# 4. Impact Analysis Approach

The following section provides a summary of the approach used to assess impacts to biological resources within the proposed Project. The criteria for determining significance, Applicant Proposed Measures (APMs), and impact assessment methodology are described below. Assumptions regarding restoration opportunities are also outlined.

The proposed Project would have a number of effects on biological resources. Examples of potential impacts include temporary disturbance and/or permanent loss to vegetation communities, rare plant communities, and special-status plant and animal species including FS Sensitive species. Temporary disturbance and/or permanent loss of habitat may occur during construction of new transmission line structures, construction of new access and spur roads, improvements to existing access roads, and at conductor splicing, staging / marshalling, laydown, pulling areas, or through the use of helicopters associated with construction. Permanent loss of habitat and potential long-term impacts also may occur from permanent project features (e.g., new transmission towers and sub-stations) that would remain throughout the life of the Project. Examples of activities that could result in impacts include:

- Installation and/or Replacement of new towers
- Construction of new substation sites and expansion of existing substations
- Construction staging and laydown areas
- Construction and improvement of access and spur roads
- Movement of equipment and project personnel for monthly or annual project maintenance
- Movement of equipment and project personnel during line-stringing/cable pulling.
- Movement of equipment and project personnel during tower construction and erection, including activities associated with helicopter use.

## 4.1 Criteria for Determining Impact Significance

The California Environmental Quality Act (CEQA) defines "significant effect on the environment" as "a substantial, or potentially substantial, adverse change in the environment" (Pub. Res. Code §21068). Under CEQA Guidelines Section 15065, a project's effects on biotic resources are deemed significant where the Project would:

- Substantially reduce the habitat of a fish or wildlife species,
- Cause a fish or wildlife population to drop below self-sustaining levels,
- Threaten to eliminate a plant or animal community, and/or
- Substantially reduce the number or restrict the range of a rare or endangered plant or animal.

In addition to the Section 15065 criteria, Appendix G within the CEQA Guidelines lists other potential impacts to consider when analyzing the effects of a project. Under NEPA, thresholds of significance are determined by considering the context and intensity of the proposed Project and its effects (40 CFR 1508.27). The term "context" under NEPA refers to the affected environment in which the proposed action would take place, while "intensity" refers to severity of the proposed action on the environment.While the statutorily defined criteria above provide guidance, the following criteria are applicable to the assessment of impacts to biological resources from the proposed Project, and will provide the basis for determinations of significance:

- Criterion BIO1: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFG or USFWS.
- Criterion BIO2: Have an adverse effect, either directly or through habitat modifications, on any species listed as endangered, threatened, or proposed or critical habitat for these species.
- Criterion BIO3: Have a substantial adverse effect, either directly or through habitat modifications on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFG, FS, or USFWS.
- Criterion BIO4: Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- Criterion BIO5: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
- Criterion BIO 6: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinances.
- Criterion BIO7: Conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Communities Conservation Plan (NCCP), or other approved local, regional, or state HCP.

## 4.2 Applicant-Proposed Measures (APMs)

This section presents the Applicant-Proposed Measures (APMs) designed by SCE to reduce impacts to biological resources. These APMs are incorporated into the project description and considered part of the proposed Project. APMs are separate from mitigation measures, which are proposed in addition to the project description for the purpose of mitigating significant impacts. If the proposed Project is approved, these measures, in addition to the mitigation identified in Section 6, would be monitored by the CPUC/ANF. Table 4-1 presents a list of the APMs related to biological resources for the proposed Project. The following APMs, described in Table 4-1, would be implemented as part of the proposed Project to avoid or minimize impacts to biological resources: APM BIO-1, BIO-2, BIO-3, BIO-4, BIO-5, BIO-6, AND BIO-7. These APMs include avoiding or compensating for impacts to vegetation communities, personnel training, restricting work to within predetermined limits of construction, implementing Best Management Practices (BMPs), construction monitoring, flagging vegetation for avoidance, and revegetating with appropriate seed mixes.

**Table 4-1. Applicant-Proposed Measures – Biological Resources**

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| APM BIO-1 | Pre-construction biological clearance surveys would be performed to minimize impacts on special-status plants or wildlife species. |
| APM BIO-2 | Every effort would be made to minimize vegetation removal and permanent loss at construction sites. If necessary, native vegetation would be flagged for protection. A project revegetation plan would be prepared for areas of native habitat temporarily affected during construction. |
| APM BIO-3 | Construction crews would avoid affecting the streambeds and banks of any streams along the route to the extent feasible. If necessary, a Streambed Alteration Agreement (SAA) would be secured from California Department of Fish and Game. Impacts would be mitigated based on the terms of the SAA. No streams with flowing waters and or those capable of supporting special-status species would be expected to be adversely impacted from project implementation. |
| APM BIO-4 | Construction and Operations Crews would be directed to use Best Management Practices (BMPs) where applicable. These measures would be identified prior to construction and incorporated into the construction and maintenance operations. |
| APM BIO-5 | Biological monitors would be assigned to the project. The monitors would be responsible for ensuring that impacts to special-status species, native vegetation, wildlife habitat, or unique resources would be avoided to the fullest extent possible. Where appropriate, monitors would flag the boundaries of areas where activities need to be restricted to protect native plants and wildlife, or special-status species. These restricted areas would be monitored to ensure their protection during construction. |

| Table 4-1. Applicant-Proposed Measures – Biological Resources | |
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| APM BIO-6 | A Worker Environmental Awareness Program (WEAP) would be prepared and all construction crews and contractors would be required to participate in WEAP training prior to starting work on the project. The WEAP training would include a review of the special-status species and other sensitive resources that could exist in the Project area, the locations of the sensitive biological resources, their legal status and protections, and measures to be implemented for avoidance of these sensitive resources. A record of all personnel trained would be maintained. |
| APM BIO-7 | Where significant and unavoidable impacts on any special-status resources cannot be avoided, SCE would conduct compensatory mitigation as determined by the regulatory agency. |
| APM BIO-8 | SCE would conduct project-wide raptor surveys and remove trees, if necessary, outside of the nesting season (1 February – 31 August). If a tree or pole containing a raptor nest must be removed during the nesting season, or if work is scheduled to take place in close proximity to an active nest on an existing transmission tower or pole, SCE would coordinate with the CDFG and USFWS and obtain written concurrence prior to moving the nest. |
| APM BIO-9 | All transmission and sub-transmission towers and poles would be designed to be raptor-safe in accordance with the Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 2006 (Avian Power Line Interaction Committee [APLIC] 2006). |

The APMs provide mitigation ratios that are not adequate, do not specify enough time for the habitat restoration monitoring, state that only the Wildlife Agencies must be consulted on various issues, do not require a Habitat Management Plan, and do not require an endowment for future management of mitigation lands. Because the APMs are not considered to be adequate, mitigation measures are presented to further define and expand on mitigation requirements. Mitigation Measures B 1a and B 1b (defined below) include mitigation ratios required by the various resource agencies based on consultation for this project. These measures also provide more specific information on the required Habitat Restoration Plans, and they include the BLM, CPUC, Wildlife Agencies, and State Parks as approving agencies. They require preparation of a Habitat Management Plan, and they require a Property Analysis Record that will identify funding requirements for management of mitigation sites in perpetuity.

## 4.3 Impact Assessment Methodology

Consistent with the requirements of CEQA, NEPA, and Forest regulations, the significance of potential impacts is evaluated through the application of the significance criteria described above. The objective of the biological resources analysis is to identify potential adverse effects and/or significant impacts on biological resources. Avoidance is the preferred approach for management of biological resources. If impacts can be avoided through project design, establishment of exclusion zones, or other means, then specific mitigation measures may be unnecessary. However, appropriate mitigation measures to avoid or minimize impacts are identified, as appropriate, including procedures to be followed if significant biological resources are discovered during construction.

### Special-Status Plant Impact Methodology

The methodology used to analyze and describe significance for special-status plant species is based on the presence/absence of sensitive plant species detected within the project footprint or in adjacent habitat. Reconnaissance level surveys were completed in portions of the project alignment by SCE in 2007 and focused rare plant species surveys were conducted along the entire project alignment by SCE and Aspen in 2008. Focused rare plant and weed surveys were conducted along all known access roads to the project alignment for Segment 6 on ANF lands in 2009 and are scheduled for completion in 2010 for Segment 11.

Many of the special-status plant species potentially occurring in the proposed Project are annuals or herbaceous perennials that may emerge and bloom only once every several years and then generally for only a few

months. Other species are conspicuous perennials. Different mitigation strategies were adopted for these two categories of plants because mitigation measures involving pre-construction surveys and avoidance are principally feasible only for the perennial species which can potentially be detected even when not in bloom.

The overall approach to mitigation for impacts to special-status plant populations is to avoid through redesign to the extent practicable. Where avoidance of impacts is not feasible, mitigation should be accomplished through one or more of the following measures: restoration of onsite habitats, preservation of offsite lands, and insuring permanent protection through an approved mechanism by the appropriate agency, and/or comparable restoration efforts approved by the appropriate agency.

## Assumptions and Approach Regarding Restoration

The highly diverse habitat types that occur throughout the northern, central, and southern regions of the proposed Project will constrain restoration opportunities. There are a number of limiting factors in regard to locating areas that would be suitable for restoration/revegetation, such as varied land ownership and /or agency jurisdiction, lack of irrigation water in remote locations, existing unique resources, existing noxious weed infestations, access, topography, soil conditions, and hydrology. The following is a brief overview of the general restoration/revegetation approach that could be implemented for each of the regions along the project alignment.

### Northern Region

The Northern Region will be the most difficult environment to successfully restore/revegetate as arid land restoration is very challenging. Temporary impacts within this region will primarily be addressed through implementing Best Management Practices (BMPs). The projects BMPs should include revegetation techniques such as high density seeding of decommissioned roads and other disturbed areas in order to provide a native seed bank. This will aid in early establishment of target species and provide additional value in competition with non-native species that may establish in the disturbance areas. This effort will need to be combined, in most areas, with a sustained program to control non-native invasive plants in the impact footprint until the native seeding has established adequate native plant cover.

### Central Region

The Central Region, which includes the ANF, provides some opportunities for restoration. Efforts to restore temporarily impacted areas may include, but are not limited to, salvage of topsoil, decompaction and recontouring, seeding, container plantings, barricades, erosion control, hydroseeding, mulching/slashing, and weed control. In restoring species-specific project disturbed oak or other tree habitats container plantings, direct seeding with acorns, or any other suitable restoration method of the various oaks or tree species should be considered. Container plantings for all species utilized for revegetation will be grown from locally collected source material and irrigated to ensure establishment. All areas impacted and disturbed by any project activities will be reseeded with locally collected native seed. On public lands, topsoil may receive the following treatment: Retrievable topsoil to a depth of 6 inches to 2 feet will be salvaged, stored and respread on temporary disturbance areas, where feasible, as part of the restoration effort for temporary disturbance areas. Topsoil stockpiles will be designed and constructed to maximize recoverability and minimize wind and water erosion. Topsoil salvaging sites will be limited by weed content, slope, availability of stockpile sites, and consistency with Mitigation Measure V-1. An aggressive weed control program will be required within all disturbed areas within the ANF to aid in control of such species as Spanish broom (*Spartium junceum*),

yellow-star thistle (*Centaurea solstitialis*), tocalote (*C. melitensis*), arundo (*Arundo donax*), fountain grass (*Pennisetum sp*), and non-native annual grasses.

The success of the restoration effort will be measured quantitatively with annual reports. The project will be monitored for up to ten years. If the success criteria are not met after ten years, restoration will continue until the success criteria are met. All plantings shall have a minimum of 80 percent survival, by species, the first year and 100 percent survival thereafter and/or shall attain 75 percent cover after three years and 90 percent cover after ten years for the life of the project. Prior to the mitigation sites being determined successful, they shall be entirely without supplemental irrigation for a minimum of two years. Success criteria and performance standards will be contained in the Habitat Revegetation and Restoration Plan in coordination with the applicable regulatory agencies and will be based on specific habitat and structure. If the survival and cover requirements have not been met, the Operator is responsible for replacement planting to achieve these requirements. Replacement plants shall be monitored with the same survival and growth requirements for ten years after planting.

Project impacts to riparian habitat within the Central Region are high, as evidenced by the number of Riparian Conservation Areas that are impacted by both Project construction and maintenance. There are numerous opportunities to enhance and restore riparian habitat throughout the Central Region. The control of giant reed should be considered a high priority as the large expanse currently provides minimal habitat value. The eradication of Arundo/giant reed would provide a large area that could be restored to native riparian habitat. Restoration of these areas to native riparian habitat would provide a dramatic increase in habitat functions and values in this area, which supports a number of special-status species. Given the large area that could be available for restoration, the ANF should also be considered for out-of-kind mitigation for impacts to other habitat types.

### Southern Region

The Southern Region provides the best opportunity for active restoration/revegetation to mitigate for temporary impacts, particularly in the Whittier Narrows area. Although project impacts to riparian habitat are minimal there are numerous opportunities to enhance and restore riparian habitat throughout the Southern Region. The control of giant reed in the Whittier Narrows area should be considered a high priority as the large expanse currently provides minimal habitat value. The eradication of giant reed would provide a large area that could be restored to native riparian habitat. Restoration of these areas to native riparian habitat would provide a dramatic increase in habitat functions and values in this area, which supports a number of special-status species. Given the large area that could be available for restoration, the Whittier Narrows, as well as the ANF and Chino Hills State Park, should also be considered for out-of-kind mitigation for impacts to other habitat types. The Puente/Chino Hills area presents a rather difficult scenario for restoration partly due to the existing land use practices and varied ownership. However, this area contains large stands dominated by invasive black mustard that could be restored to native coastal sage scrub. Also, any direct impacts to California Walnut Woodland should be mitigated through replanting in the vicinity of the impact area to expand the current southern California black walnut stands.

Chino Hills State Park has a large number of areas that are impacted by non-native species that could be restored to coastal sage scrub or chaparral. Also, riparian areas in Chino Hills State Park are crucial for providing stop-over locations for migratory birds, and could be another location for restoration.