COVER SHEET

FEDERAL ENERGY REGULATORY COMMISSION

DRAFT ENVIRONMENTAL IMPACT STATEMENT
FOR THE BIG CREEK ALP PROJECTS
Docket Nos. P-67, 2175, 2085, and 120

Section 1
Purpose and Need for Action
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DEIS

1.0 INTRODUCTION

1.1 APPLICATION

On November 29, 2005, Southern California Edison (SCE) filed a license application for the Mammoth Pool Project (SCE, 2005) with the Federal Energy Regulatory Commission (FERC or the Commission). On February 23, 2007, SCE filed license applications for Big Creek Nos. 2A, 8, and Eastwood; Big Creek Nos. 1 and 2; and Big Creek No. 3 (SCE, 2007a). SCE is using the alternative licensing process (ALP) for these four projects together and as such filed a comprehensive Settlement Agreement (SCE, 2007b). These applications for the Big Creek ALP Projects include a preliminary draft environmental assessment (PDEA).[7]

1.2 PURPOSE OF ACTION AND NEED FOR POWER

1.2.1 Purpose of Action

The Commission must decide whether to issue licenses to SCE for the Big Creek ALP Projects and what conditions should be placed in any licenses issued. In deciding whether to issue a license for a hydroelectric project, the Commission must determine that the project will be best adapted to a comprehensive plan for improving or developing a waterway. In addition to the power and developmental purposes for which licenses are issued (e.g., flood control, irrigation, and water supply), the Commission must give equal consideration to the purposes of energy conservation; the protection, mitigation of damage to, and enhancement of fish and wildlife (including related spawning grounds and habitat); the protection of recreational opportunities; and the preservation of other aspects of environmental quality.

Issuing new licenses for the Big Creek ALP Projects would allow SCE to generate electricity at the projects for the term of the new licenses, making electric power from a renewable resource available to its customers.

This draft environmental impact statement (EIS) assesses the effects associated with operation of the Big Creek ALP Projects, alternatives to the proposed projects, and makes recommendations to the Commission on whether to issue new licenses, and if so, recommends terms and conditions to become a part of any licenses issued.

In this draft EIS, we assess the environmental and economic effects of continuing to operate the Big Creek ALP Projects (1) as proposed by SCE, and (2) with our recommended measures. We also consider the effects of the no-action alternative. Important issues that are addressed include establishment of appropriate flow regimes in

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[7]The application for the Mammoth Pool Project included a PDEA, but the license applications for the other three of the Big Creek ALP Projects included an amended PDEA that replaces the earlier PDEA.

project-affected stream reaches, protection of wildlife resources, provision of recreational opportunities, and protection of cultural resources.

1.2.2 Need for Power

The Big Creek ALP Projects,[8] with an installed capacity of 865 megawatts (MW) and an annual generation of 3,366,560 megawatt-hours (MWh) per year, play an important role in meeting SCE's power needs. The four projects are also a significant power resource to the state of California and within the Western Electricity Coordinating Council (WECC). The WECC includes the states west of the Rockies; portions of Texas, Nebraska, and Kansas; Alberta and British Columbia, Canada; and a portion of North Baja California.

Because the Big Creek ALP Projects are located in the California-Mexico Power area of the WECC, we looked at the regional need for power projected by the WECC and reported by the North American Electricity Reliability Corporation (NERC, 2007) to anticipate how the demand for electricity is expected to change in the region.

The California-Mexico Power area, which encompasses most of California and a portion of Baja California in Mexico, has a significant summer peak demand. For the period from 2007 through 2016, the WECC forecasts peak demand and annual energy requirements in the United States portion of the area to grow at annual compound rates of 1.5 and 1.3 percent, respectively. The WECC anticipates that 7,433 MW of new capacity would come on line within the next 10 years in the California-Mexico Power area. The Big Creek ALP Projects could continue to meet part of the existing load requirements within a system in need of resources.

1.3 STATUTORY AND REGULATORY REQUIREMENTS

Licenses for the Big Creek ALP Projects are subject to numerous requirements under the Federal Power Act (FPA) and other applicable statutes. The major regulatory and statutory requirements are summarized in table 1-1 and described below.

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[8]For the remainder of this EIS, we discuss the Project developments from upstream to downstream in the following order: Big Creek Nos. 2A, 8, and Eastwood, No. 67; Big Creek Nos. 1 and 2, No. 2175; Mammoth Pool, No. 2085; and Big Creek No. 3, No. 120.

Table 1-1. Major statutory and regulatory requirements for the Big Creek ALP Projects.

Requirement	Agency	Status
Section 18 of the FPA (fishway prescriptions)	Interior, NMFS	Interior, on February 2, 2007, for the Mammoth Pool Project, and on March 5, 2008, for the Big Creek Nos. 2A, 8, and Eastwood; Big Creek Nos. 1 and 2; and Big Creek No. 3 projects, reserved their authority to prescribe upstream fish passage facilities. NMFS reserved its authority to prescribe fishways on February 5, 2007, for the Mammoth Pool Project, August 31, 2007, for the Big Creek Nos. 2A, 8, and Eastwood Project and Big Creek No. 3 Project, and September 1, 2007, for the Big Creek Nos. 1 and 2 Project.
Section 4(e) of the FPA (land management conditions)	Forest Service	The Forest Service provided preliminary conditions on February 5, 2007, for the Mammoth Pool Project, and final conditions on February 27, 2008, for the Big Creek Nos. 2A, 8, and Eastwood; Big Creek Nos. 1 and 2; and Big Creek No. 3 projects.
Section 10(j) of the FPA	Interior	Interior provided section 10(j) recommendations, intended to protect fish and wildlife resources, on February 2, 2007, for the Mammoth Pool Project, and on March 5, 2008, for the Big Creek Nos. 2A, 8, and Eastwood; Big Creek Nos. 1 and 2; and Big Creek No. 3 projects.
Clean Water Act—water quality certification	State Water Resources Control Board	Application for water quality certification for the Big Creek ALP Projects accepted on April 2, 2008.

Requirement	Agency	Status
Endangered Species Act Consultation	FWS	SCE consulted with FWS beginning in 2000 and submitted a preliminary Biological Assessment/Biological Evaluation for the Big Creek ALP Projects to FWS on October 25, 2004. A revised Biological Assessment/Biological Evaluation for all four projects that responds to FWS comments is included in the PDEA that accompanied the license applications.
Coastal Zone Management Act Consistency	California Coastal Commission	We conclude that relicensing the Big Creek ALP Projects would not influence resources in the designated coastal zone and will seek concurrence from the California Coastal Commission.

1.3.1 Federal Power Act

1.3.1.1 Section 18 Fishway Prescriptions

Section 18 of the FPA states that the Commission is to require construction, operation, and maintenance by a licensee of such fishways as may be prescribed by the secretaries of Commerce or the Interior. Interior, by letter filed on February 2, 2007, for the Mammoth Pool Project, and by letter filed on March 5, 2008, for the Big Creek Nos. 2A, 8, and Eastwood; Big Creek Nos. 1 and 2; and Big Creek No. 3 projects, requests that a reservation of authority to prescribe fishways under section 18 be included in any licenses issued for the Big Creek ALP Projects. The U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NMFS) also requests that a reservation of authority to prescribe fishways be included in any project licenses by letters filed on February 5, 2007, for the Mammoth Pool Project, August 31, 2007, for the Big Creek Nos. 2A, 8, and Eastwood Project and Big Creek No. 3 Project, and September 1, 2007, for the Big Creek Nos. 1 and 2 Project.

1.3.1.2 Section 4(e) Conditions

Section 4(e) of the FPA provides that any license issued by the Commission for a project within a federal reservation shall be subject to and contain such conditions as the Secretary of the responsible federal land management agency deems necessary for the adequate protection and use of the reservation. The U.S. Department of Agriculture,

Forest Service (Forest Service) provided preliminary conditions on February 5, 2007, for the Mammoth Pool Project, and final conditions on February 27, 2008, for the Big Creek Nos. 2A, 8, and Eastwood; Big Creek Nos. 1 and 2; and Big Creek No. 3 projects. The Forest Service indicated that it would file its final conditions for the Mammoth Pool Project within 60 days of the close of comments on the Commission's draft EIS.

1.3.1.3 Section 10(j) Recommendations

Under section 10(j) of the FPA, each hydroelectric license issued by the Commission must include conditions based on recommendations provided by federal and state fish and wildlife agencies for the protection, mitigation, or enhancement of fish and wildlife resources affected by the project. The Commission is required to include these conditions unless it determines that they are inconsistent with the purposes and requirements of the FPA or other applicable law. Before rejecting or modifying an agency recommendation, the Commission is required to attempt to resolve any such inconsistency with the agency, giving due weight to the recommendations, expertise, and statutory responsibilities of such agency.

Interior timely filed on February 2, 2007, recommendations under section 10(j) for the Mammoth Pool Project, and March 5, 2008, for the Big Creek Nos. 2A, 8, and Eastwood; Big Creek Nos. 1 and 2; and Big Creek No. 3 projects. In section 5.4 we discuss how we address the agency recommendations and compliance with section 10(j).

1.3.2 Clean Water Act

Under section 401of the Clean Water Act, a license applicant must obtain certification from the appropriate state pollution control agency verifying compliance with the Act. SCE filed its application for water quality certification with the California State Water Resources Control Board (Water Board) by letter dated March 4, 2008. SCE documented that the Water Board received the application on March 7, 2008. Consequently, action on the application is due by the Water Board by March 7, 2009.

The Water Board has indicated its intention to issue a single certification to cover all of the Big Creek projects currently undergoing relicensing in the Upper San Joaquin Watershed. These include the Vermilion Valley Hydroelectric Project (FERC No. 2086), Portal (FERC No. 2174), and the Big Creek ALP Projects considered in this draft EIS.

1.3.3 Endangered Species Act

Section 7 of the Endangered Species Act (ESA) requires federal agencies to ensure that their actions are not likely to jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of the critical habitat of such species. SCE requested to be designated as the non-federal representative for the purpose of conducting section 7 consultations pertaining to the Big Creek ALP Projects on December 7, 2000, and was granted this request by the Commission on December 21, 2000. SCE included a Biological Assessment/Biological Evaluation with

its license applications. Our analyses of project effects on threatened and endangered species are presented in section 3.3.3, *Threatened and Endangered Species*, and our recommendations are presented in section 5.2, *Comprehensive Development and Recommended Alternative*. We conclude that the only federally listed species that could potentially be affected by the projects is the valley elderberry longhorn beetle (VELB). Even with implementation of the proposed VELB Management Plan, there would still be loss of elderberry habitat and potential adverse effects on VELB during the term of the licenses. Therefore, we conclude that relicensing the Big Creek ALP Projects may adversely affect this federally listed species. We will request formal consultation with the U.S. Fish and Wildlife Service (FWS) upon issuance of this draft EIS.

1.3.4 Coastal Zone Management Act

Under section 307(c)(3)(A) of the Coastal Zone Management Act (CZMA), 16 U.S.C. §1456(3)(A), the Commission cannot issue a license for a project within or affecting a state's coastal zone unless the state CZMA agency concurs with the license applicant's certification of consistency with the state's CZMA program, or the agency's concurrence is conclusively presumed by its failure to act within 180 days of its receipt of the applicant's certification.

The Big Creek ALP Projects are not located within the state-designated CZMA, which extends from a few blocks to 5 miles inland from the sea (www.ceres.ca.gov/coastal.com), and relicensing the projects would not affect California's coastal resources. Our assessment is that the Big Creek ALP Projects are not subject to California coastal zone program review and that no coastal zone consistency certification is needed.

1.3.5 National Historic Preservation Act

Section 106 requires that every federal agency "take into account" how each of its undertakings could affect historic properties. Historic properties are districts, sites, buildings, structures, traditional cultural properties, and objects significant in American history, architecture, engineering, and culture that are eligible for inclusion in the National Register of Historic Places (National Register).

To meet the requirements of section 106, the Commission intends to execute a Programmatic Agreement (PA) for the protection of historic properties from the effects of the operation of the Big Creek ALP Projects. The terms of the PA would ensure that the SCE addresses and treats all historic properties identified within the projects' area of potential effects (APE) through the finalization of the existing draft Historic Properties Management Plan (HPMP).

1.3.6 California Environmental Quality Act

The California Environmental Quality Act (CEQA) is the California counterpart to the National Environmental Policy Act (NEPA). CEQA went into effect in 1970 for the

purpose of monitoring land development in California through a permitting process. This statute, enacted to protect the health of the environment from current and future development, requires state and local agencies to identify the significant environmental effects of their actions and to avoid or mitigate those effects, if feasible. CEQA applies to all discretionary activities proposed to be undertaken or approved by California state and local government agencies. The Water Board must act on SCE's request for a water quality certificate for the Big Creek ALP Projects (see section 1.3.2, *Clean Water Act*), making CEQA applicable to this licensing proceeding.

Under CEQA, an environmental impact report (EIR) is prepared when the public agency finds substantial evidence that the project may have a significant effect on the environment. An EIR is the public document used to analyze the significant environmental effects of a proposed project, to identify alternatives, and to disclose possible ways to reduce or avoid the possible environmental damage. CEQA guidelines state that when federal review of a project is also required, state agencies are encouraged to integrate the two processes to the fullest extent possible, which may include a joint EIS/EIR. While this document is not a joint EIS/EIR, SCE has the opportunity to use this document, as appropriate, to satisfy its responsibilities under CEQA. As such, we invite the Water Board's comments on this draft EIS as they may pertain to the agency's use of the final EIS for CEQA purposes.

The content requirements for an EIR under CEQA are similar to the requirements for an EIS, although an EIR must contain two elements not typically addressed in a Commission NEPA document. The first element needed in an EIR is a discussion of how the proposed project, if implemented, could induce growth. A project can be considered to have a growth-inducing effect if it directly or indirectly fosters economic or population growth or removes obstacles to population growth, strains existing community service facilities to the extent that the construction of new facilities would be needed, or encourages or facilitates other activities that cause significant environmental effects. In an effort to present information that may be useful should the Water Board decide to use this draft EIS for its CEQA purposes, we considered whether issuing a new license for the Big Creek ALP Projects would have any growth-inducing effects, and determined that it would not. Under new licenses, the projects would continue to operate essentially as they have in the past (see section 2.2, *Applicant's Proposal*), continuing to provide electricity to meet existing regional power needs.

The second element needed in an EIR, but not typically presented in a Commission NEPA document in a format compatible to CEQA requirements, is a discussion of a program for monitoring or reporting on mitigation measures that were adopted or made conditions of project approval. The monitoring or reporting program must ensure compliance with mitigation measures during project implementation. The program may also provide information on the effectiveness of mitigation measures. Although discussion of the mitigation reporting or monitoring program can be deferred until the final EIR or, in some cases, after project approval, it is often included in the draft EIR to obtain public review and comment.

In section 3 of this draft EIS, *Environmental Analysis*, we describe each potential environmental resource effect, our analysis of each recommended mitigation measure, and our conclusion with respect to the effectiveness of each measure in addressing the effect. In section 5.2, *Comprehensive Development and Recommended Alternative*, we list the mitigation measures and monitoring and reporting requirements we recommend for inclusion in any licenses issued for the Big Creek ALP Projects. Additionally, any conditions of a water quality certificate that may be issued for this project will become an enforceable part of any licenses issued for this project. Appendix A, *Big Creek Projects Mitigation and Monitoring Summary* identifies each potentially significant effect of relicensing the Big Creek ALP Projects, lists the project changes or mitigation measures that are recommended for inclusion in a new license to avoid or reduce the effect, and describes the monitoring and reporting measures SCE would undertake to ensure the project changes and mitigation measures are implemented as intended. In order to facilitate the Water Board's potential use of this draft EIS for CEQA purposes, appendix A also includes the measures contained in the Settlement Agreement that are not within the Commission's jurisdiction and would therefore not be part of any new licenses.

The Water Board could adopt this EIS as satisfying its CEQA requirements or could determine that a separate EIR is required for the Big Creek ALP Projects.

1.4 PUBLIC REVIEW AND CONSULTATION

Commission regulations (18 CFR §16.8) require that applicants consult with appropriate resource agencies, tribes, and other entities before filing an application for a license. This consultation is the first step in complying with the Fish and Wildlife Coordination Act, ESA, National Historic Preservation Act, and other federal statutes. Pre-filing consultation must be complete and documented according to the Commission's regulations.

1.4.1 Scoping

SCE conducted the NEPA scoping process as part of the ALP. SCE held a publicly noticed meeting with interested stakeholders and issued the Initial Information Package for the Big Creek ALP Projects in May 2000. The purpose of this meeting was to outline the ALP goals and objectives; identify process protocols; provide an overview of the Big Creek ALP Projects and associated resources; identify early stakeholder resource interests and issues; and identify opportunities for the public to participate and provide comment.

In May 2000, the Plenary was established. The Plenary, which consists of representatives of the state and federal resource agencies, Native American tribes, local and regional authorities, non-government organizations, and members of the public, received training regarding the "mutual gains" style of negotiation.

SCE held an additional publicly noticed meeting and a site tour of the Big Creek ALP Projects with interested stakeholders in June 2000. In addition, on July 24, 25, and

26, 2007, Commission and SCE staff held a publicly noticed site visit to the projects. The site visit was open to the public and resource agencies.

Based on the scoping process that was built into the collaborative ALP process, SCE conducted 67 relicensing technical studies addressing issues at the Big Creek ALP Projects. The technical reports for the overlapping issues were all filed with SCE's license applications.

1.4.2 Interventions

On December 5, 2006, the Commission issued a public notice accepting the application for the Mammoth Pool Project, and soliciting motions to intervene and protest. This notice set a 60 day period during which interventions could be filed ending on February 5, 2007. On July 5, 2007, the Commission issued a public notice accepting the applications and soliciting motions to intervene and protest for the remaining three projects. This notice set a 60 day period during which interventions could be filed. This period ended on September 5, 2007. In response, the following entities filed motions to intervene in this proceeding.

Entity	Date of Filing
North Fork Mono Tribe	February 22, 2006
U.S. Department of the Interior (Mammoth Pool)	February 1, 2007
U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service (Mammoth Pool)	February 5, 2007
U.S. Department of Agriculture, Forest Service (Mammoth Pool)	February 5, 2007
Friant Water Authority (Mammoth Pool)	February 6, 2007
Friends of the River, Trout Unlimited, and American Whitewater (Mammoth Pool)	February 8, 2007
U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service (Big Creek Nos. 2A, 8, and Eastwood)	August 31, 2007
U.S. Department of the Interior (remaining three projects)	August 31, 2007
U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine	September 1, 2007

Entity	Date of Filing
Fisheries Service (Big Creek Nos. 1 and 2 and Big Creek No. 3)	
Friends of the River, Trout Unlimited, and American Whitewater (remaining three projects)	September 4, 2007
U.S. Department of Agriculture, Forest Service (remaining three projects)	September 4, 2007

1.4.3 Settlement Agreement

SCE and the parties to the Settlement Agreement have held more than 300 meetings over the last 5 years in the Big Creek ALP for the Big Creek ALP Projects, which are owned and operated by SCE. The Big Creek ALP involved the design and implementation of 67 studies designed to identify effects associated with the Big Creek ALP Projects. Reports were prepared based upon these studies and were reviewed and commented upon by the Parties. These reports were used to identify potential project effects and serve as the basis for a Settlement Agreement (SCE, 2007b). SCE filed the Settlement Agreement on February 23, 2007, concurrently with the applications for three of the Big Creek ALP Projects (the Mammoth Pool license application was filed on November 29, 2005). The Settlement Agreement was signed by representatives of federal and state agencies, and NGOs listed below. We consider the Settlement Agreement to represent the Proposed Actions for these projects.

Signatories to the Settlement Agreement
American Whitewater
California Department of Fish and Game
Fly Fishers For Conservation
Fresno County Sheriff's Department
Friant Water Authority
Friends of the River
Huntington Lake Association
Huntington Lake Big Creek
Historical Conservancy
Huntington Lake Volunteer Fire Department
Michahai Wuksachi
Natural Resources Defense Council

Signatories to the Settlement Agreement
Sams Coalition
San Joaquin Paddlers Club
San Joaquin River Trail Council
Shaver Crossing
Railroad Station Group
Sierra Mono Museum
Sierra Resource Conservation
District of the County of Fresno
Trout Unlimited
U.S. Department of Agriculture, Forest Service
U.S. Department of the Interior

The Commission issued a notice of the Settlement Agreement on March 7, 2007 and set a comment deadline of April 5, 2007, and a reply comment deadline of April 20, 2007. The following entities filed comments on the Settlement Agreement.

Commenting Entities on Settlement Agreement	Date of Filing
North Fork Mono Rancheria (opposing the Settlement Agreement, writing on behalf of the San Joaquin River Tribal Coalition[9])	February 27, 2007
Cold Springs Rancheria (opposing the Settlement Agreement, writing on behalf of the San Joaquin River Tribal Coalition)	February 28, 2007
California Department of Fish and Game	April 5, 2007
U.S. Department of the Interior	April 5, 2007

SCE filed responses to the California Department of Fish and Game (Cal Fish & Game) on May 21, 2007, and to the North Fork Mono Rancheria, Cold Springs

[9]The San Joaquin River Tribal Coalition comprises three federally recognized Tribes: North Fork Mono Rancheria, Cold Springs Rancheria, and Big Sandy Rancheria.

Rancheria, and Big Sandy Rancheria (collectively the San Joaquin River Tribal Coalition) on June 18, 2007.

1.5 RECOMMENDATIONS, TERMS, AND CONDITIONS

On December 5, 2006, the Commission issued a Ready for Environmental Analysis Notice pertaining to the Mammoth Pool Project and requested comments, recommendations, and terms and conditions (subject to sections 10(j) and 18 of the FPA) with a filing deadline of February 5, 2007. On January 8, 2008, the Commission issued a Ready for Environmental Analysis Notice and requested comments, recommendations, and terms and conditions for Big Creek Nos. 2A, 8, and Eastwood; Big Creek Nos. 1 and 2; and Big Creek No. 3 with a filing deadline of March 8, 2008. The following entities filed comments, terms, conditions, prescriptions, or recommendations:

Entity	Date of Filing
U.S. Department of the Interior (Mammoth Pool)	February 2, 2007
U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service (Mammoth Pool)	February 5, 2007
U.S. Department of Agriculture, Forest Service (Mammoth Pool)	February 5, 2007
U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service (Big Creek Nos. 2A, 8, & Eastwood)	August 31, 2007
U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service (Big Creek Nos. 1 and 2 and Big Creek No. 3)	September 10, 2007
U.S. Department of Agriculture, Forest Service (Big Creek Nos. 2A, 8, and Eastwood; Big Creek Nos. 1 and 2; and Big Creek No. 3)	February 28, 2008
U.S. Department of the Interior (remaining three projects)	March 5, 2008

SCE did not respond to the recommendations, terms, and conditions filed for the Mammoth Pool Project. SCE responded to recommendations, terms, and conditions for the remaining three projects by letter filed on April 9, 2008.