

1.1 Project Background

Sierra Pacific Power Company (SPPC), the applicant for the proposed project, maintains and operates a 2.6-megawatt hydroelectric power plant, the Farad Power Plant, in Nevada County near Floriston, California. Pursuant to a federal court decree, SPPC has water rights to divert 400 cubic feet per second (cfs) of water from the Truckee River to the Farad Power Plant. Historically, water has been diverted from the Truckee River at the Farad Diversion Dam, located approximately 1.8 miles upstream of the Farad Power Plant, and conveyed to the Farad Power Plant through an elevated wooden flume, which is approximately 10 feet high by 10 feet wide. The diversion structure was originally constructed in 1899 of wood and rock ballast. In the late 1950s, the Truckee River was realigned in the vicinity of Floriston and over the dam site to accommodate the new Interstate 80 (I-80). In 1963, the structure was moved and rebuilt with an entirely new wood crib and rock structure stepped dam. An inclined weir plate fish ladder was installed near the river-right (when facing downstream) abutment of the structure in the early 1980s. In 1996, a concrete abutment wall was added, connecting the west end of the dam to the concrete intake gate structure. An off-channel diversion canal conveys the diverted flow from the gate structure approximately 750 linear feet to the elevated wooden flume.

For nearly 100 years, the Farad diversion dam provided power to industrial customers, beginning with the Comstock silver mines; more recently, it has provided power to residential customers in the Truckee-Reno area. The 5-year average annual power generation between October 1971 and September 1976 was 13.3×10^6 kilowatt-hours (kWh) of electricity per year (Williams pers. comm.). During several drought years in the late 1970s and early 1990s, SPPC generated limited or no power.

On January 1, 1997, the Truckee River crested with a peak flow of approximately 15,000 cfs, corresponding roughly to a 50-year flood event. It appears that the concrete wall connecting the west end of the dam to the diversion structure washed downstream during that storm, resulting in failure of the west abutment wall and ultimately the dam. Following the storm, SPPC removed the remaining pieces of the dam within the river channel to minimize safety hazards to river users. The concrete control structure west of the channel and the concrete abutment east of the channel remain in place.

As described in chapter 2, “Description of Project Alternatives,” SPPC proposes to construct a new structure to divert water to the Farad Power Plant and replace the previous weir. The proposed project design was selected to restore water diversions to the Farad Power Plant and reduce the risk of structure failure under high-flow conditions while providing fish passage under variable flow conditions and accommodating recreational boat passage.

1.2 The California Environmental Quality Act Process and Public Review

1.2.1 Purpose of the Environmental Impact Report

The California Environmental Quality Act (CEQA) requires public agencies to consider the potential environmental impacts of their proposed discretionary actions. Before SPPC can construct the proposed diversion dam, it must obtain water quality certification from the State Water Resources Control Board (SWRCB) in accordance with Section 401 of the Clean Water Act (CWA). As the lead agency under CEQA, the SWRCB must consider whether issuing the water quality certification would have an adverse effect on the environment.

This environmental impact report (EIR) is being prepared under the direction of the SWRCB to comply with the regulatory requirements of CEQA.

The purposes of this EIR are to

- analyze and disclose the environmental impacts of the proposed project;
- identify ways to reduce or avoid potential adverse environmental impacts, including cumulative impacts, that would result from the proposed project; and
- identify and assess alternatives to the proposed project.

CEQA requires agencies under its jurisdiction to mitigate or avoid significant adverse environmental impacts of projects they approve or implement, whenever feasible. Based on the project description presented by the project applicant, the SWRCB determined that preparation of an EIR was required. The SWRCB must consider the final EIR in deciding whether or how to approve the project.

1.2.2 Scoping

After review of the proposed project, the SWRCB determined that implementing the proposed project could result in significant environmental impacts. The SWRCB distributed a Notice of Preparation (NOP) for this EIR in April 2000 to approximately 50 people, including representatives of public agencies and

interest groups. The NOP included an initial study checklist, which identified the potential significant impacts of the project and stated that an EIR would be prepared. The public scoping period was open from April 21, 2000, to May 26, 2000, during which time the SWRCB received over 200 comment letters, including many letters from federal, state, and local agencies; interest groups; nonprofit organizations; and members of the public. Many scoping letters requested that the SWRCB analyze or include the following issues in the EIR:

- **Project Need**—Many commenters questioned the need for the dam, considering the small amount of power generated by the facility when balanced against the potential impacts on recreational boaters and downstream aquatic habitat. Some commenters were confused about whether SPPC has a water right entitlement to 400 cfs.
- **No-Project Alternative**—Many comments urged the analysis and ultimate adoption of the no-project (i.e., no dam) alternative.
- **Instream Flows**—Comments emphasized the importance of maintaining minimum instream flows for sport fish and native fish populations, macroinvertebrates, recreational use, and overall river health.
- **Recreation**—The design and construction of a facility that provides for the safe passage of boaters was a frequent request. Many of these comments requested an evaluation of the downstream effects of project operation on recreational resources, including boating and fishing opportunities.
- **Fish**—Some comments emphasized the importance of evaluating the proposed project's potential effects on Lahontan cutthroat trout fish passage (both upstream and downstream) and on fish habitat downstream of the diversion; comments also emphasized the need for a fish screen to prevent entrainment.
- **Hydrology**—Comments indicated the need to analyze the project's effects on river hydrology.
- **Water Quality**—Several comments expressed concern about both short-term and long-term project impacts on water quality, including changes in water temperature and movement of sediments past the dam.

A variety of other resource issues were raised during scoping, including geology and soils; transportation; facility design elements (e.g., fish screen, intake structure); water quality during construction; water rights; and visual resources. This document focuses on the resource issues and significant environmental impacts identified in the initial study and further identified during the scoping process.

In the initial study (appendix A), effects on mineral resources, public services, utilities, agricultural resources, air quality, land use, and population/housing were determined not to be significant; therefore, they are not discussed in detail in this EIR. Through the scoping process, the SWRCB determined that some issues, such as aesthetics, cultural resources, and noise, did merit further consideration; these topics are discussed in this EIR.

1.2.3 Public Review and Comment Period for the Environmental Impact Report

The SWRCB is circulating this draft EIR for a 45-day public review period and will hold 2 public hearings to receive written and oral comments on this document. After the public comment period, the SWRCB will prepare and publish a second document, the final EIR, which will contain the agency's responses to all significant environmental issues raised in the review and consultation process.

1.3 Report Organization and Terminology

1.3.1 Organization

This document has been organized to comply with the requirements and guidelines of CEQA and to provide the decision makers with a description of the proposed project, its impacts, and suggested mitigation measures. The report is organized into the following chapters:

- Chapter 1. Introduction
- Chapter 2. Description of Project Alternatives
- Chapter 3. Hydrology
- Chapter 4. Water Quality
- Chapter 5. Geology, Seismicity, and Soils
- Chapter 6. Aquatic Resources
- Chapter 7. Vegetation and Wetland Resources
- Chapter 8. Wildlife
- Chapter 9. Recreation
- Chapter 10. Cultural Resources
- Chapter 11. Noise
- Chapter 12. Transportation
- Chapter 13. Aesthetics
- Chapter 14. Evaluation of Alternatives to the Proposed Project
- Chapter 15. Cumulative and Growth-Inducing Effects

- Chapter 16. References Cited
- Chapter 17. Preparers

A description of the project objectives, including the purpose and need for the proposed project and the features of the project alternatives considered in this EIR, is provided in chapter 2.

Chapters 3–13 describe and identify, for each resource topic,

- the affected environment;
- environmental impacts of the proposed project;
- areas of controversy known to the SWRCB, including issues raised by agencies and the public; and
- methods of mitigating significant impacts for resource areas that may reduce or avoid the potential impacts of the proposed project.

Cumulative and growth-inducing impacts are discussed in chapter 15.

1.3.2 Terminology

The “regional setting” section of each resource chapter describes the existing physical environmental conditions and provides a point of reference (or *baseline*) for comparing the potential environmental impacts of the proposed project. In accordance with CEQA Guidelines Section 15125, the SWRCB has considered the baseline to be the environmental setting as it existed at the time the NOP was published in 2000.

This EIR uses the following terminology to denote the significance of environmental impacts:

- A *less-than-significant* impact would cause no substantial adverse change in the environment, and no mitigation measures are required.
- A *significant* impact would cause a substantial adverse change in the environment, and feasible mitigation measures could minimize the impact to a less-than-significant level.
- A *significant and unavoidable* impact would cause a substantial adverse change in the environment, and no feasible mitigation measures are available to reduce the impact to a less-than-significant level.

1.4 Permit and Environmental Review and Consultation Requirement

The SWRCB will use the information presented in this EIR during its evaluation of SPPC's application for water quality certification under Section 401 of CWA. The water quality certification process administered by the SWRCB is designed to achieve the highest water quality consistent with the maximum benefit to the people of the state. The specific beneficial uses and water quality objectives in the *Water Quality Control Plan for the Lahontan Region* (Basin Plan), including those that the SWRCB will be considering during the water quality certification process, are described in detail in chapter 4, "Water Quality."

This EIR and the information collected during the environmental analysis may also be used to satisfy permit requirements and to support environmental review and consultations required under other laws and regulations (table 1-1), such as the National Environmental Policy Act (NEPA), Section 404 of CWA, the federal and California Endangered Species Acts (ESA and CESA), the National Historic Preservation Act (NHPA), and Section 1600 of the California Fish and Game Code. Other specific agencies expected to use the EIR include the U.S. Army Corps of Engineers (USACE), U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game (DFG), California Department of Transportation (Caltrans), Lahontan Regional Water Quality Control Board (RWQCB), the state Office of Historic Preservation, and Nevada County Building Department.

Specific regulatory requirements and agency permitting for the project are described in detail in each resource chapter.

Table 1-1. Permits, Approvals, and Consultations that May Be Required for Project Alternatives

Permit/Consultation	Agency Action or Approval	Agency Authority
Federal		
Department of the Army Permit pursuant to Section 404 of the Clean Water Act	The U.S. Army Corps of Engineers (USACE) issues permits for discharge of dredged or fill materials into waters of the United States, including wetlands.	33 U.S.C. (USC) 1344
NEPA consultation pursuant to Section 7 of the Endangered Species Act (ESA)	USACE must consult with the U.S. Fish and Wildlife Service (USFWS) if their actions may affect species listed under ESA.	16 USC 1531 <i>et seq.</i>
Fish and Wildlife Coordination Act	USACE must consult with USFWS before granting a permit or license to modify surface water.	16 USC 661 <i>et seq.</i>
Executive Order 11988	USACE must prepare existing-floodplain assessments for proposed actions located on or affecting floodplains.	
Executive Order 11990	USACE must prepare wetland assessments for proposed actions located in or affecting wetlands.	
State		
Water Quality Certification pursuant to Section 401 of the Clean Water Act (CWA)	The State Water Resources Control Board (SWRCB) certifies that the applicant for a Department of the Army permit pursuant to Section 404 of CWA complies with state water quality standards.	33 USC 1341
National Pollutant Discharge Elimination System—General Construction Activities Permit	The Lahontan Regional Water Quality Control Board (RWQCB) issues permits to regulate discharge of stormwater from a construction site and limit discharge of other materials that contain hazardous substances in excess of established standards. Requires preparation of a stormwater pollution prevention plan.	33 USC 1342: Water Code Section 13370 <i>et seq.</i>
California Endangered Species Act (CESA)	California Department of Fish and Game (DFG) regulates the take of endangered species.	Fish and Game Code Section 2050, <i>et seq.</i>
Lake or Streambed Alteration Agreement	DFG enters into agreements with project applicants proposing changes in conditions of rivers, streams, lakes, or other regulated areas.	Fish and Game Code Sections 1600 <i>et seq.</i>
California Department of Transportation (Caltrans) Encroachment Permit	Caltrans issues encroachment permits for projects affecting areas within the rights-of-way of state-owned roadways.	Streets and Highways Code Sections 660 <i>et seq.</i>
State Historic Preservation Officer (SHPO) Consultation Under Section 106 of the National Historic Preservation Act	SHPO reviews and comments on any archaeological surveys. If resources are identified, the SHPO must be consulted to determine eligibility for listing to the National Register of Historic Places.	16 USC 470 <i>et seq.</i>
Local		
Nevada County Grading Permit	Nevada County Building Department issues permits for projects involving land grading within 20 feet of a watercourse. The department requires the project applicant to prepare an erosion and sediment control plan.	Nevada County Land Use Code Chapter V