3. Affected Environment and Environmental Consequences

3.1 Introduction to the Environmental Analysis

3.1.1 Section Content and Organization

Chapter 3 of this EIR/EIS examines the environmental consequences associated with the proposed Project and alternatives to the proposed Project, including the No Project/Action alternative. Chapter 3 includes analyses of the 16 environmental resource/issue areas listed in Table 3.1-1 below.

Table 3.1-1. Topics Addressed in the Impact Analysis

Sec. No.	Issue/Resource Area	Topics Addressed in the Analysis
3.2	Agricultural Resources	• Conversion of Prime Farmland, Unique Farmland, and Farmland of Statewide Importance • Interference with agricultural operations • Conflicts with Williamson Act contracts
3.3	Air Quality	• Generation of air pollutant emissions during construction and operation • Objectionable odors • Compliance with applicable air quality management plans
3.4	Biological Resources	• Riparian habitat and other sensitive natural communities • Endangered and threatened species and critical habitat for such species • Candidate, sensitive, and special-status species • Federally protected wetlands as defined by Section 404 of the Clean Water Act • Wildlife corridors • Conflicts with any local policies or ordinances protecting biological resources • Conflicts with an adopted Habitat Conservation Plan or Natural Communities Conservation Plan
3.5	Cultural Resources	• Historic properties or Traditional Cultural Properties • Historical resources or unique archaeological sites • Cultural resources included in a local register of historical resources • Native American human remains
3.6	Environmental Contamination and Hazards	• Soil contamination, including flammable or toxic gases • Mobilization of contaminants currently existing in the soil • Exposure of workers or the public to contaminated or hazardous materials
3.7	Geology, Soils, and Paleontology	• Unique geologic features or geologic features of unusual scientific value • Known mineral and energy resources • Triggering or acceleration of geologic processes, such as landslides or soil erosion • Earthquake-related ground rupture in the vicinity of major fault crossings • Seismically induced ground shaking, landslides, liquefaction, settlement, lateral spreading, and surface cracking • Corrosive soils and other unsuitable soils • Potential for future slope failures on existing unstable slopes • Scientifically important paleontological resources
3.8	Hydrology and Water Quality	• Degradation of water quality • Depletion of groundwater supplies or interference with groundwater recharge • Flood hazards • Erosion, siltation, and flood-related damage • Inundation by mudflow
3.9	Land Use	• Preclusion of permitted land uses • Conflicts applicable federal, State or local land use plans, goals, or policies
3.10	Noise	• Temporary or periodic increases in ambient noise levels during construction • Permanent increases in ambient noise levels in the vicinity of sensitive receptors

Table 3.1-1. Topics Addressed in the Impact Analysis

Sec. No.	Issue/Resource Area	Topics Addressed in the Analysis
3.11	Public Services and Utilities	• Demand for public services • Interference with existing emergency access • Interruption of existing utility systems • Effects on water treatment, wastewater treatment, or solid waste facilities • Water entitlements and resources
3.12	Socioeconomics	• Population, housing, and employment • Quality of life • Private property values • Agricultural revenues • Public agency revenue
3.13	Traffic and Transportation	• Traffic congestion during construction due to road or lane closures • Level of service on roadways in the area • Temporary access restrictions during construction • Restriction of emergency vehicle movement during construction • Disruption of bus transit service during construction • Disruptions of rail, aviation, bicycle, or pedestrian traffic • Effects on parking supply • Roadway wear in the vicinity of the construction zone • Effects on public and private airports, air traffic, and military aviation
3.14	Visual Resources	• Existing landscape character and visual quality • Light or glare • Scenic resources within a scenic highway viewshed or a national scenic trail viewshed • Applicable plans, policies, regulations, or standards for the protection and management of visual quality in the landscape
3.15	Wilderness and Recreation	• Disruption of activities at federal, State, or local recreation areas or wilderness areas • Long-term loss or degradation of federal, State, local, or private recreational facilities or wilderness areas
3.16	Wildfire Prevention and Suppression	• Fire prevention and suppression • Wildfire risks • Ignition potential and rate of fire spread
3.17	Electrical Interference and Hazards	• Interference with radio, television, communications, or electronic equipment • Induced currents and shock hazards • Interference with cardiac pacemakers • Potential for structural failure due to wind or earthquake

The environmental issue/resource areas listed in Table 3.1-1 above are discussed in detail in Sections 3.2 through 3.17. Analysis within each resource/issue area section includes consideration of SCE's proposed Project (Alternative 2) and other alternatives, which are described fully in Chapter 2 of this EIR/EIS. Each resource/issue area section is organized in the same manner to help the reader find similar information in the various sections for each resource/issue area. The organization and content of the resource/issue area sections are described below:

Introduction

The "Introduction" describes the resource/issue area that is addressed in the section and indicates that the information and analysis of contained in each section is derived from a corresponding Specialist Report. To support the EIR/EIS, a series of Specialist Reports were prepared that address each of the issue/resource areas discussed in this chapter (Chapter 3). The "Introduction" also lists the relevant issues raised during the scoping process that are addressed in the resource/issue section. The "Introduction" also contains a table that summarizes and the impacts for each alternative for that issue/resource area.

Affected Environment

The "Affected Environment" section describes existing conditions in the Project area for each resource/issue area at the time the EIR/EIS analysis was conducted. Except where indicated differently, the affected environment generally consists of conditions that existed at the time the Notice of Preparation and Notice of Intent for the EIR/EIS were published. The impacts of the alternatives are determined based on changes between existing conditions described in the "Affected Environment" section and conditions in the future with implementation of each alternative. It is the difference between existing conditions and future conditions that forms the basis for identification of impacts associated with the implementation of each alternative. In other words, the changes in the future environment that would be caused by an alternative constitute the impacts of that alternative.

Applicable Laws, Regulations, and Standards

Laws, regulations, and standards relevant to each issue/resource area are described in order to establish the regulatory context for the impact analysis. Many existing requirements serve to avoid or minimize impacts to the environment. The analysis assumes that applicable laws, regulations, and standards will be adhered to and enforced. However, not all relevant laws and regulations are applicable to all projects. For instance, local laws are generally not applicable to projects regulated by the California Public Utilities Commission, which has exclusive authority to approve or deny projects proposed by investor-owned utilities, such as SCE. Similarly, the USDA Forest Service has exclusive authority to approve or deny projects on National Forest System lands.

Impact Analysis Approach

The "Impact Analysis Approach" section describes measures proposed by the Applicant (SCE) to reduce or avoid environmental impacts. These Applicant-proposed measures are considered part of the proposed Project and represent a commitment by the Applicant to be followed or implemented. The Lead Agencies will monitor their implementation. The "Impact Analysis Approach" section also lists the criteria that will be used to determine the significance of identified impacts, as required by CEQA (see Section 3.1.3 below). CEQA requires that the significance of individual impacts be determined by the Lead Agency; however, the use of specific significance criteria is not required by NEPA. The Forest Service must consider the context and intensity of impacts in determining their significance. This section also describes any specific methods, such as modeling, that were used to conduct the impact analysis for a particular issue/resource area.

Alternative 1: No Project/Action

The analysis of the No Project/Action Alternative attempts to describe, in a general way, forecasted conditions that would exist in the future without the implementation of the proposed Project/Action. In other words, this section describes the conditions that would be expected to exist if the proposed transmission system improvements are not implemented. No Project-related impacts are described; however, any known impacts that would occur without the proposed Project are discussed.

Alternative 2: SCE's Proposed Project

This section describes the impacts of SCE's proposed Project, which is designated as Alternative 2. The first part of the impact analysis describes the direct and indirect effects of the proposed Project. The second part of the impact analysis describes cumulative effects, which are effects of the proposed Project and other projects that could combine to result in an impact that is cumulative in nature.

Cumulative effects are discussed in a more general way than the Project's direct and indirect effects. The impact analysis is organized according to subheadings that correspond to the CEQA significance criteria listed in the "Impact Analysis Approach" section. For each identified impact, a numbered impact statement is presented that describes the basic nature of the impact. Each numbered impact statement is followed by a discussion that describes the impact in more detail. For each adverse impact, feasible mitigation measures are listed that would avoid or minimize the identified impact. For the purposes of CEQA, which requires a determination of the significance of each impact, a conclusion is provided regarding the significance of each impact after the effectiveness of the mitigation measures is considered.

Alternative 3: West Lancaster Alternative

This alternative is analyzed in the same manner as the proposed Project (Alternative 2), except that the impact discussion is not fully repeated if the impacts of this alternative are the same or substantially similar to those already described for the proposed Project. Instead, the previous impact discussion is referenced and any differences in the nature or severity of the impact are described, including any differences related to mitigation or impact significance. If this alternative would result in an impact not previously identified, a new impact statement is introduced, along with a corresponding impact discussion, mitigation measures, and CEQA significance conclusion.

Alternative 4: Chino Hills Route Alternatives

This alternative is analyzed in the same manner as the proposed Project (Alternative 2), except that the impact discussion is not fully repeated if the impacts of this alternative are the same or substantially similar to those already described for an alternative already discussed. Instead, the previous impact discussion is referenced and any differences in the nature or severity of the impact are described, including any differences related to mitigation or impact significance. If this alternative would result in an impact not previously identified, a new impact statement is introduced, along with a corresponding impact discussion, mitigation measures, and CEQA significance conclusion.

Alternative 5: Partial Underground Alternative

The analysis of this alternative is presented in the same manner as Alternative 4, described above.

Alternative 6: Maximum Helicopter Construction in the ANF Alternative

The analysis of this alternative is presented in the same manner as Alternative 4, described above.

Alternative 7: 66-kV Subtransmission Alternative

The analysis of this alternative is presented in the same manner as Alternative 4, described above.

Impact Significance Summary

At the end of each resource/issue area section, a table is presented that lists each impact identified for that issue/resource area. The CEQA significance conclusion for each impact for each alternative is presented in the table along with the mitigation measures proposed to address each impact.

As described above, each environmental impact identified is associated with a specific significance criterion, which is used to evaluate the severity, or significance, of the impact. Mitigation measures are proposed for adverse impacts, where feasible. Cumulative impacts are discussed at the end of each

issue/resource area section in this Chapter. The growth-inducing impacts of the proposed Project are discussed in Section 5.1.4.

The purpose of identifying the potential environmental impacts and the associated mitigation measures is to provide information about the Project's environmental effects to decision makers and the public that can be used in deliberations about whether or not to approve the proposed Project or one of the alternatives. The information contained in this EIR/EIS will also be used by regulatory agencies that would need to issue permits for the construction of the Project if approved by the Lead Agency decision makers.

3.1.2 Environmental Analysis Methodology

For the purpose of this EIR/EIS document, and pursuant to CEQA Guidelines (Section 15125[a]), the environmental setting used to determine the impacts associated with the proposed Project and alternatives is based on the environmental conditions that existed in the Project area in September 2007, at the time the Notice of Preparation was distributed and the Notice of Intent was published (see Section 7.1). NEPA requires that the EIS shall succinctly describe the environment of the area(s) to be affected or created by the alternatives under consideration (40 CFR 1502.15). However, NEPA has no direct guidance regarding when the establishment of a baseline for determining the significance of an impact when preparing an EIS should occur. Therefore, this document uses the CEQA environmental setting baseline identified above.

This EIR/EIS evaluates the environmental consequences and potential impacts that would be caused by the proposed Project and the alternatives if approved and implemented. The impacts identified were compared with significance criteria and, based on these criteria, the impacts have been classified according to significance categories described in Section 3.1.3, below. A comparative analysis of the impacts of the proposed Project and the alternatives is provided in Section 4 of this EIR/EIS.

The cumulative impacts of the proposed Project and alternatives were assessed by considering similar impacts of other projects in the vicinity that would have the potential to combine with the impacts of the proposed Project. The purpose of the cumulative impact analyses is to identify those Project impacts that might not be significant when considered alone, but contribute to a significant impact when viewed in conjunction with existing or potential future projects.

Mitigation is only required for significant impacts under CEQA; however, NEPA encourages mitigation for all of the adverse impacts of a project. For this reason, some mitigation measures described in this document are wholly appropriate under NEPA, although the impacts they address may not be considered significant under CEQA. Mitigation measures have been identified that would reduce or avoid the adverse impacts identified. Where feasible, mitigation measures have been identified that would reduce significant impacts to a less-than-significant level. These mitigation measures are presented for consideration by decision makers as possible conditions of Project approval.

The Applicant has incorporated design features, measures, and procedures into the description of its proposed Project to avoid or reduce impacts from Project construction and operation. These measures are referred to as Applicant-Proposed Measures (APMs) in this EIR/EIS and are considered in the analysis of impacts and the determinations of impact significance. In the assessment of identified impacts, APMs have been assumed to be part of the proposed Project and, therefore, are not included as mitigation measures. The APMs are considered a commitment by the Applicant and implementation of each APM will be monitored by the Lead Agencies if the proposed Project or an alternative is approved. The APMs that are considered necessary to reduce potential impacts are listed in each environmental issue area discussion (Sections 3.2 through 3.17).

3.1.3 Impact Significance Categories

For the purposes of CEQA compliance, the significance of each identified impact of the proposed Project and alternatives has been determined. The CEQA Lead Agency is responsible for determining whether an impact is significant and is required to adopt feasible mitigation measures to minimize or avoid each significant impact. A series of criteria, identified in the "Impact Analysis Methodology" section for each issue/resource area, are used to help the CEQA Lead Agency gauge the significance of each impact.

In order to provide for a comprehensive and systematic evaluation of potential environmental impacts to the issue area categories, a classification system was applied to the impacts of the proposed Project and alternatives. These classifications indicate whether an identified impact is significant and whether mitigation measures can reduce the severity of the impact to a level that is not significant. The following classifications were uniformly applied to each identified impact:

- **Class I: Significant impact; cannot be mitigated to a level that is not significant.** Class I impacts are significant adverse effects that cannot be mitigated below a level of significance through the application of feasible mitigation measures. Class I impacts are significant and unavoidable.
- **Class II: Significant impact; can be mitigated to a level that is not significant.** A Class II impact is a significant adverse effect that can be reduced to a less than significant level through the application of feasible mitigation measures presented in this EIR/EIS.
- **Class III: Adverse; less than significant.** A Class III impact is a minor change or effect on the environment that does not meet or exceed the criteria established to gauge significance.
- **Class IV: Beneficial impact.** Class IV impacts represent beneficial effects that would result from project implementation.

In cases where there is a potential for a certain type of impact, but no such impact would occur for the proposed Project or an alternative, the reasons for no occurrence of an impact are described and no impact classification is assigned.

A significant impact is defined by CEQA as "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project" (State CEQA Guidelines Section 15382). In comparison, NEPA states that "'Significantly' as used in NEPA requires considerations of both context and intensity…" (40 CFR 1508.27). Significance criteria serve as a benchmark for determining if a project action will result in a significant adverse environmental impact when evaluated against the baseline. Although guidance provided by CEQA and NEPA are used to help determine the significance of impacts, the determination of impact significance is based on the independent judgment of the Lead Agencies. The establishment of any criteria used to evaluate the significance of impacts is also the responsibility of the Lead Agencies. Criteria used to determine the significance of the proposed Project's impacts are presented in the sections addressing individual environmental issue areas (Sections 3.2 through 3.17). Some impact categories in this document lend themselves to scientific or mathematical analysis and, therefore, to quantification, while others are more qualitative, and resources such as Air Quality have significance thresholds that are established by regulatory agencies.

Pursuant to NEPA, the intent of the environmental impact analysis is to provide a scientific and analytic basis for comparing the alternatives. The analysis also identifies any adverse environmental effects that cannot be avoided should the project be implemented and presents mitigation measures to minimize adverse environmental impacts (40 CFR 1502.16). Environmental effects include direct, indirect, and cumulative impacts.