native annual and perennial species as are available during each collection phase. If any seed species require specific treatment (e.g., scarification) this will be conducted prior to installation.



Seed that has become wet, moldy, or otherwise damaged in transit or in storage will not be used and would be rejected and removed from site. If sufficient seed cannot be collected/obtained for a particular species or vegetation community, such seed will be substituted with that of a comparable species.

See Tables 5-10 below for potential seed mixes specific to each vegetation community. The species listed are based on native species commonly found along the Project based on habitat assessments and focused botanical surveys. The actual palette used will be based on native species that currently occur within the temporarily impacted work areas as documented during the pre-construction analyses. The final seed mix per vegetation community would also be dependent on seed species availability both commercially and seed available for collection in the region in the season prior to restoration.

| Common Name | Scientific Name |
|------------------------------|----------------------------|
| American bird's foot trefoil | Acmispon americanus |
| Blue wildrye | Elymus glaucus |
| California brome | Bromus carinatus |
| California poppy | Eschscholzia californica |
| California goldfields | Lasthenia californica |
| California melic | Melica imperfecta |
| Common phacelia | Phacelia distans |
| Golden yarrow | Eriophyllum confertiflorum |
| One-sided bluegrass | Poa secunda |
| Purple needlegrass | Stipa pulchra |
| Three weeks fescue | Festuca microstachys |
| Purple needlegrass | Stipa pulchra |
| Tomcat clover | Trifolium wildenovii |
| Turkey mullein | Eremocarpus setigerus |
| Tarweed | Deinandra fasciculata |

 TABLE 5: REPRESENTATIVE NATIVE SEED PALETTE FOR NON-NATIVE GRASSLAND

TABLE 6: REPRESENTATIVE NATIVE SEED PALETTE FOR RIVERSIDEAN SAGE SCRUB

| Common Name | Scientific Name |
|----------------------|------------------------|
| Black sage | Salvia melifera |
| Bladderpod | Peritoma arborea |
| Brittlebush | Encelia farinosa |
| Broom baccharis | Baccharis sarothroides |
| Deerweed | Acmispon glaber |
| California buckwheat | Eriogonum fasciculatum |
| California sagebrush | Artemisia californica |
| Mountain mahogany | Cercocarpus betuloides |
| Sweetbush | Bebbia juncea |



| C 1 | 1 | |
|-------|-------|--|
| Scale | broom | |

Lepidospartum squamatum

TABLE 7: REPRESENTATIVE NATIVE SEED PALETTE FOR CHAMISE CHAPARRAL

| Common Name | Scientific Name |
|------------------------|--------------------------|
| black sage | Salvia melifera |
| Deerweed | Acmispon glaber |
| California buckwheat | Eriogonum fasciculatum |
| chamise | Adenostoma fasciculatum |
| chaparral beard-tongue | Keckiella antirrhinoides |
| hoary-leaved ceanothus | Ceanothus crassifolius |
| laurel sumac | Malosma laurina |
| mission manzanita | Xylococcus bicolor |
| Monkeyflower | Mimulus spp. |
| mountain mahogany | Cercocarpus betuloides |
| Redberry | Rhamnus crocea |
| Scalebroom | Lepidospartum squamatum |
| sugar-bush | Rhus ovata |
| Toyon | Heteromeles arbutifolia |

TABLE 8: REPRESENTATIVE NATIVE SEED PALETTE FOR COAST LIVE OAK WOODLAND

| Common Name | Scientific Name |
|-----------------------|-------------------------|
| California goldfields | Lasthenia californica |
| California melic | Melica imperfecta |
| Chaparral nightshade | Solanum xanti |
| Chick lupine | Lupinus microcarpus |
| Coast live oak | Quercus agrifolia |
| Giant wild rye | Elymus condensatus |
| Golden currant | Ribes aureum |
| Mountain mahogany | Cercocarpus betuloides |
| Leafy daisy | Erigeron foliosus |
| Pine goldenbush | Ericameria pinifolia |
| Redberry | Rhamnus crocea |
| Yellow pincushion | Chaenactis glabriuscula |

TABLE 9: REPRESENTATIVE NATIVE SEED PALETTE FOR ALKALI MEADOW/WET MEADOW

| Common Name | Scientific Name |
|------------------|---------------------|
| Alkali bluegrass | Poa secunda |
| Alkali sacaton | Sporobolus airoides |





| Beardless wild rye | Elymus triticoides |
|--------------------|---------------------------|
| Blue eyed grass | Sisyrinchium bellum |
| Blue wildrye | Elymus glaucus |
| Common yarrow | Achillea millefolium |
| Deergrass | Muhlenbergia rigens |
| Dotseed plantain | Plantago erecta |
| Meadow barley | Hordeum brachyantherum |
| Mexican rush | Juncus mexicanus |
| Prairie plantain | Plantago elongata |
| Salt grass | Distichlis spicata |
| Salt heliptrope | Heliotropium curassavicum |
| Small fescue | Festuca microstachys |
| Vinegarweed | Trichostema lanceolatum |

TABLE 10: REPRESENTATIVE NATIVE PLANT PALETTE FOR RIVERSIDEAN ALLUVIAL FAN SAGE SCRUB

| Common Name | Scientific Name |
|-----------------------|----------------------------|
| Brittlebush | Encelia farinosa |
| California Buckwheat | Eriogonum fasciculatum |
| California Matchweed. | Gutierrezia californica |
| California Sagebrush | Artemisia californica |
| Deerweed | Acmispon glaber |
| Golden Yarrow | Eriophyllum confertiflorum |
| Hairy Yerba Santa | Eriodictyon trichocalyx |
| Prickly Pear Cactus | Opuntia littoralis |
| Sandaster | Corethrogyne filaginifolia |
| Scalebroom | Lepidospartum squamatum |
| White Sage | Salvia apiana |

If project conditions require restoration of special-status plants, seeds will be collected consistent with state and federal laws.

4.3.2 CONTAINER PLANTS

Container plants may be used on some sites for certain species. The size and shape of the containers should match the plant's rooting strategy (i.e., deep-rooted plants should be grown in tall pots to encourage more root development, while fibrous-rooted plants can be grown in shorter pots or as plugs). Any required replacement oak trees will be indigenous coast live oaks that have been grown in a natural form (no topping or street tree forming).

Container plants will be grown for a minimum period of four months in a greenhouse or under shadecloth and then conditioned in full sun for at least four months prior to planting. SCE will visually inspect all container plants prior to or upon delivery to verify that the plants are of the correct species and quantities,



are visually free of weeds, pests and disease, and showing signs of healthy growth (e.g., no evidence of coiled roots), as determined by a visual field inspection upon delivery. Any plants that are not within these standards will be rejected. The container plant palettes will be composed of the same representative species listed in Tables 6-8 and 10 above and specific plant species and quantities will be determined on a site-specific basis.

Planting holes will be excavated to diameters approximately twice that of the root ball (but not deeper than the root ball, to avoid settling). Planting holes will be thoroughly moistened prior to placement of container plants. During installation of container stock, care will be taken to minimize disturbance of the root system while extracting the plants from their containers. The plants will be placed in the holes and loose native soil will be backfilled into the hole around the plant and firmly hand-packed around the root ball to eliminate any air pockets. For deep pots, soil will be backfilled and packed in lifts of a few inches at a time to discourage settling of plants. Berms or basins may be constructed to aid in irrigation, but special care will be taken to avoid pooling of water around plant stems or settling of the stem/root union below grade. Plants will be watered immediately after installation.

Container stock installation requires an associated irrigation method to supply irrigation through the first year at a minimum. Irrigation will be installed and tested prior to container plant installation and may include use of flood bubblers or drip emitters. In cases of very small or remote planting sites, DRiWATER or equivalent gel water product or hand watering using buckets may be used to irrigate container plants.

4.3.3 CUTTINGS

Cuttings of shrub and tree species may be prepared to assist with revegetation of restoration areas. Cuttings may be collected locally and prepared according to the following specifications. Cuttings generally should be harvested in the winter months once the plants have entered dormancy and deciduous species have dropped leaves. Soaking of cuttings in water will occur immediately for select riparian species. Rooting hormones in the water may be used to increase the potential for establishment following transplantation. These guidelines apply to collection of cutting materials:

- Cuttings shall be placed in water until planting, any cuttings allowed to dry shall not be used, or cuttings may be collected and propagated at an approved and qualified nursery in containers from no more than 6 months prior to planting.
- Collect cuttings from healthy plants that are in a dormant state (riparian species).
- Collection should not exceed 25 percent in a single area and no more than 25 percent of an individual plant shall be removed.
- Cuttings will be 1-5 feet in length and should range from 1-3 inches in diameter.
- Each cutting shall be cut one end square above a leaf bud and the cut the other end at a 45 degree angle.
- Trim any stems or leaves flush with the cutting.

4.4 Installation

Seeding is anticipated to be the primary method for revegetation and will be performed at all restoration/revegetation sites except where not appropriate, such as riparian sites. Native tree and shrub cuttings may be more appropriate for restoration of riparian sites. Cuttings for riparian restoration will consist of native cuttings from the same species found within the area to be restored. Nursery-produced container plants may be used on sites with Riversidean sage scrub (RSS), Riversidean alluvial fan sage scrub, chamise chaparral, and coast live oak woodland/riparian forest vegetation.



4.4.1 SEEDING METHODS

Seeding will be completed following site preparation activities. To the extent possible, seeding will be conducted when atmospheric moisture levels are favorable (generally between the months of October and February).

Revegetation will be accomplished through application of an appropriate seed mix via one or a combination of three techniques: imprint seeding, hydroseeding, or broadcast seeding. The seeding method implemented at each restoration/revegetation site will depend upon accessibility and size of the area to be seeded. For example, easily accessible areas may be seeded primarily using the imprint seeding method, and/or hydroseeding method; smaller more remote and/or inaccessible areas may be broadcast seeded. These methods are described below.

4.4.1.1 Imprint Seeding

Imprint seeding may be best in mitigation sites that are large enough and accessible for the imprinting equipment and where the soils are neither too loose nor heavily compacted. Imprint seeding provides good soil-to-seed contact and provides a pocket for water infiltration that protects and encourages germination. Imprinting is accomplished via a mechanical imprinter pulled behind a tractor or tracked vehicle which simultaneously spreads and buries pre-developed seed mixes in V-shaped depressions. In appropriate soils, imprinting facilitates successful establishment of seed into the soil and eliminates the need for mulch, soil irrigation, and soil binding. Imprinting also increases rainwater infiltration, improves gas exchange between the soil and atmosphere, reduces erosion, and improves contact between seeds and soil water (Barnes 1950, Gintzburger 1987, Slayback and Cable 1970). Hard soils should be loosened using ripping shanks, or similar equipment, prior to imprinting to ensure that the troughs are deep enough to retain water. Wheat bran or similar binder should be mixed with seed to assist with uniformity of application rate. Where container planting is also planned, imprint seeding should take place prior to container planting. In lieu of an imprinting machine, dozer track walking perpendicular to the site contours may also be used to create seed "safe sites" prior to hand-broadcasting or hydroseeding.

4.4.1.2 Hydroseeding

The designated seeding areas should be seeded using a two-stage hydroseed application method. Where container planting is planned, preventative measures may be taken to avoid damage to container plants and cuttings such as covering plants to prevent them from being coated with hydroseed slurry, or damaged from hydroseed spraying. The seed mix (quantity will vary based on habitat type and site-specific conditions) will be mixed with approximately 2,000 pounds per acre of long-strand wood fiber, a colorant, 150 pounds per acre of binder (adjust accordingly for slope), and sufficient water to allow the mix to be applied evenly over the revegetation area. All hydroseed mixing will be performed in a clean tank, rinsed a minimum of three times (to ensure the removal of any residual seed) in a wash out area. The hydroseeder will be equipped with a continuous agitation and recirculation system to produce a uniform slurry and have the capacity to apply this slurry at a uniform and continuous rate.

Application of hydroslurry will comply with product specifications. The designated areas will be sprayed with the slurry in a sweeping motion and in an arced stream until a uniform coat is achieved, with no slumping or shadowing as the material is spread at the required rate. Any excessive mulch coating on plants will be removed. The seed slurry will be applied within one hour of preparation as the viability of the seed could be compromised. A typical rate of application in arid California is 500 pounds per acre of wood fiber mulch for hydroseed-only sites, and 1,500 to 2,000 pounds per acre of wood fiber mulch and a tackifier for the hydromulch method (Newton and Claassen 2003); however, the Revegetation Contractor will determine the specific rate of application on a site-by-site basis in consultation with the biologist and SWPPP consultant.

4.4.1.3 Broadcast Seeding

Broadcast seeding will generally be used where mechanical seeding is deemed infeasible because of substrate, location, or disturbance area size. In general, application of hand-broadcasted seed will be



reserved for areas approximately 0.5 acre or less, or where small amounts of seed are needed. Hand-seeded sites will be raked or harrowed before seeding to break up the surface and after to allow seeds to fall into crevices. Raking or other post-seeding treatment to lightly cover seed will also be completed to enhance germination likelihood, provide even distribution of seed, and reduce losses to granivores. This will also help retain moisture for germination. The seed material may be broadcast by hand or using a seed spreader. Hand seeding will be timed to occur in the late fall prior to rains.

4.4.2 CONTAINER PLANTING METHODS

Container planting will occur prior to seeding activities when feasible. All container plants will be inspected visually prior to planting to ensure they are healthy, free of weeds, pests, and disease, and the proper size. Container plants will be installed in areas determined to be feasible and appropriate by SCE. During transport from the nursery or storage facility to the planting site, the plant material will be handled carefully to ensure plants are not dropped, tossed or otherwise "roughly handled." Upon plant delivery, container plants will be stored in a designated temporary storage location within a developed or disturbed area approved by SCE. Plants will be protected from herbivory, vandalism or theft, as well as maintained (watered) while they are in temporary storage for planting.

Plants will typically be installed on 5-foot centers for shrub species, with closer spacing for herbaceous perennials and wider spacing for larger shrubs or trees (although final spacing may vary upon container size used and species to be planted). All container plants and trees will be planted in accordance with the following specifications:

- Plants will be planted with the roots untangled and sides scarified to promote new root development, roots will be protected from weather exposure during planting;
- Planting holes will be augured and be no more than 1.5 times the diameter and 2 times the depth of the container species to be planted;
- Planting holes will be backfilled 25 percent with excavated native soil and filled with water and allowed to drain completely prior to planting. Container plants must never be installed in planting holes with standing water; all water will be allowed to settle and infiltrate through the soil prior to plant installation.
- Plantings will be set in well-drained planting holes with the crown of the root ball approximately 0.5 inches above the backfilled soil. The soil around the planting will be tamped down sufficiently to eliminate any air pockets in the soil.
- A basin around the planting will be constructed by creating a berm above the existing grade approximately 24 inches in diameter around the planting.
- Each planting will be sufficiently watered after installation so that water reaches the lower roots.

Some planted container stock may require protection against herbivory. Herbivore barriers made of chicken wire or a similar material that will prevent herbivores to chew through the barrier. Barriers will be a minimum of two feet above ground. The herbivory cages will be inspected during each maintenance visit, and removed when that herbivory will no longer compromise the health and establishment of the plantings. Herbivory caging will be removed before it hinders plant development and growth. If determined that there is a potential threat of subterranean root damage by small mammals, wire cages constructed of chicken wire may be installed into planting holes prior to planting.

4.4.3 CUTTINGS

Planting of cuttings will occur prior to seeding activities when feasible. Cuttings will be planted at the appropriate time for each species utilized. For example, cuttings from riparian tree species will be obtained, prepared, and planted when trees are dormant. Cuttings will be provided with supplemental water following planting until the cuttings show signs of growth and/or establishment. Cuttings will be planted with similar



density and composition as adjacent habitat. After initial preparations as discussed above, cuttings shall be installed following these specifications:

- Cuttings shall be planted in holes approximately 2 inches in diameter; with a minimum depth of two-thirds of the cutting length; all planting holes shall have vertical sides.
- Each hole shall then be partially backfilled with excavated soil material then saturated with water; this step shall be repeated until the hole is at least half backfilled.
- Once the water has absorbed into the soil, a cutting shall be inserted into the hole with the angled end in the ground. The cutting shall be installed so two-thirds of the cutting length is below ground with at least 3 leaf bud scars above the surface of the soil.
- The hole shall then be backfilled completely with excavated material and distributed evenly around the cutting, the backfill shall then be tamped down sufficiently to eliminate air pockets.
- After installation the cutting will be soaked at least twice to fully saturate the soil down to the base of the cutting and to assist with settling the cutting.

5.0 MAINTENANCE

Maintenance will begin with implementation of the restoration/revegetation work at each of the Project's temporary disturbance areas and will continue for up to three years. Maintenance tasks may include truck/hand watering, erosion control, and weed/pest abatement. Environmental conditions will be monitored and adaptive measures may be applied as necessary.

5.1 Irrigation

Germination at seeded areas will rely on natural precipitation. Irrigation is not proposed for the seeded revegetation efforts because plant palettes were designed to be regionally adapted. However, if the applied seed does not successfully germinate due to low seasonal precipitation, supplemental watering may be considered as a remedial action to promote plant establishment and growth. The appropriate supplemental watering methodology will be decided on a case-by-case basis, and gradually reduced as the plants become established. Supplemental watering can be accomplished via a watering truck (or hand-watering in difficult access areas).

Irrigation may be used on sites where container plants or cuttings are installed (if container planting occurs) and will be considered in conjunction with other restoration treatments on a site by site basis.

5.2 Weed Control

Weed control measures will be implemented during post-construction restoration where necessary to ensure success criteria in the HRRP are met.

Control measures may include physical (hand-pulling, mechanical removal) and chemical (herbicide application) treatment methods. These control methods will be dependent on the weed species, location of weeds, and the time of year that weed control operations occur.

Physical Methods

Physical/manual weed control methods may be appropriate in sensitive habitats, immediately around container plant basins, around germinating native species, and in areas where chemical methods are prohibited. Recommended physical control methods are as follows:

- Hand-pulling may be used to remove localized and discrete populations of herbaceous species prior to seed set. Cutting may be used to remove shrub and tree species. This method may require follow-up non-toxic herbicide applications to kill the root system and prevent re-sprouting.
- Mechanical removal may be used to remove weed infestations from large areas where few or no native plant species are present. This method may use a mower, weed whacker, or tiller.



Chemical Methods (Herbicides)

Herbicides can be a very effective method in controlling weed species by killing or inhibiting plant growth. The appropriate method of application is based on the species, the degree of infestation, time of year, temperature, and environmental conditions. Approved herbicides will be used in compliance with the manufacturer's instructions and/or state and federal regulations. The environmental risks of using non-toxic herbicides will be minimized by using marker dyes to make the herbicide visible in areas where it has been applied.

6.0 MONITORING AND REPORTING

6.1 Restoration Site Performance Standards

Restoration success criteria for the Project:

Non-native Grassland Restoration

- Non-native grassland restoration areas will achieve a minimum 70 percent vegetative cover of predisturbance or adjacent reference site cover, or the coverage as specified by the Project's SWPPP.
- Non-native perennial species cover cannot exceed 5 percent cover of pre-disturbance or adjacent reference sites.
- The 70 percent vegetative cover may be comprised of both native and non-native plant cover, however there is no native plant cover percentage requirement.

Riversidean Sage Scrub, Chamise Chaparral, Coast Live Oak Woodland, Coast Live Oak Riparian Forest Restoration, Mulefat Scrub, Riversidean Alluvial Fan Sage Scrub, Southern Arroyo Willow Riparian Forest, Southern Cottonwood-Willow Riparian Forest, Southern Riparian Scrub, Southern Willow Scrub

- Native cover for restoration sites is greater than or equal to 70 percent of pre-disturbance or adjacent reference vegetation native cover.
- Non-native annual plant cover is no greater than 20 percent above pre-disturbance or adjacent reference vegetation non-native cover.
- Species richness should be at least 50 percent of what it was pre-disturbance or adjacent reference sites.
- Non-native perennial invasive species cover cannot exceed 5 percent cover.

These success criteria are relative to baseline conditions established during pre-construction surveys. For example, if baseline conditions are 90 percent absolute native cover, the success criteria will be relative to the baseline as 70 percent of the 90 percent baseline cover which equals 63 percent absolute native cover. For non-native cover, if baseline conditions are 10 percent absolute non-native plant cover, the non-native cover success criteria will be no greater than 20 percent above the 10 percent which equals 12 percent absolute non-native cover.

If it is determined that oak tree removal is necessary mitigation and restoration will follow MM BR-6: either the trees to be removed will be relocated outside the area of anticipated impacts, under the direction of a certified arborist, or 1-gallon oaks will be planted at a 12:1 ratio within appropriate habitat outside of permanent impact areas including future O&M work areas.

6.2 Monitoring

SCE will perform periodic monitoring to assess site stabilization and revegetation progress at the restoration site. Assessments during monitoring may include seed germination observations, evaluating revegetation progress including volunteer recruitment of native species, and qualitatively determining percent cover. SCE may also evaluate other performance indicators including the presence of non-native plant species, the presence of significant disease or pest problems, and the need for remedial measures.



Monitoring will commence after installation and will continue for up to three years. Monitoring may consist of maintenance and performance monitoring. Monitoring will be performed to assess maintenance activities, to evaluate the need for remedial measures, and to track performance of the site. Monitoring of any relocated or replacement oak trees will be maintained and monitored for the first two years, to include at least two complete rainy seasons (November-May). They will be revisited by a certified arborist in the 5th, 10th, and 15th years after relocation/planting, to assess their survival/ mortality rate and health of surviving individuals.

6.2.1 MAINTENANCE MONITORING

SCE will perform maintenance monitoring to assess the maintenance needs of the restoration/revegetation sites, as needed. The frequency of visits may be based on the season (e.g., more weed growth occurs in spring), restoration activity (i.e., container plant installation), and the needs of the sites. Assessments may include evaluation of soil conditions (i.e., moisture), container plant health, container plant growth, seed germination, the need for supplemental watering, volunteer recruitment of native species, presence/absence of special status species and non-native plant species, presence of significant disease or pest problems, general site maintenance, and any erosion problems. In addition, photographs will be taken from permanent photo monitoring stations facing the restoration/revegetation areas. The locations of the photo monitoring stations will be recorded using GPS.

6.2.2 PERFORMANCE MONITORING

SCE will conduct performance monitoring annually during the growing season each year of the 3-year monitoring period. The goal of performance monitoring is to evaluate the progress of the restoration site towards achieving success criteria. Data collection may include the general site conditions, native and non-native plant percent cover, bare ground cover, species richness, and photo documentation.

Within restoration areas, SCE will collect cover data using a method such as California Native Plant Society's Rapid Assessment/Relevé Protocol (published in a Manual of California Vegetation, Sawyer et al., 2009)

Data will be used to measure native species growth performance, to estimate native and non-native species coverage, seed mix germination, native species recruitment and reproduction, and species richness. In addition, photographs of the site will be taken from permanent photo monitoring stations facing the restoration area. The locations of the photo monitoring stations will be recorded using GPS.

6.2.3 MONITORING SCHEDULE

A 3-year maintenance and monitoring period will commence following installation to track progress toward achieving success standards. Maintenance monitoring will occur regularly as needed for three years or until the success criteria are met.

| Restoration Phase | Frequency (per Calendar Year) | Duration |
|--------------------------------------|---|----------|
| Year 1 Maintenance Monitoring | Monthly (or as needed) events; timing may vary by year but should be scheduled to sufficiently assess weed occurrence, soil moisture, planting health and growth, and natural recruitment, and presence of disease or pests. | Variable |
| Years 2 -3 Maintenance Monitoring | Quarterly (or as needed) events; timing may vary by year but should be scheduled to sufficiently assess weed occurrence, soil moisture, planting health and growth, and natural recruitment, and presence of disease or pests. | Variable |
| Years 1- 3 Performance Monitoring | Annual event; will typically occur in the spring but may vary by year to optimize data collection and account for year-to- year variations in rainfall and/or other factors. | Variable |

TABLE 11: MONITORING SCHEDULE



| Years 1-2 Maintenance Monitoring for Oak Trees | Quarterly (or as needed) events. Final event will occur after the second rainy season (rainy season defined as November - May). | Variable |
|--|--|----------|
| Years 5, 10, and 15 Performance Monitoring for Oak Trees | A 5, 10, and 15-year event conducted by a certified arborist; will typically occur in the spring but may vary by year to optimize data collection and account for year-to-year variations in rainfall and/or other factors. | Variable |

6.3 Reporting

6.3.1 ANNUAL REPORT

SCE will prepare and submit annual reports for a period of 3 years post-construction. The report will include an assessment of the restoration program and describe restoration and maintenance activities, results of the monitoring visits, progression towards achieving the success criteria, and recommended remedial activities. Annual reports will be submitted by SCE to the CPUC annually during years 1 through 3.

If any oak tree restoration occurred, a separate oak tree monitoring report will be prepared at the end of the year-2 and at the end of year-15 and submitted to the CPUC, USFWS (Palm Springs Office), CDFW (Inland/Desert Region Office), and the California Native Plant Society's Conservation Program staff per MM BR-6.

6.3.2 Adaptive Management and Remedial Measures

Adaptive management may be necessary if there are significant changes to the restoration sites and/or they demonstrate a declining trend. Adaptive management could include implementing remedial measures such as reseeding, replanting, supplemental watering, control of invasive plant species, additional stabilization measures (e.g., erosion control blankets), and/or regulating human and/or wildlife access. Replacement or supplemental seeding will be composed of the same representative species listed in Tables 5-10, above.

If an unforeseen and/or catastrophic event (e.g., acts of God like floods and fires or vandalism-like OHV use or homeless encampments) removes or kills the majority (>50 percent) of species after the restoration/revegetation effort is complete, SCE will not be responsible for revegetating the damaged areas. If said event(s) occurs during restoration/revegetation efforts, SCE will revegetate the area one additional time only.

SCE will not be responsible for meeting the success criteria at sites that are periodically or continuously disturbed by landowners or others outside of SCE control. SCE will not be responsible for landowners re-initiating pre-project activities. For example, farmers re-initiating grazing or agricultural activities.

6.3.3 NOTIFICATION OF COMPLETION

SCE will notify the CPUC when the restoration/revegetation effort is complete. The notification would be submitted electronically and may be accompanied by a brief letter report summarizing key work performed, seeding efforts, maintenance activities, remedial measures (as applicable), and representative photographs.



7.0 REFERENCES

- Barnes, O.K. 1950. Mechanical Treatments on Wyoming Rangeland. *Journal of Range Management* 3: 198-203.
- California Invasive Plant Council (Cal-IPC). 2019. The Cal-IPC Inventory. Available at: <u>https://www.cal-ipc.org/plants/inventory/</u>. Accessed March.
- California Native Plant Society (CNPS) Vegetation Committee. 2007. Relevé Protocol. Available at: <u>https://cnps.org/wp-content/uploads/2018/03/cnps_releve_protocol_20070823.pdf</u>. Accessed March 2019.
- California Public Utilities Commission (CPUC). 2017. Valley-Ivyglen 115-KV Subtransmission Line and Alberhill System Projects. Final Environmental Impact Report. Available at: <u>http://www.cpuc.ca.gov/environment/info/ene/ivyglen/ivyglen.html</u>. Accessed March 2019.
- Gintzburger, G.1987. The Effect of Soil Pitting on Establishment and Growth of Annual Medicago Spp. on Degraded Rangeland in Western Australia. *The Rangeland Journal* 9: 49-52.
- Newton, G. A., and V. Claassen. 2003. Rehabilitation of Disturbed Lands in California: A Manual for Decision-Making. California Department of Conservation, California Geological Survey.
- Sawyer, J.O., T. Keeler-Wolf, and J.M. Evens. 2009. A manual of California vegetation, 2nd edition. California Native Plant Society: Sacramento, CA.
- Slayback, R.D., and D.R. Cable. 1970. Larger Pits Aid Reseeding of Semidesert Rangeland. Journal of Range Management 23:333-335.
- U.S. Geological Survey (USGS). 1979. Romoland 7.5-minute series Topographic Quadrangle.
- U.S. Geological Survey (USGS). 1988a. Lake Elsinore 7.5-minute series Quadrangle.
- U.S. Geological Survey (USGS). 1988b. Alberhill 7.5-minute series Quadrangle.
- U.S. Geological Survey (USGS). 1988c. Lake Matthews Quadrangle.

APPENDIX A **EXHIBITS**



















EXHIBIT 2. PROJECT IMPACTS TO VEGETATION COMMUNITIES (PAGE 4 OF 36) VALLEY-IVYGLEN SUBTRANSMISSION PROJECT | RIVERSIDE COUNTY, CA







EXHIBIT 2. PROJECT IMPACTS TO VEGETATION COMMUNITIES (PAGE 5 OF 36) VALLEY-IVYGLEN SUBTRANSMISSION PROJECT | RIVERSIDE COUNTY, CA





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EXHIBIT 2. PROJECT IMPACTS TO VEGETATION COMMUNITIES (PAGE 8 OF 36) VALLEY-IVYGLEN SUBTRANSMISSION PROJECT | RIVERSIDE COUNTY, CA

1:3,600

1 in = 300 feet







































EXHIBIT 2. PROJECT IMPACTS TO VEGETATION COMMUNITIES (PAGE 18 OF 36) VALLEY-IVYGLEN SUBTRANSMISSION PROJECT | RIVERSIDE COUNTY, CA

| Project Structures (2019) | | |
|-----------------------------------|--|--|
| Guard Pole | | |
| Vault | | |
| Phase 1 Subtransmission Alignment | | |
| Segment 2, Underground | | |
| Fiber Optic Line | | |
| Overhead Fiber Optic Cable | | |
| Impact Areas (Proposed Project) | | |
| Temporary | | |
| Rough Step Units | | |
| []Unit Boundary | | |
| Sensitive Upland Vegetation | | |
| NNG : Nonnative Grassland | | |
| Upland Vegetation | | |
| DDL : Residential/Urban/Exotic | | |
| | | |
| | | |









EXHIBIT 2. PROJECT IMPACTS TO VEGETATION COMMUNITIES (PAGE 19 OF 36) VALLEY-IVYGLEN SUBTRANSMISSION PROJECT | RIVERSIDE COUNTY, CA







EXHIBIT 2. PROJECT IMPACTS TO VEGETATION COMMUNITIES (PAGE 20 OF 36) VALLEY-IVYGLEN SUBTRANSMISSION PROJECT | RIVERSIDE COUNTY, CA





EXHIBIT 2. PROJECT IMPACTS TO VEGETATION COMMUNITIES (PAGE 21 OF 36) VALLEY-IVYGLEN SUBTRANSMISSION PROJECT | RIVERSIDE COUNTY, CA







EXHIBIT 2. PROJECT IMPACTS TO VEGETATION COMMUNITIES (PAGE 22 OF 36) VALLEY-IVYGLEN SUBTRANSMISSION PROJECT | RIVERSIDE COUNTY, CA

| | Project Structures (2019) | | |
|-------|-----------------------------------|--|--|
| | Guard | Pole | |
| | Hybric | | |
| | 🔺 Monor | oole - Guy | |
| | Monor | pole - LWS | |
| | Monor | oole - TSP | |
| L | Phase 2 Subtransmission Alignment | | |
| | | ent 4, Overhead | |
| L | Fiber Optic Li | ne | |
| L | = = = Overh | ead Fiber Optic Cable | |
| | Impact Areas | (Proposed Project) | |
| | Perma | inent | |
| | Tempo | prary | |
| | Tree T | rimming Areas | |
| | Rough Step Units | | |
| | []Unit B | oundary | |
| 1 | Conserved La | nds | |
| | E PQP (| Conserved Lands | |
| | Riparian Vege | tation | |
| | CAM : | Cismontane Alkali Marsh | |
| | SAWF | : Southern Arroyo Willow Riparian Forest | |
| | Sensitive Upla | and Vegetation | |
| | NNG : | Nonnative Grassland | |
| | DNNG | i : Disturbed Nonnative Grassland | |
| | Upland Vegetation | | |
| | DDL : | Residential/Urban/Exotic | |
| | | | |
| | | | |
| 1 - C | | | |











EXHIBIT 2. PROJECT IMPACTS TO VEGETATION COMMUNITIES (PAGE 24 OF 36) VALLEY-IVYGLEN SUBTRANSMISSION PROJECT | RIVERSIDE COUNTY, CA

| Project Structures (2019) |
|--------------------------------------|
| Guard Pole |
| Monopole - LWS |
| Monopole - TSP |
| O Monopole - Wood |
| Phase 2 Subtransmission Alignment |
| Segment 4, Overhead |
| Segment 5, Overhead |
| Fiber Optic Line |
| — — — Overhead Fiber Optic Cable |
| |
| Impact Areas (Proposed Project) |
| Permanent |
| Temporary |
| Rough Step Units |
| Unit Boundary |
| Conserved Lands |
| MSHCP Conserved Lands |
| Riparian Vegetation |
| AM : Alkali Meadow |
| Sensitive Upland Vegetation |
| NNG : Nonnative Grassland |
| DNNG : Disturbed Nonnative Grassland |
| Upland Vegetation |
| DDL : Residential/Urban/Exotic |
| |
| |

1:3,600

Feet

1 in = 300 feet

















EXHIBIT 2. PROJECT IMPACTS TO VEGETATION COMMUNITIES (PAGE 28 OF 36) VALLEY-IVYGLEN SUBTRANSMISSION PROJECT | RIVERSIDE COUNTY, CA

| Project Structures (2019) | | | | |
|---|--|--|--|--|
| Guard Pole | | | | |
| Monopole - LWS | | | | |
| Monopole - TSP | | | | |
| Phase 2 Subtransmission Alignment | | | | |
| Segment 5, Overhead | | | | |
| Fiber Optic Line | | | | |
| — — — Overhead Fiber Optic Cable | | | | |
| Impact Areas (Proposed Project) | | | | |
| Permanent | | | | |
| Temporary | | | | |
| Tree Trimming Areas | | | | |
| Rough Step Units | | | | |
| Unit Boundary | | | | |
| Conserved Lands | | | | |
| MSHCP Conserved Lands | | | | |
| Riparian Vegetation | | | | |
| MFS : Mulefat Scrub | | | | |
| RAFS : Riversidean Alluvial Fan Sage Scrub | | | | |
| SCWR : Southern Cottonwood-Willow Riparian Forest | | | | |
| SWS : Southern Willow Scrub | | | | |
| Sensitive Upland Vegetation | | | | |
| CLOW : Coast Live Oak Woodland | | | | |
| NNG : Nonnative Grassland | | | | |
| DNNG : Disturbed Nonnative Grassland | | | | |
| RSS : Riversidean Sage Scrub | | | | |
| DRSS : Disturbed Riversidean Sage Scrub | | | | |
| Upland Vegetation | | | | |
| DDL : Residential/Urban/Exotic | | | | |







EXHIBIT 2. PROJECT IMPACTS TO VEGETATION COMMUNITIES (PAGE 29 OF 36) VALLEY-IVYGLEN SUBTRANSMISSION PROJECT | RIVERSIDE COUNTY, CA









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EXHIBIT 2. PROJECT IMPACTS TO VEGETATION COMMUNITIES (PAGE 30 OF 36) VALLEY-IVYGLEN SUBTRANSMISSION PROJECT | RIVERSIDE COUNTY, CA

| Project Structures (2019) | | |
|---|--|--|
| Monopole - LWS | | |
| Monopole - TSP | | |
| O Monopole - Wood | | |
| Phase 2 Subtransmission Alignment | | |
| Segment 5, Overhead | | |
| Segment 6, Overhead | | |
| Fiber Optic Line | | |
| — — — Overhead Fiber Optic Cable | | |
| Impact Areas (Proposed Project) | | |
| Permanent | | |
| Temporary | | |
| Tree Trimming Areas | | |
| Rough Step Units | | |
| Unit Boundary | | |
| Conserved Lands | | |
| RCA Conserved Lands | | |
| Riparian Vegetation | | |
| SCWR : Southern Cottonwood-Willow Riparian Forest | | |
| SWS : Southern Willow Scrub | | |
| Sensitive Upland Vegetation | | |
| CC : Chamise Chaparral | | |
| NNG : Nonnative Grassland | | |
| RSS : Riversidean Sage Scrub | | |
| DRSS : Disturbed Riversidean Sage Scrub | | |
| Upland Vegetation | | |
| DDL : Residential/Urban/Exotic | | |







EXHIBIT 2. PROJECT IMPACTS TO VEGETATION COMMUNITIES (PAGE 31 OF 36) VALLEY-IVYGLEN SUBTRANSMISSION PROJECT | RIVERSIDE COUNTY, CA



1:3,600

Feet

1 in = 300 feet





EXHIBIT 2. PROJECT IMPACTS TO VEGETATION COMMUNITIES (PAGE 32 OF 36) VALLEY-IVYGLEN SUBTRANSMISSION PROJECT | RIVERSIDE COUNTY, CA



MEGINEW 215 Newporter







EXHIBIT 2. PROJECT IMPACTS TO VEGETATION COMMUNITIES (PAGE 33 OF 36) VALLEY-IVYGLEN SUBTRANSMISSION PROJECT | RIVERSIDE COUNTY, CA







EXHIBIT 2. PROJECT IMPACTS TO VEGETATION COMMUNITIES (PAGE 34 OF 36) VALLEY-IVYGLEN SUBTRANSMISSION PROJECT | RIVERSIDE COUNTY, CA

| | Guard Pole | | | |
|-----------------------------------|---|--|--|--|
| ullet | Monopole - TSP | | | |
| \circ | Monopole - Wood | | | |
| \bullet | Riser | | | |
| \otimes | Shoofly | | | |
| | Vault | | | |
| Phase 2 Subtransmission Alignment | | | | |
| | Segment 8, Overhead | | | |
| | Segment 8, Underground | | | |
| Fiber Optic Line | | | | |
| | Underground Fiber Optic in existing conduit | | | |
| Impact Areas (Proposed Project) | | | | |
| | Permanent | | | |
| | Temporary | | | |
| Rough | Step Units | | | |
| | Unit Boundary | | | |
| Conserv | ved Lands | | | |
| [] | RCA Conserved Lands | | | |
| Sensitive Upland Vegetation | | | | |
| | CLOW : Coast Live Oak Woodland | | | |
| | NNG : Nonnative Grassland | | | |
| | DRSS : Disturbed Riversidean Sage Scrub | | | |
| Upland Vegetation | | | | |
| | DDL : Residential/Urban/Exotic | | | |











EXHIBIT 2. PROJECT IMPACTS TO VEGETATION COMMUNITIES (PAGE 36 OF 36) VALLEY-IVYGLEN SUBTRANSMISSION PROJECT | RIVERSIDE COUNTY, CA

600 150 300 Feet 1:3,600 1 in = 300 feet

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