

### 3.1 INTRODUCTION

Section 3.0 Existing Resource Information was developed pursuant to Title 18 of the Code of Federal Regulations (CFR) Chapter I § 5.6(d)(3) and summarizes the existing environment relevant to the relicensing of Southern California Edison Company's (SCE) Kaweah Project (Project). This section is organized to address specific content requirements outlined in the Federal Energy Regulatory Commission's (FERC or Commission) regulations, including:

- Description of the existing environment; and
- Summary of existing data or studies, including references to sources of information or studies.

This section is organized by resource area, as follows:

- 3.2 Kaweah River Basin
- 3.3 Water Use and Hydrology
- 3.4 Water Quality
- 3.5 Fish and Aquatic Resources  
(Including rare, threatened, and endangered species)
- 3.6 Botanical and Wildlife Resources  
(Including rare, threatened, and endangered species)
- 3.7 Geology and Soils
- 3.8 Geomorphology
- 3.9 Riparian Resources
- 3.10 Land Use
- 3.11 Recreation Resources
- 3.12 Aesthetic Resources
- 3.13 Cultural Resources
- 3.14 Tribal Resources
- 3.15 Socioeconomics

In some cases, resource areas defined by FERC were split into separate sections to facilitate review by resource specialist. For example, content required to be included in Section 3.7 Geology and Soils was split into three resource sections: (1) 3.7 Geology and Soils, (2) 3.8 Geomorphology, and (3) 3.9 Riparian Resources. In addition, when similar information was required in more than one section, it has only been provided in detail once (first reference) and then referred back to in subsequent sections, as appropriate. Table 3.1-1 provides the content requirements of 18 CFR Chapter I § 5.6(d)(3) and identifies the section where resource information is provided.

All associated tables, figures, maps, and appendices are included at the end of each resource section. In addition, acronyms and references are provided within each section to facilitate review.

The information included in each resource section is based on data and information collected from publically available sources and supplemented with additional information received from resource agencies in response to SCE's information requests. Additional information was requested from U.S. Bureau of Land Management (BLM), U.S. Fish and Wildlife Service (USFWS), State Water Resources Control Board (State Water Board), and the California Department of Fish and Wildlife (CDFW). BLM and CDFW provided additional information on biological and cultural resources which has been incorporated into the appropriate resource sections. In many cases only limited information was available to characterize resources in the vicinity of the Kaweah Project.

**TABLE**

**Table 3.1-1. FERC Regulations at 18 CFR §5.6(d)(3) and Associated Kaweah PAD Section.**

18 CFR §	FERC Regulation Text	PAD Section
5.6	Pre-application document.	–
(3)	<i>Description of existing environment and resource impacts—</i>	Section 3.0 Existing Resource Information
(i)	<b><u>General requirements.</u></b> A potential applicant must, based on the existing, relevant, and reasonably available information, include a discussion with respect to each resource that includes:	Refer to each respective resource section and Section 2.0 Project Description
(A)	A description of the existing environment as required by paragraphs (d)(3)(ii)-(xiii) of this section;	
(B)	Summaries (with references to sources of information or studies) of existing data or studies regarding the resource;	
(C)	A description of any known or potential adverse impacts and issues associated with the construction, operation or maintenance of the proposed project, including continuing and cumulative impacts; and	
(D)	A description of any existing or proposed project facilities or operations, and management activities undertaken for the purpose of protecting, mitigating impacts to, or enhancing resources affected by the project, including a statement of whether such measures are required by the project license, or were undertaken for other reasons. The type and amount of the information included in the discussion must be commensurate with the scope and level of resource impacts caused or potentially caused by the proposed project. Potential license applicants are encouraged to provide photographs or other visual aids, as appropriate, to supplement text, charts, and graphs included in the discussion.	
(ii)	<b><u>Geology and soils.</u></b> Descriptions and maps showing the existing geology, topography, and soils of the proposed project and surrounding area. Components of the description must include:	3.7 Geology and Soils
(A)	A description of geological features, including bedrock lithology, stratigraphy, structural features, glacial features, unconsolidated deposits, and mineral resources at the project site;	3.7 Geology and Soils

**Table 3.1-1. FERC Regulations at 18 CFR §5.6(d)(3) and Associated Kaweah PAD Section.**

18 CFR §	FERC Regulation Text	PAD Section
(B)	A description of the soils, including the types, occurrence, physical and chemical characteristics, erodibility and potential for mass soil movement;	3.7 Geology and Soils
(C)	A description of reservoir shorelines and stream banks, including:	3.7 Geology and Soils
(1)	Steepness, composition (bedrock and unconsolidated deposits), and vegetative cover; and	3.7 Geology and Soils
(2)	Existing erosion, mass soil movement, slumping, or other forms of instability, including identification of project facilities or operations that are known to or may cause these conditions.	3.7 Geology and Soils
(iii)	<b><u>Water resources.</u></b> A description of the water resources of the proposed project and surrounding area. This must address the quantity and quality (chemical/physical parameters) of all waters affected by the project, including but not limited to the project reservoir(s) and tributaries thereto, bypassed reach, and tailrace. Components of the description must include:	2.0 Project Description; 3.2 Kaweah River Basin; 3.3 Water Use and Hydrology; 3.4 Water Quality; 3.8 Geomorphology
(A)	Drainage area;	3.2 Kaweah River Basin
(B)	The monthly minimum, mean, and maximum recorded flows in cubic feet per second of the stream or other body of water at the power plant intake or point of diversion, specifying any adjustments made for evaporation, leakage, minimum flow releases, or other reductions in available flow;	3.3 Water Use and Hydrology
(C)	A monthly flow duration curve indicating the period of record and the location of gauging station(s), including identification number(s), used in deriving the curve; and a specification of the critical streamflow used to determine the project's dependable capacity;	3.3 Water Use and Hydrology
(D)	Existing and proposed uses of project waters for irrigation, domestic water supply, industrial and other purposes, including any upstream or downstream requirements or constraints to accommodate those purposes;	3.3 Water Use and Hydrology
(E)	Existing instream flow uses of streams in the project area that would be affected by project construction and operation; information on existing water rights and water rights applications potentially affecting or affected by the project;	2.0 Project Description; 3.3 Water Use and Hydrology

**Table 3.1-1. FERC Regulations at 18 CFR §5.6(d)(3) and Associated Kaweah PAD Section.**

18 CFR §	FERC Regulation Text	PAD Section
(F)	Any federally-approved water quality standards applicable to project waters;	3.4 Water Quality
(G)	Seasonal variation of existing water quality data for any stream, lake, or reservoir that would be affected by the proposed project, including information on:	3.4 Water Quality
(1)	Water temperature and dissolved oxygen, including seasonal vertical profiles in the reservoir;	3.4 Water Quality
(2)	Other physical and chemical parameters to include, as appropriate for the project; total dissolved gas, pH, total hardness, specific conductance, chlorophyll a, suspended sediment concentrations, total nitrogen (mg/L as N), total phosphorus (mg/L as P), and fecal coliform (E. Coli) concentrations;	3.4 Water Quality
(H)	The following data with respect to any existing or proposed lake or reservoir associated with the proposed project; surface area, volume, maximum depth, mean depth, flushing rate, shoreline length, substrate composition; and	2.0 Project Description
(I)	Gradient for downstream reaches directly affected by the proposed project.	3.8 Geomorphology
(iv)	<b><u>Fish and aquatic resources.</u></b> A description of the fish and other aquatic resources, including invasive species, in the project vicinity. This section must discuss the existing fish and macroinvertebrate communities, including the presence or absence of anadromous, catadromous, or migratory fish, and any known or potential upstream or downstream impacts of the project on the aquatic community. Components of the description must include:	3.5 Fish and Aquatic Resources
(A)	Identification of existing fish and aquatic communities;	3.5 Fish and Aquatic Resources
(B)	Identification of any essential fish habitat as defined under the Magnuson-Stevens Fishery Conservation and Management Act and established by the National Marine Fisheries Service; and	3.5 Fish and Aquatic Resources
(C)	Temporal and spatial distribution of fish and aquatic communities and any associated trends with respect to:	3.5 Fish and Aquatic Resources

**Table 3.1-1. FERC Regulations at 18 CFR §5.6(d)(3) and Associated Kaweah PAD Section.**

18 CFR §	FERC Regulation Text	PAD Section
(1)	Species and life stage composition;	3.5 Fish and Aquatic Resources
(2)	Standing crop;	3.5 Fish and Aquatic Resources
(3)	Age and growth data;	3.5 Fish and Aquatic Resources
(4)	Spawning run timing; and	3.5 Fish and Aquatic Resources
(5)	The extent and location of spawning, rearing, feeding, and wintering habitat.	3.5 Fish and Aquatic Resources
(v)	<b><u>Wildlife and botanical resources.</u></b> A description of the wildlife and botanical resources, including invasive species, in the project vicinity. Components of this description must include:	3.6 Botanical and Wildlife Resources
(A)	Upland habitat(s) in the project vicinity, including the project's transmission line corridor or right-of-way and a listing of plant and animal species that use the habitat(s); and	3.6 Botanical and Wildlife Resources
(B)	Temporal or spatial distribution of species considered important because of their commercial, recreational, or cultural value.	3.6 Botanical and Wildlife Resources
(vi)	<b><u>Wetlands, riparian, and littoral habitat.</u></b> A description of the floodplain, wetlands, riparian habitats, and littoral in the project vicinity. Components of this description must include:	3.6 Botanical and Wildlife Resources; 3.9 Riparian Resources
(A)	A list of plant and animal species, including invasive species, that use the wetland, littoral, and riparian habitat;	3.6 Botanical and Wildlife Resources; 3.9 Riparian Resources
(B)	A map delineating the wetlands, riparian, and littoral habitat; and	3.9 Riparian Resources
(C)	Estimates of acreage for each type of wetland, riparian, or littoral habitat, including variability in such availability as a function of storage at a project that is not operated in run-of-river mode.	3.9 Riparian Resources
(vii)	<b><u>Rare, threatened and endangered species.</u></b> A description of any listed rare, threatened and endangered, candidate, or special status species that may be present in the project vicinity. Components of this description must include:	3.5 Fish and Aquatic Resources; 3.6 Botanical and Wildlife Resources

**Table 3.1-1. FERC Regulations at 18 CFR §5.6(d)(3) and Associated Kaweah PAD Section.**

18 CFR §	FERC Regulation Text	PAD Section
(A)	A list of Federal- and state-listed, or proposed to be listed, threatened and endangered species known to be present in the project vicinity;	3.5 Fish and Aquatic Resources; 3.6 Botanical and Wildlife Resources
(B)	Identification of habitat requirements;	3.5 Fish and Aquatic Resources; 3.6 Botanical and Wildlife Resources
(C)	References to any known biological opinion, status reports, or recovery plan pertaining to a listed species;	3.5 Fish and Aquatic Resources; 3.6 Botanical and Wildlife Resources
(D)	Extent and location of any federally-designated critical habitat, or other habitat for listed species in the project area; and	3.5 Fish and Aquatic Resources; 3.6 Botanical and Wildlife Resources
(E)	Temporal and spatial distribution of the listed species within the project vicinity.	3.5 Fish and Aquatic Resources; 3.6 Botanical and Wildlife Resources
(viii)	<b><i>Recreation and land use.</i></b> A description of the existing recreational and land uses and opportunities within the project boundary. The components of this description include:	3.10 Land Use; 3.11 Recreation Resources
(A)	Text description illustrated by maps of existing recreational facilities, type of activity supported, location, capacity, ownership and management;	3.10 Land Use; 3.11 Recreation Resources
(B)	Current recreational use of project lands and waters compared to facility or resource capacity;	3.11 Recreation Resources
(C)	Existing shoreline buffer zones within the project boundary;	3.11 Recreation Resources
(D)	Current and future recreation needs identified in current State Comprehensive Outdoor Recreation Plans, other applicable plans on file with the Commission, or other relevant local, state, or regional conservation and recreation plans;	3.11 Recreation Resources

**Table 3.1-1. FERC Regulations at 18 CFR §5.6(d)(3) and Associated Kaweah PAD Section.**

18 CFR §	FERC Regulation Text	PAD Section
(E)	If the potential applicant is an existing licensee, its current shoreline management plan or policy, if any, with regard to permitting development of piers, boat docks and landings, bulkheads, and other shoreline facilities on project lands and waters;	3.11 Recreation Resources
(F)	A discussion of whether the project is located within or adjacent to a:	3.11 Recreation Resources
(1)	River segment that is designated as part of, or under study for inclusion in, the National Wild and Scenic River System; or	3.11 Recreation Resources
(2)	State-protected river segment;	3.11 Recreation Resources
(G)	Whether any project lands are under study for inclusion in the National Trails System or designated as, or under study for inclusion as, a Wilderness Area.	3.11 Recreation Resources
(H)	Any regionally or nationally important recreation areas in the project vicinity;	3.11 Recreation Resources
(I)	Non-recreational land use and management within the project boundary; and	3.10 Land Use
(J)	Recreational and non-recreational land use and management adjacent to the project boundary.	3.10 Land Use; 3.11 Recreation Resources
(ix)	<b><u>Aesthetic resources.</u></b> A description of the visual characteristics of the lands and waters affected by the project. Components of this description include a description of the dam, natural water features, and other scenic attractions of the project and surrounding vicinity. Potential applicants are encouraged to supplement the text description with visual aids.	3.12 Aesthetic Resources
(x)	<b><u>Cultural resources.</u></b> A description of the known cultural or historical resources of the proposed project and surrounding area. Components of this description include:	3.13 Cultural Resources; 3.14 Tribal Resources

**Table 3.1-1. FERC Regulations at 18 CFR §5.6(d)(3) and Associated Kaweah PAD Section.**

18 CFR §	FERC Regulation Text	PAD Section
(A)	Identification of any historic or archaeological site in the proposed project vicinity, with particular emphasis on sites or properties either listed in, or recommended by the State Historic Preservation Officer or Tribal Historic Preservation Officer for inclusion in, the National Register of Historic Places;	3.13 Cultural Resources
(B)	Existing discovery measures, such as surveys, inventories, and limited subsurface testing work, for the purpose of locating, identifying, and assessing the significance of historic and archaeological resources that have been undertaken within or adjacent to the project boundary; and	3.13 Cultural Resource
(C)	Identification of Indian tribes that may attach religious and cultural significance to historic properties within the project boundary or in the project vicinity; as well as available information on Indian traditional cultural and religious properties, whether on or off of any federally-recognized Indian reservation (A potential applicant must delete from any information made available under this section specific site or property locations, the disclosure of which would create a risk of harm, theft, or destruction of archaeological or Native American cultural resources or to the site at which the resources are located, or would violate any Federal law, including the Archaeological Resources Protection Act of 1979, 16 U.S.C. 470w-3, and the National Historic Preservation Act of 1966, 16 U.S.C. 470hh).	3.14 Tribal Resources
(xi)	<b><u>Socio-economic resources.</u></b> A general description of socio-economic conditions in the vicinity of the project. Components of this description include general land use patterns (e.g., urban, agricultural, forested), population patterns, and sources of employment in the project vicinity.	3.15 Socioeconomics
(xii)	<b><u>Tribal resources.</u></b> A description of Indian tribes, tribal lands, and interests that may be affected by the project Components of this description include:	3.14 Tribal Resources
(A)	Identification of information on resources specified in paragraphs (d)(2)(ii)-(xi) of this section to the extent that existing project construction and operation affecting those resources may impact tribal cultural or economic interests, e.g., impacts of project-induced soil erosion on tribal cultural sites; and	3.14 Tribal Resources

**Table 3.1-1. FERC Regulations at 18 CFR §5.6(d)(3) and Associated Kaweah PAD Section.**

18 CFR §	FERC Regulation Text	PAD Section
(B)	Identification of impacts on Indian tribes of existing project construction and operation that may affect tribal interests not necessarily associated with resources specified in paragraphs (d)(3)(ii)-(xi) of this Section, e.g., tribal fishing practices or agreements between the Indian tribe and other entities other than the potential applicant that have a connection to project construction and operation.	3.14 Tribal Resources
(xiii)	<b><u>River basin description.</u></b> A general description of the river basin or sub-basin, as appropriate, in which the proposed project is located, including information on:	3.2 Kaweah River Basin
(A)	The area of the river basin or sub-basin and length of stream reaches therein;	3.2 Kaweah River Basin
(B)	Major land and water uses in the project area;	3.2 Kaweah River Basin
(C)	All dams and diversion structures in the basin or sub-basin, regardless of function; and	3.2 Kaweah River Basin
(D)	Tributary rivers and streams, the resources of which are or may be affected by project operations.	3.2 Kaweah River Basin