

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

In the Matter of Water Quality Certification for the
THE FARAD DIVERSION DAM REPLACEMENT PROJECT
SIERRA PACIFIC POWER COMPANY

SOURCE: Truckee River

COUNTY: Nevada County

INTRODUCTION

This matter comes before the State Water Resources Control Board (SWRCB) upon Sierra Pacific Power Company's (SPPC) request for water quality certification under section 401 of the Clean Water Act (CWA). This document contains the project description, California Environmental Quality Act (CEQA) findings, Mitigation Monitoring and Reporting Plan (MMRP), and water quality certification for the reconstruction and operation of the Farad Diversion Dam Replacement Project. SPPC proposes to rebuild the Farad Diversion Dam to restore power generation from the 2.6 megawatt Farad Power Plant, in Nevada County near Floriston, California. The Farad Diversion Dam, located approximately 12 miles east of Truckee was destroyed in a flood in January 1997. The findings and certification conditions contained in this document apply to SPPC and any future owner and operator of the proposed Project.

PROJECT DESCRIPTION

The segment of the Truckee River in the project area is characterized by a steep, predominantly north-south-trending canyon that cuts through intermixed volcanic flows and consolidated stream-terrace deposits. Interstate 80 (I-80) and a railroad line follow the course of the river and are adjacent to the project area. The total project area is composed of a construction area and an operation area. The construction area is approximately seven acres; it is bordered on the north and west by Old Highway 40 and the Toiyabe National Forest (hereafter referred to as river left when facing downstream), and on the south and east by I-80 and a Caltrans right-of-way (hereafter referred to as river right when facing downstream). The operation area is downstream of the construction area and includes an approximately two-mile stretch of the Truckee River between the Farad Diversion Dam fish return and the Farad Power Plant. The majority of the land surrounding the two-mile stretch of river below the diversion is in the Toiyabe National Forest.

The proposed diversion structure consists of a concrete trapezoidal boat/debris chute that will be approximately five feet high and 35 feet wide with 1.5:1 side slopes and an adjustable-crest dam that will be constructed of a rubber fabric that will inflate or deflate with air pressure. When

Truckee River flows are 900 cubic feet per second (cfs) or less, the fabric will be elevated to create a pool of water sufficient to divert water into the intake structure. At high flows the rubber dam will be deflated and the boat/debris chute will convey water to provide downstream passage for boats, debris, and sediment through the dam. The channel bottom will be excavated approximately five feet to install the entire diversion structure, and large grouted core rock will be installed under the diversion structure and boat/debris chute. A maintenance path on river left will provide access to the proposed diversion structure. Additional access will be provided along the top of the diversion conduit.

On river left, an intake box structure will be constructed to convey water to the box diversion conduit. The screened intake structure will be operated to ensure even intake of water and water pressure across the intake screen. Approach velocities in the vicinity of the intake structure will be between two and four feet per second to minimize clogging of debris or entrapment of boats. The intake structure and diversion conduit are sized to accommodate enough water for the fish return (10-50 cfs), transportation losses (25 cfs), and power generation (400 cfs). Diversion for power will not occur until flow in the river is over 285 cfs, which includes 150 cfs instream flow, 10 cfs fish return, a minimum of 100 cfs for the powerhouse, and up to 25 cfs for flume losses. As river flow increases the inflatable dam will be operated to maximize the diversion for power generation.

On river right and integrated into the diversion structure, roughened channels will be constructed to allow fish migration. The slope will be held at approximately five percent to ensure fish passage over various river stages. The roughened channels include a low-flow area and a high-flow area. The low-flow channel will become inundated at flows of more than 1,500 cfs, but the high-flow channel becomes operational at flows of more than 800 cfs.

After passing through the intake structure, water will flow through a diversion conduit to a sediment detention channel. A large fine-plate self-cleaning fish screen will be constructed at the end of the sediment detention channel before the head of the flume. At the downstream end of the sediment detention channel a smooth-wall pipe will return juvenile fish back to the river. Two removable stop logs will be incorporated into the screen design and will be removed so that water will flow to the powerhouse when frazil ice is present. The final fish screen and return design, including the bypass for frazil ice conditions will follow United States Fish and Wildlife Service (USFWS) and National Marine Fisheries Service criteria.

An access road will be constructed on river left, from the cul-de-sac near the westbound I-80 Floriston exit to the top of the intake structure. This road will be closed to the public and used for maintenance activities associated with the diversion structure. Caltrans has indicated that it will provide an unfinished path on river right under I-80, at the upstream end of the project construction area. The project applicant will finish the path and make it a usable portage trail by placing and compacting small rock on the trail. This road will be closed to public vehicles but, at Caltrans' discretion, will be open to the public for foot traffic. The road will serve as a portage trail to provide boaters with an opportunity to avoid the boat/debris chute or scout the drop before deciding to boat the chute. The portage trail begins at an eddy under I-80. Signs will be posted warning boaters of the diversion and boat/debris chute.

A mechanically stabilized earth wall (MSE) and soil-nail wall is planned for river right. MSEs are composed of a mortared-rock face and welded-wire fabric used to stabilize dirt side slopes and prevent erosion. Soil-nail walls are composed of 15- to 20-foot-long anchors that extend into the underlying geology of an area and provide structural support to a slope. The MSE and soil-nail wall on river right are needed to provide an adequate area for construction dewatering, a temporary diversion channel, fish passage-and-drop structure construction, and to provide maintenance and portage access around the site. The base of the wall will be covered with armored fill after construction of the drop is complete. The upper part of the wall will remain exposed. During construction a temporary diversion channel will be built on river right outside of the active river channel. The temporary diversion channel will be installed by cutting the right bank and installing the MSE. Rock netting will be placed on the nearly vertical rock slope between Old Highway 40 and the intake structure. A rock catchment fence will be erected along Old Highway 40 to stop rocks from falling from Toiyabe National Forest land onto the project construction area. No soil-stabilization work is proposed for the river-left canyon wall uphill from Old Highway 40 or on Toiyabe National Forest property.

To further ensure slope stability between Old Highway 40 and the Truckee River, the project applicant will improve the existing drainage system from Old Highway 40 by constructing a drainage ditch west of Old Highway 40 and regrading Old Highway 40 with a one percent slope toward the ditch. An existing corrugated metal pipe culvert will be cleared of debris, facilitating drainage via the pipe rather than over Old Highway 40 onto the soil slope. During construction, measures implemented to control erosion will include timing construction during the dry season, staging equipment outside of the floodplain, construction of an armored temporary diversion channel, use of Baker tanks to precipitate sediments, use of sediment fences, use of wire rock netting on the steep unstable slopes along Old Highway 40, and use of soil nail walls and MSEs to stabilize slopes. Erosion and sedimentation control during construction will be described in the Storm Water Pollution Prevention Plan (SWPPP), which will contain Best Management Practices for erosion control, sediment control, and soil stockpile management. A restoration plan for areas disturbed by project implementation will be completed before construction and will be an integral part of the post construction erosion control strategy. The restoration plan will be designed to unify and expand the visual character of the site, stabilize riverbanks using vegetation, enhance fish and bird habitat, and enhance views of the proposed diversion facilities.

CALIFORNIA ENVIRONMENTAL QUALITY ACT FINDINGS AND MITIGATION MONITORING AND REPORTING PLAN

The SWRCB, as lead agency under CEQA, prepared an Environmental Impact Report (EIR) for the Farad Diversion Dam Replacement Project. The SWRCB issued the Draft EIR in March of 2002 and the Final EIR on April 10, 2003. This section addresses the SWRCB's responsibilities as the lead agency under CEQA, discusses the potentially significant effects of the proposed Project, makes the mandatory findings required by CEQA, and describes the mitigation and monitoring requirements for the Project.

CEQA establishes a duty for public agencies that approve projects to minimize environmental damage if feasible. (Pub. Resources Code, § 21002.1, Cal. Code Regs., tit. 14, §§ 15091, 15096,

subd. (g)(2).) For each significant effect of the proposed project identified in the EIR, the SWRCB must make one or more of the following findings:

- (1) changes or alterations have been required in, or incorporated into, the project which mitigate or avoid the significant effects on the environment;
- (2) those changes or alterations are within the responsibility and jurisdiction of another public agency and have been, or can and should be, adopted by that other agency;
- (3) specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or alternatives identified in the environmental impact report. (Pub. Resources Code, § 21081, Cal. Code Regs., tit. 14, § 15091(a).)

The Final EIR for the proposed Farad Diversion Dam Replacement Project identified potential environmental effects of the proposed project that would be environmentally significant absent project modifications or mitigation measures to reduce or eliminate those effects. Each potentially significant effect of the project identified in the Final EIR is described below, followed by a condition that implements the mitigation measure identified by the SWRCB in the final EIR for each impact. The SWRCB hereby adopts and incorporates as part of the Project all conditions set forth in these findings. Each potentially significant impact identified will be reduced to a level of less than significant with implementation of the condition(s). Therefore, all of the findings are made under Public Resources Code section 21081, subdivision (a)(1). Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid each potentially significant impact identified in the Final EIR as described in detail below.

In addition, if a public agency makes changes or alterations in a project to mitigate or avoid significant adverse environmental effects of the project, it must adopt a monitoring or reporting program to ensure compliance with the changes or alterations to avoid significant effects on the environment. The reporting or monitoring program shall be designed to ensure compliance during project construction and operation. (Pub. Resources Code, § 21081.6, Cal. Code Regs., tit. 14, § 15091, subd. (d).) The SWRCB prepared a MMRP based on the mitigation measures and other conditions of approval in the EIR. The SWRCB identified in the draft EIR certain environmental impacts that are less than significant because of conditions already included in the project. As required by CEQA, the MMRP also specifies a monitoring and reporting program to ensure that the identified conditions are implemented. This MMRP is incorporated as a condition of the water quality certification under Section 401 of the CWA. The specific requirements of the MMRP are listed below each CEQA finding, and general MMRP requirements follow. Accordingly, the SWRCB adopts the following findings and MMRP for the Farad Diversion Dam Replacement Project.

HYDROLOGY

Impact 3-2: Placement of structures within the 100-year flood hazard area that could impede or redirect flood flows.

Machinery, construction debris, supplies, temporary structures, and sediments carried away by flood flows may damage downstream bridges or structures and increase the severity of flooding by causing water to back up behind entrained debris. Structures may be damaged by moving debris or by increased hydrostatic pressure caused by accumulated debris that backs up water. Potential offsite damage caused by flood-entrained debris is considered a significant impact.

Implementation of Condition 3-1 would reduce this impact to a less-than-significant level.

Condition 3-1: Limit placement and construction of temporary structures in the 100-year floodplain

To ensure that structures do not impede or redirect flood flows, temporary structures, such as Baker tanks and debris piles, shall not be sited in the 100-year floodplain during the flood season (from November 30 through May 1). If a temporary bridge or other structure must be located in the floodplain, it shall not be buoyant and must be adequately anchored during the flood season to resist the hydrodynamic forces expected during a flood of up to a 100-year-recurrence interval.

WATER QUALITY

Impact 4-2: Degradation of water quality due to inundation of active construction area and associated equipment

Construction activities will occur in the floodplain and channel of the Truckee River. Flood flows may inundate the active construction area and associated equipment if construction occurs during a major flood event. Direct damage to construction equipment or inundation of equipment that causes a release of fuel, oil, hydraulic fluids, antifreeze, sanitary waste, or other substance is considered significant.

Implementation of Condition 4-1 would reduce this impact to a less-than-significant level.

Condition 4-1: Locate construction equipment and supplies outside the 100-year floodplain

SPPC or its contractors shall not store or locate aboveground storage tanks, chemical toilets, or any hazardous materials in the 100-year floodplain between December and April. Heavy equipment, such as excavators and bulldozers, shall be parked outside the normal high-water mark when not in use during the flood season. This measure will minimize the potential for floodwaters to contact equipment and cause a release of fuel, oil, hydraulic fluids, antifreeze, sanitary waste, or other substance.

Mitigation, Monitoring and Reporting

SPPC shall submit a monitoring and reporting construction plan to the Chief of the Division of Water Rights, and the Executive Officer of the Lahontan Regional Water Quality Control Board (LRWQCB). At a minimum the plan shall include:

- Actions that will be taken to ensure that temporary structures and debris piles are not sited in the 100-year floodplain during the flood season (November 30 through May 1). By November 30th of each year construction takes place, SPPC shall submit a report to

the Chief of the Division of Water Rights on the status of the construction site, including the location of all structures.

- Plans approved by a civil engineer, licensed in the State of California, for anchoring any temporary structures built in the floodplain, during the flood season, to protect against a flow up to a 100-year recurrence interval.
- Maps showing the location of any above-ground storage tanks, chemical toilets, or any hazardous materials
- Maps showing the location where heavy equipment, such as excavators and bulldozers, are parked when not in use during the flood season relative to the normal high water mark
- A spill response plan, including a list of the spill containment equipment that will be kept on site at all times during construction. The spill response plan must also include emergency response reporting requirements in the event of a release of fuel, oil, hydraulic fluids, antifreeze, sanitary waste, or other substance. This includes the requirement that SPPC notify the LRWQCB, SWRCB, and the Department of Fish and Game within 12 hours after any spill event. Notification may be by telefax, e-mail, or telephone, and should be followed up in writing within one week, including a description of all actions that were taken to contain the spill and avoid its impacts.

This plan may incorporate additional monitoring and reporting elements for the construction phase of the Project, described under conditions 7-1, 9-1, 11-1 through 11-4, 12-1, and the Water Quality section of Additional MMRP Requirements. SPPC shall also submit to the Chief of the Division of Water Rights any comments on the plan made by the Executive Officer of the LRWQCB. No construction may commence until the SWRCB, Chief of the Division of Water Rights has approved the construction monitoring and reporting plan.

Impact 4-4: Transportation losses adversely affecting beneficial uses

Replacement of the Farad Diversion Dam will result in up to 25 cfs of water being removed from the Truckee River and used to convey water to generate power and maintain the flume in a wet condition. The project applicant refers to these “transportation losses,” as water leaks or splashes from the flume while water is being conveyed to the power plant. The “lost” water ultimately evaporates, percolates, or returns to the Truckee River, downstream, at reduced volumes. During high flows these losses are negligible with respect to overall river volume. During critical water years with very low flows, these losses could be a substantial portion of the instream water. As power generation is reduced, the transportation losses are reduced; ultimately, when the turbines are shut down for an extended period of time, 5 to 7 cfs are needed to maintain the flume in wet condition in order to prevent damage to the flume. Transportation losses may adversely affect beneficial uses (i.e., Cold Freshwater Habitat) of the river because this water reduces the in-stream flow needed for aquatic resources. Because this effect would result in an impact to beneficial uses during low-flow periods, this impact is considered significant.

Implementation of Condition 4-2 would reduce this impact to a less-than-significant level.

Condition 4-2: Limit flume diversions during low-flow periods

When flows in the Truckee River are at or below 150 cfs, immediately upstream of the diversion dam, SPPC shall not divert more than 7 cfs to keep the flume wet, or will implement other measures to ensure that water it diverts at the Farad Diversion Dam is not wasted or used unreasonably. Other possible measures include sealing leaks in the flume with nontoxic sealant or lining the flume with high-density polyethylene (HDPE) plastic.

Mitigation, Monitoring and Reporting

Within one year from the issuance of this certification, SPPC shall develop and submit a gauging plan to the Chief of the Division of Water Rights, for approval. The plan will include methods for measuring the flow diverted at the Farad Diversion Dam for maintaining wetness of the flume when flows in the Truckee River are at or below 150 cfs immediately upstream of the diversion dam. The plan will also include requirements for reporting the results of gauging to the Chief of the Division of Water Rights. No water may be diverted at the Farad Diversion Dam until the Chief of the Division of Water Rights approves the gauging plan. This plan requirement may be incorporated into the monitoring and reporting requirements listed under Condition 6-3.

AQUATIC RESOURCES

Impact 6-3: Disruption of movement of adult and juvenile fish during construction

Movement of adult and juvenile fish past the construction area may occur at any time of year. The temporary diversion channel would provide the only route for upstream and downstream movements of fish during in-channel construction activities. If construction occurs over two or more years, the temporary diversion channel would be blocked at the end of each low-flow period and flow would be restored to the main river until the following year or low-flow period. Inadequate water depths, excessive water velocities, or physical barriers in the temporary diversion channel or main channel may impede fish passage during active or inactive construction periods. Because of the two-year duration of construction activities, this impact is considered significant.

Implementation of Condition 6-1 would reduce this impact to a less-than-significant level.

Condition 6-1: Ensure that adequate fish passage conditions exist in the temporary diversion channel and main channel during construction

In order to ensure that adequate fish passage conditions exist in the temporary diversion channel and main channel during construction, the temporary diversion channel shall be designed to meet the guidelines or biological criteria established by the resource agencies for passage of the target fish species. The proposed channel design must be reviewed and approved by US Fish and Wildlife Service (USFWS) and Department of Fish and Game (DFG). Key considerations will include channel dimensions, longitudinal and cross-sectional profiles, and hydraulic characteristics over the expected range of flows. Roughness elements may be needed to create fish resting areas. The channel shall also be designed to prevent stranding of fish when the channel is dewatered after construction. If construction requires more than one year, the final plans and specifications will include guidelines for avoiding or minimizing conditions that may impede fish passage or subject fish to other hazards during the inactive construction period (e.g., stranding following high-flow events). Before construction is suspended, a qualified biologist

shall survey the construction area to identify any significant fish passage impediments. During construction start and stop phases, or as needed, fish shall be moved unharmed from potential stranding areas prior to dewatering. Consideration will also be given to conditions that may cause stranding or increased predation on young fish. Measures will be taken to correct or minimize these before the inactive construction period.

Mitigation, Monitoring and Reporting

SPPC shall submit the following to the SWRCB prior to the start of construction:

- The USFWS and DFG reviews and approval of the temporary channel design.
- If construction will take more than one-year, a plan containing guidelines for avoiding or minimizing conditions that may impede fish passage, or subject fish to other hazards, during the inactive construction period. This plan shall identify the qualified fisheries engineer or biologist who will survey the construction area and identify significant fish passage impediments. The results of the survey shall be submitted to the SWRCB.
- A plan for removing fish in areas of potential stranding during construction. This plan shall identify a qualified party for conducting the work. SPPC shall submit a report on any fish moved during construction to the SWRCB within 30 days of the activity.

Impact 6-5: Mortality, or disruption of movements, of fish caused by project operation

Design of the fish passage facilities (e.g., fish screen, bypass, roughened channels) was based on the needs of Lahontan cutthroat trout. The fish-screening criteria established by DFG were used to guide development of the proposed fish screen and bypass design. Further evaluations of the proposed design are currently underway to refine the fish screen and bypass design. These refinements are expected to lead to a final design that meets the fish-screening criteria and addresses all site-specific conditions that would affect the performance of the fish screen and bypass over the expected range of operating conditions. Entrapment of fish in the flume or inability to pass through the roughened channels is unlikely because of the extensive design work done by fisheries biologists and engineers. Because the design has yet to be implemented and tested on-site, unforeseen circumstances may result in conditions that adversely affect the performance of the fish passage facilities and lead to significant impacts on fish, such as fish mortality or disruption of upstream and downstream movements. This impact is considered significant.

Implementation of Condition 6-2 would reduce this potential impact to a less-than-significant level.

Condition 6-2: Prepare and implement a monitoring and evaluation program to ensure long-term fish protection

In order to prevent an increase in fish mortality or disruption of upstream and downstream movements, SPPC shall develop and implement a fisheries monitoring and evaluation program. The program must ensure that all fish passage facilities are maintained and operated throughout the life of the project in conformance with design criteria and objectives established by the DFG. The program must include a schedule for specific fish protection objectives and descriptions of

monitoring and evaluation methods, performance criteria, and protocols for addressing problems and identifying corrective measures as needed. The program must include a schedule for start-up evaluations and regular monitoring of the project components. Monitoring activities shall include regular inspections of the diversion structure, intake structure, diversion conduit, roughened channels, and fish screen and bypass system to identify hydraulic conditions or other hazards (e.g., accumulations of sediment, frazil ice, debris) that could adversely affect performance of these facilities or harm fish during transit. Hydraulic testing shall be performed initially and at selected intervals to assess the performance of the fish passage facilities over a representative range of flows and hydraulic conditions. Hydraulic testing shall include measurements of approach and sweeping velocities across the face of the fish screen. A draft monitoring and evaluation plan will be prepared in consultation with DFG and submitted to the Chief of the Division of Water Rights for final approval prior to project operation. In the event that the Division Chief determines that performance criteria are not met, SPPC, in consultation with the DFG and the SWRCB, will implement corrective measures and further monitoring to ensure that these measures are effective.

Mitigation, Monitoring and Reporting

SPPC shall develop and implement a testing and monitoring program to ensure that all fish passage facilities are designed to, and will operate throughout the life of the project in conformance with design criteria and objectives established by the DFG. The program shall identify specific fish protection objectives and describe testing and monitoring methods, performance criteria, and protocols for addressing problems and identifying corrective measures as needed. SPPC shall prepare a draft monitoring and evaluation plan in consultation with DFG and submit the plan to the Chief of the Division of Water Rights for final approval prior to project operation. The plan shall include the following:

- Start-up evaluations – SPPC shall perform hydraulic testing initially and at selected intervals to assess the performance of the fish passage facilities over a representative range of flows and hydraulic conditions. Hydraulic testing shall include measurements of approach and sweeping velocities across the face of the fish screen. SPPC shall submit the results of start-up evaluations to the Division Chief within six months of testing.
- Monitoring activities – SPPC shall conduct regular inspections of the diversion structure, intake structure, diversion conduit, roughened channels, and fish screen and bypass system to identify hydraulic conditions or other hazards (e.g., accumulations of sediment, frazil ice, debris) that could adversely affect performance of these facilities or harm fish during transit. SPPC shall submit an annual report to the Chief of the Division of Water Rights by the end of each calendar year. The report shall include the results of monitoring and maintenance activities.
- In the event that the performance criteria are not met, SPPC, following consultation with DFG, shall implement corrective measures identified in the testing and monitoring plan. The annual report shall include a description of the corrective actions taken and shall include a recommendation and further monitoring necessary to ensure that these measures are effective. This additional monitoring shall be implemented and reported annually if the Division Chief so specifies.

Impact 6-6: Reduction in physical habitat availability in the operations area during operation

SPPC proposed releasing 60 cfs in the bypass reach for fisheries purposes. The SWRCB evaluated the impact of this flow on the cold freshwater habitat beneficial use using the habitat requirements of rainbow and brown trout and DFG's Physical Habitat Simulation Model (PHABSIM) flow recommendations. The EIR assessed the number of days that optimum flows would be met for rainbow trout spawning, rainbow trout adult rearing, and brown trout spawning using 60-, 100-, and 150-cfs bypass scenarios. Project diversions that maintain minimum bypass flows of 60 and 100 cfs are considered to have a significant impact on juvenile, spawning, and adult life stages of rainbow and brown trout in all water year types. A minimum bypass flow of 150 cfs provides the minimum habitat for rainbow trout spawning and incubation, and rainbow and brown trout rearing, and provides 100, 85, 90 and 89 percent of the maximum habitat values for juvenile rainbow trout, adult rainbow trout, spawning rainbow trout, and spawning brown trout, respectively.

Implementation of Condition 6-3 would reduce impacts on rainbow and brown trout to a less-than-significant level.

Condition 6-3: Maintain a minimum flow of 150 cfs or the total Truckee River flow, which ever is less, in the operation area

In order to maintain habitat for juvenile, adult, and spawning rainbow trout and brown trout life stages SPPC shall bypass below the diversion dam 150 cfs, or the flow of the Truckee River immediately upstream of the diversion dam, whichever is less, except that the SPPC may divert up to 7 cfs in order to keep its flume wet to avoid damage. SPPC may request the SWRCB to review additional information about the benefits for fish provided by the Truckee River Operating Agreement (TROA) and analyzed in the final TROA EIS/EIR. The SWRCB reserves jurisdiction in this water quality certification to revise this condition to incorporate or otherwise take into account relevant provisions of TROA, in its discretion, if information included in the final EIS/EIR for the TROA indicates that the revised mitigation is as or more effective. The SWRCB may revise this bypass condition pursuant to its reserved jurisdiction only after it provides notice and opportunity for hearing to the SPPC, the DFG, the USFWS, and any other affected parties the SWRCB deems appropriate.

Mitigation, Monitoring and Reporting

Within one year from the issuance of this Order, SPPC shall develop and submit a gauging plan to the Chief of the Division of Water Rights for approval. The plan shall include methods for measuring the flow diverted for power production and flume loss, the quantity of water returned through the fish return pipe, and the instream flow. The plan shall also include requirements for reporting the results of gauging to the Chief of the Division of Water Rights. The plan shall establish appropriate reporting intervals at no less than once a year. This plan may incorporate the monitoring and reporting requirements listed under Condition 4-2. No water may be diverted by the SPPC for this project until the Division Chief approves the plan and the SPPC installs the gauges to satisfaction of the Division Chief.

Impact 6-8: Stranding of fish and invertebrates as a result of flow fluctuations during project operation

Flow fluctuations in regulated streams are generally more rapid than those in natural systems. Abrupt flow changes may adversely affect fish and aquatic invertebrates. Rapid flow fluctuations in regulated streams may force fish to move from preferred habitats or isolate or strand fish in areas where they become vulnerable to predation, poor water quality, and desiccation. The early life stages of fish (eggs and fry) are particularly vulnerable because of their inability or limited ability to respond to rapid flow changes. Fluctuating flows can also reduce populations of aquatic invertebrates by direct exposure or by stimulating them to drift downstream.

Project-related flow fluctuations include those caused by seasonal and daily variations in flows as a result of normal operations, maintenance, and bypass flow requirements (e.g., recreation flows). Because these fluctuations could potentially strand fish and invertebrates, this impact is considered significant.

Implementation of Condition 6-5 would reduce this impact to a less-than-significant level.

Condition 6-5: Limit the magnitude and rate of flow fluctuations that are under control of the operator

SPPC shall adhere to the following general restrictions on flow fluctuations for the Truckee River Basin to prevent stranding and isolation of salmonid eggs, fry, and juveniles. These recommendations generally apply to controlled conditions (i.e., non-flood or non-spill conditions) when flows are equal to or less than twice the optimum flow for the species and life stage of concern.

- Flows will not be increased more than 100 percent during a 24-hour period;
- Flows will not be decreased more than 50 percent during a 24-hour period;
- Flow change during a 24-hour period will occur in a minimum of three roughly proportional amounts (i.e., 1/3 the total 24-hour change per 8 hours).

To evaluate the potential effect of ramping rates on the aquatic resources in the project area, SPPC shall develop and prepare a study plan in consultation with the DFG and approved by the Chief of the Division of Water Rights to quantify the number of fish stranded after ramping events in the affected reach. The objectives of the plan shall be to evaluate the recommended ramping rates, and, if warranted, revise these rates to avoid or minimize impacts on aquatic resources. Evaluations should be conducted during planned flow ramping events during the rainbow trout fry emergence and rearing period (June 1–September 30). If the level of stranding is determined to have a significant impact on fish populations, SPPC shall consult with the DFG to develop recommendations for revised ramping rates. The SWRCB reserves jurisdiction in this water quality certification to revise the ramping rates accordingly after the opportunity for a hearing.

Mitigation, Monitoring and Reporting

Prior to commencing operation of the Project, SPPC shall develop a study plan in consultation with the DFG to quantify the number of fish stranded after ramping events in the affected reach. SPPC shall submit the plan to the Chief of the Division of Water Rights for approval.

VEGETATION

Impact 7-5: Introduction of new noxious weeds or spread of existing noxious weed infestations

Ingress and egress of construction equipment could introduce new noxious weed species into the area, creating an impact on native vegetation communities. This impact is considered significant.

Implementation of Condition 7-1 would reduce this impact to a less-than-significant level.

Condition 7-1: Avoid dispersing noxious weeds into the project area

To avoid introducing or spreading noxious weeds into previously uninfested areas, SPPC shall implement the following measures as part of the proposed project:

- Educate construction supervisors and managers on weed identification and the importance of controlling and preventing the spread of noxious weeds
- Clean equipment at designated wash stations before entering the project construction area
- Seed used to stabilize soil will consist of a certified weed-free native mix
- Conduct a follow-up inventory after construction to verify that removal activities have not resulted in the introduction of new noxious weed infestations
- Mulch used to stabilize soil will consist of certified weed-free straw

Mitigation, Monitoring and Reporting

SPPC shall incorporate the requirements of Condition 7-1 described above into a Noxious Weed element of the construction monitoring and reporting plan listed under Condition 4-1. The plan shall provide:

- A report on education provided to construction supervisors and managers on weed identification and the importance of controlling and preventing the spread of noxious weeds.
- The locations of designated wash stations for cleaning equipment before entering the project construction area.
- A report on the type of certified weed-free native seed mix used, the location of application and quantity of seed used to stabilize soil.
- A report on a follow-up inventory for 2 growing seasons after construction to verify that activities have not resulted in the introduction of new noxious weed infestations. If new noxious weeds are identified, SPPC must submit a plan for control of the weeds to the SWRCB.
- A copy of the certification for weed-free straw used to stabilize soil.

RECREATION

Impact 9-1: Change in recreation opportunities during project construction

The presence of construction equipment, materials, and the temporary construction features represent an increased risk to public safety for recreational boaters passing through the temporary diversion. This increased risk exists especially in situations where boaters find themselves in unfamiliar navigational circumstances resulting from changes in flow or are unaware of temporarily changed instream conditions resulting from project construction. This impact is considered significant.

Implementing Condition 9-1 would reduce this impact to a less-than-significant level.

Condition 9-1: Implement appropriate measures to ensure public safety during project construction

In order to minimize risk of injury to recreational boaters within the construction area, SPPC shall install floating buoys or other appropriate equipment in the river upstream of the construction area to guide boaters to a take-out location or to allow them to scout the construction area for passage. SPPC shall place signs at an appropriate distance upstream of the construction area, warning boaters of the upcoming construction zone. SPPC shall install signs and make information available at put-in and take-out areas or other points of river access, informing boaters and other recreational users of the proposed construction schedule and components of project construction that may pose a challenge to navigation. SPPC shall provide easily updated information to the public regarding construction schedules and activities. This information will be provided in the form of a phone number with a message that is updated on a daily basis. In addition, SPPC shall work in coordination with the blasting contractor to ensure that the river is clear of boaters before blasting activities occur by posting signage and possibly stationing an employee above the I-80 Floriston bridge during blasting, and that boaters and other recreational users are informed of the times that blasting would occur by mailing notices to commercial river companies.

SPPC shall place appropriate fencing around points of ingress to the construction area; this fencing must prevent recreation users from unknowingly entering the construction area. Fencing and signage will direct boaters to the take-out areas.

To ensure the safety of boaters attempting passage through the project construction area, SPPC shall keep the temporary diversion channel clear of obstructions when construction is not occurring. Obstructions include construction equipment or materials (e.g., rebar) that impede navigation or compromise the safety of recreational boaters.

Mitigation, Monitoring and Reporting

SPPC shall incorporate the requirements of Condition 9-1 described above into a Recreation element of the construction monitoring and reporting plan listed under Condition 4-1. Prior to the commencement of construction, SPPC shall provide proof to the SWRCB that all of the safety measures listed above have been installed, and that a phone message system is operational.

Impact 9-4: Impairment of flows affecting designated beneficial uses (change in recreational boating opportunities during project operation)

Diversion of water from the river would alter the frequency with which flows equal or exceed the minimum rate necessary to conduct boating activities (a designated beneficial use). Kayakers and rafters require minimum streamflows of 400 and 600 cfs, respectively. Project diversions would reduce the number of days during which the 400 cfs minimum threshold for kayaking was met by an average of 55 percent. During the recreation season, the distribution of reduction in suitable kayaking days is highly variable, ranging from an average reduction of 6 days (16 percent) in May to an average reduction of 23 days (93 percent) in August (the highest monthly average reduction). The distribution of reduction in suitable rafting days is less variable than that for kayaking, ranging from an average reduction of 4 days (15 percent) in May to an average reduction of 10 days (43 percent) in April (the highest monthly reduction in days).

Most commercial rafting outfitters indicate that they will raft between Floriston and Farad if flows are more than 600 cfs, but that the downstream segment of the river from Farad to Verdi must have flows in excess of 800 cfs to support rafting. Peak-use periods for both rafting and kayaking occur primarily on weekends and holidays.

Recreational boating opportunities in the vicinity of the project facility (i.e., the boat chute and park and surf) will also change. With the restored Farad project, the available flows for “Park and Ride” play spot will be reduced by 435 cfs (400 cfs at the wheel, 10 cfs return flow, and 25 cfs transmission loss equals 435 cfs). This results in a 37 percent reduction. However, the diversion structure contains a boatable chute that will create favorable hydraulics for play boating. The boat chute will be more usable than the Park and Ride wave, and there will be times when these recreation areas run concurrently. This may help ease crowding during peak use periods and add variety to this whitewater destination.

Implementation of the proposed project would create a substantial reduction in the number of days during which minimum recreation thresholds for kayaking and rafting would be met. These changes in flow conditions would create a long-term reduction in potential boating opportunities in the operation area. Therefore, this impact is considered significant. Kayaking opportunities in the vicinity of the project facility would remain unchanged or improve slightly.

Implementation of Condition 9-2 or 9-3 would ensure overall recreational opportunities are maintained at an equal or higher level on the Truckee River to support beneficial uses and would reduce this impact to a less-than-significant level. Currently, SPPC has indicated that Condition 9-3 will be implemented. In the event that Condition 9-3 is not implemented prior to completion, Condition 9-2 will be implemented.

Condition 9-2: Maintain 1 weekend per month of recreational flows from April through September, when available

If flows are between 400 and 1,625 cfs in the Truckee River above Floriston, SPPC shall not divert water for power generation for the first weekend each month from April through September. When flows exceed 1,625 cfs SPPC shall maintain a minimum bypass flow of 1,500 cfs. Maintenance of flows on the weekend should be timed such that full flow (400 cfs) is available in the bypass reach by 8 a.m. on Saturday and is not diminished before 5 p.m. on Sunday. SPPC shall develop a whitewater boating use monitoring plan subject to approval of the Chief of the Division of Water Rights that shall evaluate future weekend boating use. If whitewater boating exceeds a threshold for crowding, as defined in the plan, a second weekend each month of boating flows shall be made available. SPPC shall provide information to the public by flow-phone or website regarding when weekend flow releases will be made. To assess the impact of weekend recreational flows on aquatic life, SPPC shall be required to develop a plan for monitoring macroinvertebrates and fish. Fish and macroinvertebrates shall be monitored for a minimum of five years after completion of the dam. If the results of monitoring reveal that weekend whitewater flows have a significant impact on fish and macroinvertebrate health, then the SWRCB shall at that time require alternative conditions to protect whitewater boating opportunities. If Condition 9-3 is implemented, the fish and macroinvertebrate monitoring shall not be required.

This condition reduces project effects to a less-than-significant level because it will minimize the loss of boating opportunities on the Truckee River, allow commercial boaters to extend their trip length during the boating season, and ensure a regular weekend flow when flows are suitable. Flows will not be suitable in dry years, but will be suitable in most months in normal and wet years.

Mitigation, Monitoring and Reporting

Prior to commencing operation of the Project, SPPC shall submit a plan to monitor whitewater boating use during the planned weekend boating events. The plan shall contain accepted protocols for monitoring the whitewater recreation use, and determining the level of crowding. If whitewater boating exceeds a threshold for crowding, as defined in the plan, SPPC shall provide a second weekend each month of boating flows. SPPC shall provide information to the public by flow-phone or website at least two weeks prior to the weekends when flow releases will be made.

To assess the impact of weekend recreational flows on aquatic life, SPPC shall develop a plan for monitoring macroinvertebrates and fish. Fish and macroinvertebrates shall be monitored for a minimum of 5 years after completion of the dam. If the results of monitoring reveal that weekend whitewater flows have a significant impact on fish and macroinvertebrate health, then the Chief of the Division of Water Rights shall at that time require alternative conditions to protect whitewater boating opportunities. This monitoring requirement may be incorporated into the monitoring requirements listed under Condition 6-2.

If Condition 9-3 is implemented, the fish and macroinvertebrate monitoring will not be required.

Condition 9-3: Contribute funds for the construction of a whitewater recreation park element of the Truckee River Recreation Plan

On behalf of the project, and in lieu of Condition 9-2, the Truckee Meadows Water Authority (TMWA) will contribute \$1.5 million toward the construction of Phase 1 of the Truckee River Recreation Plan. The money must be used for the construction of a whitewater recreation park (Truckee River Park @ Wingfield) on the Truckee River in Reno, Nevada. The funds will be transferred prior to, or concurrent with, commencement of construction of the Farad Dam. At the start of construction, SPPC will notify the SWRCB which condition they have selected (either Condition 9-2 or Condition 9-3). If construction of the whitewater park is not completed prior to the completion of the Farad Dam, then Condition 9-2 must be implemented until construction of the whitewater recreation park is complete.

A whitewater recreation park in downtown Reno is currently in the planning phases and will be designed, developed, and implemented by multiple agencies including the City of Reno, County of Washoe, U.S. Army Corps of Engineers, TMWA and others. TMWA is contributing to this mitigation measure because they are the likely future owner of the Farad Diversion Dam. Environmental compliance for the whitewater park will occur through the permitting process associated with section 404 of the Clean Water Act.

Mitigation, Monitoring and Reporting

At the start of construction, SPPC shall notify the SWRCB which condition they have selected (either Condition 9-2 or Condition 9-3). If construction of the whitewater park is not completed prior to the completion of the Farad Dam, then SPPC shall implement Condition 9-2 until construction of the whitewater recreation park is complete.

Impact 9-5: Change in angling opportunities and success during project operation

Changes in flow between 50 and 585 cfs caused by implementation of the proposed project would result in a narrower fishing corridor and reduced habitat availability for juvenile and adult rainbow and brown trout within the project operation area. Operation of the proposed project would decrease availability of habitat for fish species and selective life stages. Project operations would result in a decrease in fishing opportunities and potential angling success due to decreased habitat availability for adult rainbow trout and for both spawning rainbow and brown trout. Therefore, an adverse change in angling success in the project operation area is anticipated. This impact is considered significant.

Implementation of Condition 6-2, 6-3, and 6-5 listed previously would ensure that aquatic health is maintained and reduce this impact to a less-than-significant level.

NOISE

Impact 11-1: Temporary increase in noise levels resulting from general construction activities.

Construction of the proposed project would result in temporary increases in noise in the vicinity of the project construction area. Primary noise-generating activities would include excavation, grading, and scraping. Vehicle traffic traveling to and from the construction area may affect noise in the area, but to a lesser degree. There is a potential for residences within approximately 1,500 feet of active construction sites to be exposed to substantial increases in noise, assuming a background sound level of 50 dBA. This impact is considered significant.

Implementation of Conditions 11-1, 11-2 and 11-3 would reduce this impact to a less-than-significant level.

Condition 11-1: Notify property owners of project construction before construction begins

In order to prevent noise impacts on nearby residences, SPPC shall give notice of construction timing to the owners of all residential and other noise-sensitive properties within 1,500 feet of the project construction area prior to when construction activities will take place. SPPC shall send a notification packet to property owners that includes the intended construction schedule, the duration of noise-generating construction activities, and a telephone number of the Nevada County building department, to use for communicating noise complaints. Nevada County may contact the project applicant regarding construction noise if necessary.

Condition 11-2: Use appropriate sound-control devices on construction equipment

During construction, SPPC shall ensure that all equipment has sound-control devices no less effective than those provided by the manufacturer. All equipment shall be operated and maintained to minimize noise generation. No equipment shall have unmuffled exhausts.

Condition 11-3: Implement measures required by Nevada County grading permit

Throughout the construction period, SPPC shall implement appropriate additional noise mitigation measures, including, but not limited to, changing the location of stationary construction equipment, shutting off idling equipment, rescheduling construction activity, and installing acoustic barriers around stationary construction noise sources. SPPC shall implement appropriate measures at the request of Nevada County.

Impact 11-2: Temporary increase in noise levels resulting from blasting activities

Blasting of rocks would result in a temporary increase in noise levels during daytime hours. Sensitive receptors within about 1,500 feet of the blasting site could be exposed to substantial increases in noise, assuming a background sound level of 50 dBA. Because residences and properties exist within approximately 1,500 feet of the construction area, this impact is considered significant.

Implementation of Conditions 11-1 through 11-3 listed previously, and 11-4 would reduce this impact to a less-than-significant level.

Condition 11-4: Minimize effects of blasting on nearby residents

In order to minimize effects of blasting on nearby residents, SPPC shall restrict blasting to between 8:00 a.m. and 5:00 p.m. This restriction will ensure that blasting occurs when residents are more likely to be away from their homes or able to leave the area if necessary to avoid the noise effects of blasting. In addition, SPPC and its contractor(s) shall use the best available technology, such as blast mats or other techniques, to minimize noise generated by blasting.

Mitigation, Monitoring and Reporting

SPPC shall incorporate the requirements of Conditions 11-1, 11-2, 11-3, and 11-4 described above into a Noise element of the construction monitoring and reporting plan listed under

Condition 4-1. SPPC shall give notice of construction timing to the owners of all residential and other noise-sensitive properties within 1,500 feet of the project construction area prior to when construction activities will take place. SPPC shall provide a copy of the notification packet to the SWRCB at the time it is provided to the residents.

SPPC shall monitor noise levels at the project site during construction and blasting activities to ensure the conditions for noise reduction are effective. SPPC shall ensure that all equipment has sound control devices installed, that blasting occurs between 8:00 a.m. and 5:00 p.m., and the best available technology, such as blast mats or other techniques are used to minimize noise generated by blasting. SPPC shall report its noise monitoring results to Nevada County. If Nevada County staff determine noise is impacting local residents, SPPC shall change the location of stationary construction equipment, shut off idling equipment, reschedule construction activity, and/or install acoustic barriers around stationary construction noise sources, at the direction of Nevada County staff.

TRANSPORTATION

Impact 12-2: Increased construction-related traffic volume delay, and hazard on local and regional roadways

Construction-related activities would involve the use of heavy trucks on a daily basis. Although construction-related activities would only occur over a short period of time, these activities would result in greater-than-normal truck traffic along local roadways. In addition, these trucks would have the potential to increase roadway operation safety hazards on local roadways. Driver conflicts could occur between slower moving vehicles traveling along local roadways as additional heavy trucks travel to and from the project area. This impact is considered significant. Implementation of Condition 12-1 would reduce this impact to a less-than-significant level.

Condition 12-1: Implement a traffic safety plan

In order to reduce conflicts between motorists and construction equipment, SPPC shall require its construction contractor to prepare and implement a traffic safety plan (TSP) during the actual construction phase of the project. The TSP will provide for:

- Appropriate vehicle size and speed;
- Travel routes;
- Detour or lane closure plans;
- Flagperson requirements;
- Location of turnouts to be constructed;
- Coordination with law enforcement and fire control agencies;
- Coordination with Caltrans personnel (for work affecting state road rights-of-way);
- Emergency access to ensure public safety; and
- Traffic and speed limit signs.

Mitigation, Monitoring and Reporting

SPPC shall require its construction contractor to prepare and implement a TSP during the

actual construction phase of the project. The plan shall include the items listed above in Condition 12-1, and shall be submitted to the California Department of Transportation, California Highway Patrol, and SWRCB prior to beginning construction. The plan shall be modified at the request of these agencies. This monitoring and reporting requirement may be incorporated into the construction monitoring and reporting plan listed under Condition 4-1.

ADDITIONAL MONITORING AND REPORTING REQUIREMENTS

The Executive Director of the SWRCB certified the EIR based on mitigation measures, and conditions proposed by SPPC. Several impacts identified in the DEIR were determined to be less-than-significant because of conditions already included in the project. Pursuant to Public Resources Code, section 21081.6, these conditions will require monitoring or reporting to ensure that the conditions of approval are followed and are effective. Conditions contained in the DEIR that require monitoring and reporting are summarized below and followed by the monitoring and reporting requirements.

WATER QUALITY

Impact 4-1, 5-6, and 6-1 all identify potential impacts from construction activities that result in erosion and turbidity. These impacts were determined to be less than significant in the EIR because of design provisions built into the Project, temporary Best Management Practices (BMPs), the Storm Water Pollution and Prevention Plan (SWPPP) from the LRWQCB, and a hazardous spill prevention and recovery plan.

The following Mitigation, Monitoring and Reporting requirement will ensure that Impacts 4-1, 5-6, and 6-1 will be less-than-significant.

Mitigation, Monitoring and Reporting

Prior to the start of construction, SPPC shall obtain a SWPPP approved by the LRWQCB for the Project. SPPC shall prepare a monitoring and reporting construction plan that will contain all of the water quality and monitoring and reporting requirements for the construction of the Project. The SWRCB, Chief of the Division of Water Rights, and the LRWQCB, must approve the plan before SPPC can commence construction. The plan must include, at a minimum, the following elements:

- Monitoring of benthic macroinvertebrates - Prior to commencing construction, and again within two weeks after the end of construction, SPPC shall conduct a survey of benthic macroinvertebrates in one reach above and one reach below the diversion dam. Prior to conducting the survey, SPPC shall consult with the SWRCB, Division of Water Rights. The survey shall be conducted in accordance with the California Stream Bioassessment Procedure (point source), May 1999. The macroinvertebrates shall be identified using the California Stream Bioassessment Procedure taxonomic list and reported using the standard metrics. A final report shall be filed with the SWRCB, Division of Water Rights, within 90 days of the completion of the project.

- Water quality monitoring - The plan shall provide for daily monitoring once construction begins, at one location immediately above, and one location just below the diversion dam construction site. The parameters that shall be monitored shall include temperature, pH, dissolved oxygen, conductivity, turbidity, visible oil and grease, and suspended or settleable materials. The results of the monitoring shall be reported to the SWRCB, Division of Water Rights and the Lahontan Regional Water Quality Control Board, daily by electronic mail. A final water quality monitoring report shall be prepared within 90 days from the date of completion of construction and submitted to the SWRCB and LRWQCB.
- Cleaning and inspection protocol for equipment – All equipment using gas, oil, hydraulic fluid or other petroleum products shall be steam cleaned prior to its use in the river channel. All equipment shall be inspected for leaks prior to use in the river and shall be monitored for leakage. Equipment refueling shall only take place in a designated, contained area.
- Spill containment and reporting protocol – SPPC and/or their contractors will report spills of hazardous materials, including cement products immediately to the SWRCB, LRWQCB, and DFG. Spill containment and cleanup equipment, including oil containment devices for use instream, will be stored and maintained on-site during construction.
- The plan may incorporate the monitoring and reporting requirements listed under Conditions 4-1, 7-1, 9-1, 11-1 through 11-4, and 12-1.

GEOLOGY, SEISMICITY, AND SOILS

Impact 5-4 identifies on-or offsite Mass Movement impacts on the steep slope that adjoins the construction area on river left. This impact was determined to be less than significant in the EIR because the temporary construction measures and permanent design provisions included in the Draft EIR would control rockfall during construction, protect potentially vulnerable project structures from rockfall during project operation, ensure that project-related construction activities do not induce landslides or other types of large-scale mass movements, and ensure that project-related construction activities do not destabilize slopes adjoining the construction and create new mass movement hazards.

The following Mitigation, Monitoring and Reporting requirement will ensure that Impact 5-4 will be less-than-significant.

Mitigation, Monitoring and Reporting

SPPC shall ensure that the temporary and permanent design provision included in the project description and design in the Draft EIR are built. The soil nail walls, or Mechanically Stabilized Earth will be used as described in the Draft EIR for the temporary diversion channel, portage trail, concrete diversion conduit, and northern and southern access roads. SPPC shall submit as-

built drawings within 1 year of the end of construction as evidence that these structures have been constructed. If landslides, rockfalls, or mass movement of earth occur, SPPC shall submit a report to the SWRCB and LRWQCB within 60 days of the incident.

AQUATIC RESOURCES

Impact 6-7 identifies a potential impact to cold-water organisms if sustained summertime water temperatures reach an excess of 21°C (70°F). The results of a water quality model showed that the effect of the Project diversion on average water temperature at the downstream end of the diversion reach is minimal and therefore the EIR concluded that the impact is less-than-significant.

The following Mitigation, Monitoring and Reporting requirement will ensure that Impact 6-7 will be less-than-significant.

Condition 6-4: Verify water temperature effects of the project and implement mitigation measures if warranted

SPPC shall monitor water temperatures during a minimum of the first 3 summers of diversion operation to verify that the modeled temperature effects are correct. If the model is accurate and indicates mean daily temperatures do not increase by more than 0.5° C, no additional mitigation will be required. If temperature increases exceed 0.5° C, the SPPC shall determine, in cooperation with the SWRCB, Chief of the Division of Water Rights, the need for a water temperature management plan or other remedial measures. If warranted, SPPC shall develop such a plan, which would describe conditions under which potentially stressful water temperatures occur in the operation area, whether and to what extent the project contributes to these conditions, and criteria that would trigger operational changes to minimize project impacts. SPPC shall implement the water temperature management plan and/or other remedial measures.

Mitigation, Monitoring and Reporting

SPPC shall monitor water temperature for a minimum of the first three years of diversion from June through September. The temperature data will be used to verify the model and SPPC shall provide the results to the SWRCB, Chief of the Division of Water Rights within six months of the end of the three-year monitoring period. If modeled temperature increases by more than 0.5° C, the Division Chief shall determine whether SPPC must develop a water temperature control plan. This plan, if required by the Chief of the Division of Water Rights, shall include the range of climatic and hydrologic conditions when water will exceed a mean daily temperature of 19° C, a full range of options for controlling water temperature, and criteria that would trigger operational changes to minimize project impacts. If required, the Division Chief will determine which, if any options identified in the plan need to be implemented.

VEGETATION AND WETLAND RESOURCES

Impact 7-4 identified a potential impact to up to 4.0 acres of big sagebrush scrub from the construction area. The construction drawing provided by SPPC showed that direct loss of big sagebrush scrub would be less than 1.5 acres, and therefore, the EIR concluded that this impact was less-than-significant.

The following Mitigation, Monitoring and Reporting requirement will ensure that Impact 7-4 will be less-than-significant.

Mitigation, Monitoring and Reporting

SPPC shall map vegetation; including pine trees over 6 inches diameter at breast height (dbh), in the project site prior to the start of construction. SPPC shall clearly mark the trees over 6 inches dbh that will be removed. SPPC and/or its contractors shall not remove more than 3 pine trees greater than 6 inches dbh. SPPC shall adhere to its construction drawing and ensure that direct loss of big sagebrush scrub is less than 1.5 acres. Within six months of the end of construction, SPPC shall re-map the construction site and submit to the SWRCB a list of all protected trees greater than 6 inches dbh that were moved or disturbed during the construction of the Project, and the quantity of big sagebrush scrub loss.

AESTHETICS

Impact 13-2 identifies a potential impact to the overall visual quality of the Project construction area by introducing obtrusive features into viewsheds that are currently representative of a relatively intact and harmonious natural riparian landscape. The addition of these project elements into the foreground viewshed would be offset by the implementation of the restoration plan described in the project description, and therefore, the EIR concluded that this impact is less-than-significant.

The following Mitigation, Monitoring and Reporting requirement will ensure that Impact 13-2 will be less-than-significant.

Mitigation, Monitoring and Reporting

SPPC prepared a draft restoration design recommendations report to compensate for vegetation removed by construction activities. Prior to the end of construction SPPC shall provide a final restoration plan subject to the approval of the SWRCB, Chief of the Division of Water Rights. The restoration planting plan shall include:

- Further site analyses, such as soil fertility and texture evaluations to ensure the viability of the plant species at selected locations and success of the plantings (if needed).
- Recommendations for site preparation, plant propagation and collection, and irrigation applications.
- Monitoring requirements for restoration areas, including a monitoring schedule, monitoring methods, performance standards and success criteria, remedial measures, annual reporting, and as-built drawing preparation and submittal.
- The specific locations to which each parameter applies, performance standards and success criteria, remedial measures, monitoring schedules, and monitoring methods are identified in the following sections. A qualified botanist or ecologist shall perform the monitoring and reporting.
- Annual monitoring to determine the status of the plantings relative to the annual performance standards and success criteria. The performance standards and success

criteria shall be applied independently to each restoration area (i.e., areas A, B, C, and D). This shall be done to ensure that the desired restoration features are achieved in each planting area. Monitoring shall be conducted annually during the first 5 years following initial implementation.

- A qualitative assessment of site conditions within the restoration areas to identify the overall condition of the sites and to determine whether invasive nonnative plants are beginning to colonize the areas.
- Monitoring schedule - if the planting areas achieve the performance standards and success criteria in years 1–5 no additional monitoring shall be required. If the restoration areas achieve the success criteria before year 5, SPPC shall submit a request to the SWRCB, Chief of the Division of Water Rights to terminate additional monitoring. If the planting areas do not achieve the success criteria without human intervention, remedial actions shall be implemented, as necessary.
- Photodocumentation stations for the vegetation monitoring program to document site conditions during the annual vegetation surveys.
- Annual monitoring reports
- Remedial measures
- Restoration planting maintenance activities
- Method of irrigation, including watering basin maintenance
- Litter control
- Sign maintenance

ENVIRONMENTAL COMPLIANCE MANAGER

SPPC, or future owner of this facility, is required to implement this mitigation and MMRP as a condition of the issuance of the water quality certification for the construction and operation of the Farad Diversion Dam. SPPC or future owners of the facility will designate an environmental compliance manager responsible for the implementation of the MMRP. The environmental compliance manager may delegate duties and responsibilities for monitoring to construction contractors or other consultants as deemed necessary. The environmental compliance manager will also ensure that any inappropriate deviations in the procedures established in the MMRP are identified, corrected, and implemented according to the MMRP. The environmental compliance manager shall report any deviation and its correction to the SWRCB immediately.

SPPC shall conduct many of the monitoring and reporting requirements during the construction phase of the project. To oversee the monitoring procedures and ensure the success of the MMRP, the environmental compliance manager or designee shall conduct regular site visits to the areas under construction to ensure that all procedures specified in the MMRP are followed.

CONTRACTORS

A key feature contributing to the success of mitigation monitoring will be obtaining the full cooperation of contractors, construction personnel and supervisors. To ensure success, SPPC shall take the following actions:

SPPC shall write specific stipulations into contracts between contracting entities and the construction companies hired to conduct the work. In addition, SPPC shall write the mitigation and monitoring requirements into a separate agreement that all contractors and construction personnel must sign, denoting agreement. SPPC shall hold at least one preconstruction meeting per contracting company to inform construction personnel about the requirements of the mitigation and monitoring plan.

LOCATION OF RECORD

The SWRCB maintains all the documents and other material that constitute the record of the proceedings upon which the SWRCB's water quality certification is based. Records are located and available to the public at:

California Environmental Protection Agency Building
State Water Resources Control Board
Division of Water Rights
1001 I Street, 14th Floor
Sacramento, California 95814

Correspondence should be sent to:

State Water Resources Control Board
Division of Water Rights
P.O. Box 2000
Sacramento, California 95812-2000

The public is allowed access to records and reports used to track the monitoring program. Monitoring records and reports will be made available for public inspection by the SWRCB and SPPC. Information is available at the following locations:
Sierra Pacific Power Company:

Lee Simpkins
Sierra Pacific Power Company
PO Box 10100
Reno, NV 89520-0024
775-834-3238

State Water Resources Control Board:

California Environmental Protection Agency Building
State Water Resources Control Board
Division of Water Rights
1001 I Street, 14th Floor
Sacramento, California 95814
Attn: Russ Kanz
(916) 341-5341

Mailing Address:
State Water Resources Control Board
Division of Water Rights
P.O. Box 2000
Sacramento, California 95812-2000

WATER QUALITY CERTIFICATION FOR FEDERAL PERMIT OR LICENSE

BY THE EXECUTIVE DIRECTOR:

1. The Federal Clean Water Act (33 U.S.C. §§ 1251 - 1387) was enacted "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." (33 U.S.C. § 1251(a).) Section 401 of the Act requires every applicant for a federal license or permit to obtain water quality certification. (33 U.S.C. § 1341.) The State Water Resources Control Board (SWRCB) is the lead agency responsible for water quality certification in California. (Wat. Code, § 13160). In issuing water quality certification, the SWRCB certifies that the project will comply with specified provisions of the Clean Water Act, including water quality standards that are developed pursuant to state law and in satisfaction of section 303 of the Act. (33 U.S.C. § 1313.) The SWRCB may prescribe effluent limitations and other limitations necessary to ensure compliance with water quality standards and any other appropriate requirement of state law. (33 U.S.C. § 1341(d).) Conditions of certification become conditions of any federal license or permit for the project. (*Id.*)
2. The authority to issue or deny water quality certification is delegated to the Executive Director of the SWRCB. (Cal. Code Regs., tit. 23, § 3838, subd. (a).)
3. The California Regional Water Quality Control Boards have adopted, and the SWRCB has approved, water quality control plans (basin plans) for each watershed basin in accordance with state law and in satisfaction of section 303 of the Clean Water Act (33 U.S.C. § 1313), which requires the states to establish water quality standards. Each basin plan designates the beneficial uses of the waters to be protected within a given region, establishes water quality objectives to protect those uses, and sets forth a program of implementation.
4. The basin plan for the Lahontan Region, North and South Basins, identifies the following beneficial uses for the Truckee River: municipal and domestic supply, agricultural supply, industrial service supply, ground water recharge, freshwater replenishment, hydropower generation, water contact and non-contact water recreation, commercial and sport fishing, cold freshwater habitat, wildlife habitat, rare (rare, threatened, or endangered species), migration of aquatic organisms, spawning (spawning, reproduction, and development).

5. Protection of the beneficial uses identified in the basin plan requires maintenance of adequate instream flows as well as effluent limitations and other limitations on discharges of pollutants from point and nonpoint sources to the Truckee River and its tributaries.
6. The SWRCB as lead agency under the California Environmental Quality Act (CEQA) directed the preparation of an Environmental Impact Report (EIR) for this project (State Clearinghouse Number 2000042074). The SWRCB issued a Notice of Preparation on April 21, 2000, along with an Initial Study and Environmental Checklist. The SWRCB issued the Draft EIR in March of 2002, and received public comments from March 13 to May 13, 2002. The SWRCB held two public meetings on April 26, 2002, to provide an overview of the project and answer questions from the public and governmental agencies. The SWRCB issued the Final EIR on April 10, 2003. After reviewing and considering all of the comments and information, the SWRCB certified the EIR on June 25, 2003.

ACCORDINGLY, THE SWRCB CERTIFIES THAT THE FARAD DIVERSION DAM REPLACEMENT PROJECT PROPOSED BY SIERRA PACIFIC POWER COMPANY (SPPC), and as described in the final EIR will comply with sections 301, 302, 303, 306 and 307 of the Clean Water Act, and with applicable provisions of state law if SPPC complies with the following terms and conditions during the construction and operation of the Project certified herein.

1. The SWRCB may add to or modify the conditions of this certification as appropriate to implement any new or revised water quality standards and implementation plans adopted or approved pursuant to the Porter-Cologne Water Quality Control Act or Section 303 of the Clean Water Act.
2. Notwithstanding any more specific conditions in this certification, the project shall be constructed and operated in a manner consistent with all water quality standards and implementation plans adopted or approved pursuant to the Porter-Cologne Water Quality Control Act or Section 303 of the Clean Water Act.
3. Any significant changes to the project, including project operation, shall be submitted to the Chief of the Division of Water Rights for prior review and written approval.
4. Any proposals for project maintenance or repair work involving the river, including desilting of the dam impoundment, impoundment drawdowns to facilitate repair or maintenance work, and tailrace dredging, shall be filed with the Chief of the Division of Water Rights for prior review and approval.
5. The SWRCB may add to or modify the conditions of this certification as appropriate to coordinate the operations of this project with other water development projects where coordination of operations is reasonably necessary to achieve water quality standards or protect the beneficial uses of water.

6. SPPC shall take all reasonable measures to protect the beneficial uses of water of the Truckee River during construction and operation of the Project.
7. In order to protect the beneficial use designations identified in the Basin Plan, the authorized Project shall not add the following substances to surface waters:
 - a. Taste or odor-producing substances that impart undesirable tastes to domestic and municipal water supplies or odors to fish flesh or other edible products of aquatic origin or that cause nuisance or adversely affect beneficial uses;
 - b. Perceptible floating material including, but not limited to, solids, liquids, foams or scums which could result in degradation of water quality;
 - c. Suspended or settleable material in concentrations that cause a nuisance or adversely affect beneficial uses;
 - d. Oil, greases, waxes or other materials in concentrations that result in a visible film or coating on the surface of the water or on objects in the water;
 - e. Toxic pollutants present in the water column, sediments, or biota in concentrations that adversely affect beneficial uses; that produce detrimental response in human, plant, animal, or aquatic life; or that bioaccumulate in aquatic resources at levels which are harmful to human health; and,
 - f. Coliform organisms attributable to human wastes.
8. SPPC and/or their contractors shall not allow fresh concrete or grout that has not set to contact or enter surface water.
9. The conditions and monitoring and reporting requirements detailed above in the CEQA findings section are hereby incorporated by reference and are conditions of approval of this certification. Notwithstanding any more specific conditions in this certification, SPPC shall comply with all other conditions identified in the CEQA findings and MMRP listed above.
10. SPPC shall notify the LRWQCB and SWRCB when construction commences. Construction shall not commence prior to SWRCB and LRWQCB approval of the construction monitoring and reporting plan described in the CEQA findings and MMRP.
11. The SWRCB may revise ramping rates described in Condition 6-5 after the opportunity for a hearing if the SWRCB deems such revisions necessary from the results of the fish stranding study plan.
12. SPPC shall maintain a minimum flow of 150 cfs in the bypass reach below the diversion dam, or total Truckee River flow immediately upstream of the diversion dam, whichever is less, in the operation area. The SWRCB may, in its discretion, revise this flow

requirement to take into account relevant TROA provisions, if information in the final EIS/EIR indicates that a revised flow is more effective than Condition 6-3.

13. SPPC shall allow SWRCB and LRWQCB staff access to this site for inspection at any time, without notice, prior to and during construction.
14. SPPC shall construct and operate the Farad Diversion Dam Replacement Project as described in the Draft Environmental Impact Report, dated March 2002, and the Final Environmental Impact Report, dated March 2003.
15. SPPC shall obtain all necessary permits for the construction and operations of this project, and comply with the terms of those permit(s).
16. This certification does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish & G. Code, §§ 2050 – 2097), or the federal Endangered Species Act (16 U.S.C. §§ 1531 – 1544). If a "take" will result from any act authorized under this certification, SPPC shall obtain authorization for the take prior to commencing construction or operation of the Project. SPPC shall be responsible for meeting all requirements of the applicable Endangered Species Act for the project authorized under this certification.
17. In the event of any violation or threatened violation of the conditions of this certification, the violation or threatened violation shall be subject to any remedies, penalties, process or sanctions as provided for under state law. For purposes of section 401(d) of the Clean Water Act, the applicability of any state law authorizing remedies, penalties, process or sanctions for the violation or threatened violation constitutes a limitation necessary to assure compliance with the water quality standards and other pertinent requirements incorporated into this certification.
18. In response to a suspected violation of any condition of this certification, the SWRCB may require SPPC to furnish, under penalty of perjury, any technical or monitoring reports that the SWRCB deems appropriate, provided that the burden, including costs, of the reports shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports.
19. In response to any violation of the conditions of this certification, the SWRCB, may add to or modify the conditions of this certification as appropriate to ensure compliance.

The authorization to operate the project pursuant to this certification is conditioned upon payment of all applicable fees for review and processing the application for water quality certification and administering the State's water quality certification program, including but not limited to timely payment of any annual fees or similar charges that may be imposed by future statutes or regulations for the State's reasonable costs of a program to monitor and oversee compliance with conditions of water quality certification.

This certification is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to section 13330 of the Water Code and Article 6 (commencing with § 3867) of Chapter 28 of Division 3 of title 23 of the California Code of Regulations.

Celeste Cantú
Executive Director

Date:

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