

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

RESOLUTION R6T-2003-0036

**SIERRA PACIFIC POWER COMPANY
FARAD DAM DIVERSION REPLACEMENT PROJECT -
EXEMPTION TO WASTE DISCHARGE PROHIBITION CONTAINED IN THE
WATER QUALITY CONTROL PLAN FOR THE LAHONTAN REGION**

Nevada County_____

WHEREAS, the California Regional Water Quality Control Board, Lahontan Region finds:

1. On January 5, 2003, the Sierra Pacific Power Company (SPPC) submitted a complete Report of Waste Discharge to the Regional Water Quality Control Board, Lahontan Region (Regional Board) for the Farad Dam Diversion Replacement Project (hereinafter referred to as the "Project"). The purpose of the Project is to replace the existing diversion structure that was severely damaged during the January 1997 flood event that occurred on the Truckee River. The replacement diversion structure will divert river flows into an existing flume that delivers water to the Farad Hydroelectric Power Plant (2.6 megawatt capacity). Diversion rates will range between 5 cubic feet per second (cfs) and 475 cfs, depending upon Truckee River flow rates.
2. The Project site is located on the Truckee River in Section 30, Township 18 North, Range 18 East, M.D.M., near the community of Floriston, approximately 12 miles east of Truckee and 20 miles west of Reno on I-80. The Project area is shown in Attachment "A", which is made a part of this Resolution.
3. The proposed Project entails constructing 1) an adjustable crest diversion structure/dam; 2) a 75-foot long, 20-foot x 15-foot intake structure; 3) a 750-foot long diversion conduit; 4) a low-flow channel that will convey all river flows below 150 cfs; 5) a high-flow channel, 6) a fine-plate fish screen and return system located near the flume entrance; and 7) an access road/ portage trail. The Project also includes stabilizing eroding slopes on river left ("river left" is the left-hand riverbank when facing downstream).

The intake structure and associated diversion conduit is located on river left. The concrete structures will be built into the riverbank that consists of bedrock. The adjustable component of the diversion structure consists of a concrete-lined

trapezoidal channel (35-foot width across the top, 20-foot bottom width, 5-foot depth) with an inflatable rubber-fabric bladder as shown in Attachment "B", which is made a part of this Resolution. This channel will also provide for boating and debris passage and is referred to as the boater/debris chute inlet. The low-flow channel consists of a concrete-lined channel roughened with grouted boulders to mimic natural channel conditions and is approximately 75 feet in length. The high-flow channel will be similar in design to the low-flow channel and is intended to facilitate fish passage when hydraulic conditions in the low-flow channel impede fish movement. The high-flow channel also is located on river right ("river right" is the right-hand riverbank when facing downstream). Areas between the diversion conduit on river left, the adjustable component, and the low-flow and high-flow channels consist of grouted boulders embedded in the channel bottom. The proposed structures will be located approximately 200 feet upstream of the old wood crib dam structure that was severely damaged by the 1997 Truckee River flood flow and approximately 250 feet downstream of the Interstate 80 (I-80) Floriston Overcrossing (Bridge 17-62). Maintenance access to the proposed intake structure is proposed for river-left and will involve constructing a new road (approximately 70 feet from Caltrans right of way) from both the Floriston off-ramp via a new road and from Old U.S. Highway 40.

A temporary channel sized to accommodate a river flow of 2,000 cfs will be constructed in order to create a "dry" construction area for the diversion structure. Project construction within the current river channel will not begin if seasonal high river flows are predicted to exceed 2,000 cfs. The temporary channel will be located on river right, approximately 30-60 feet from the westbound lanes of I-80. A portion of the temporary channel will be converted to a portage path/maintenance road once the diversion structure, including the roughened channels, is completed. The remainder of the temporary channel will be restored to pre-project conditions.

The project area is approximately seven acres in size. The work within the 100-year flood plain will result in temporary and permanent land disturbance. Approximately 75,700 square feet of flood plain area will be temporarily disturbed and approximately 63,100 square feet of flood plain area will be permanently disturbed. Based upon the latest engineer's estimate, the Project involves a cut of 1,790 cubic yards and a fill of 1,750 cubic yards within the flood plain, resulting in a net reduction of 40 cubic yards of material from the flood plain.

The Project also involves a significant dewatering operation. SPPC anticipates using well points to temporarily lower the groundwater table creating dry working conditions within the river channel. Water will be pumped from the well points to the existing sedimentation basin located at the flume entrance on river left. The sedimentation basin will discharge back into the Truckee River if its capacity is exceeded. This discharge shall be regulated by the Regional Board's NPDES Limited Threat Discharge General Permit.

4. The Regional Board has adopted the *Water Quality Control Plan for the Lahontan Region* (Basin Plan). The Basin Plan specifies the following discharge prohibition:

“4.(c) The discharge or threatened discharge, attributable to human activities, of solid or liquid waste materials including soil, silt, clay, sand, and other organic or earthen materials to lands within the 100-year flood plain of the Truckee River or any tributary to the Truckee River is prohibited.”

5. The Basin Plan contains provisions for the Regional Board to grant an exemption to prohibition 4(c) for specific types of projects where the Regional Board can make the following findings. The Regional Board has determined that:

- a. *The Project involves the repair or replacement of existing structures.*

The purpose of the Project is to replace the diversion structure that was severely damaged during the 1997 flood event that occurred on the Truckee River.

- b. *The Project does not involve the loss of additional flood plain area or volume.*

The project will not result in a net loss in flood plain volume or area. The Project will result in a net increase of 4.1 acre-feet of flood plain volume and 5,200 square feet of flood plain area. This will be accomplished by expanding the 100-year flood plain into areas that are currently above the 100-year flood plain elevation at the project site. The new 100-year flood plain will be stabilized with a combination of boulders, cement and/or grout.

- c. *SPPC has demonstrated to the Regional Board that all Best Management Practices and mitigation measures have been incorporated into the project to minimize any potential soil erosion and/or surface runoff problems.*

SPPC will be implementing appropriate best management practices as identified in its Storm Water Pollution Prevention Plan (SWPPP) that was prepared and determined to be acceptable by Regional Board staff. The SWPPP identifies temporary and permanent erosion and storm water runoff controls that are intended to prevent problems associated with erosion and/or surface runoff.

6. An Environmental Impact Report (EIR) was certified for this project by the State Water Resource Control Board (SWRCB) on June 25, 2003 in accordance with the provisions of the California Environmental Quality Act (Public Resources

Code Section 21000 et seq.). The Regional Board has considered the EIR prepared and certified by the SWRCB. The following significant water quality impacts were identified in the EIR:

- a. **Significant impact** – 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.

Mitigation finding – Limit placement and construction of temporary structures in the 100-year flood plain.

To ensure that structures do not impede or redirect flood flows, temporary structures, such as Baker tanks, construction equipment, and stockpiled materials, will not be sited in the 100-year flood plain during the flood season (from November 30 through May 1). If a temporary bridge or other structure must be located in the flood plain, it will not be buoyant and will be adequately anchored during the flood season to resist the hydrodynamic forces expected during a flood of up to a 100-year-recurrence interval. This mitigation measure is cited as a condition of approval in the (proposed) Clean Water Act Section 401 Water Quality Certification (401 WQC) issued by the SWRCB.

SPPC has prepared a SWPPP as required by the NPDES General Permit for Storm Water Discharges Associated with Construction Activity (Storm Water General Permit) – State Water Resources Control Board Order No. 99-08-DWQ. The Regional Board is responsible for enforcing the Storm Water General Permit, which requires implementing the SWPPP. Section 3.1.9 of the SWPPP specifies that equipment and supplies will not be staged within the flood plain until the risk of seasonal flooding has passed. The Regional Board will ensure this mitigation measure is implemented through the implementation of a mitigation monitoring and reporting plan and/or other enforcement mechanisms.

Implementation of these mitigation measures will reduce this impact to a less-than-significant level.

- b. **Significant impact** – Degradation of water quality due to inundation of active construction area and associated equipment.

Construction activities will occur in the flood plain 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.

Mitigation finding – Locate construction equipment and supplies outside the 100-year flood plain.

Conditions specified in the 401 WQC issued by SWRCB (proposed) prohibits SPPC or its contractors from storing or locating aboveground storage tanks, chemical toilets, or any hazardous materials in the 100-year flood plain. The 401 WQC also requires that all heavy equipment, such as excavators and bulldozers, be parked outside the normal high-water mark when not in use during the flood season. This measure will minimize the potential for flood waters to contact equipment and cause a release of fuel, oil, hydraulic fluids, antifreeze, sanitary waste, or other substance.

The 401 WQC requires SPPC to submit a monitoring and reporting construction plan subject to approval of the SWRCB, Chief of the Division of Water Rights, and the Regional Board. The purpose of the plan is to identify construction, staging and inspection schedules and reporting procedures that are intended to ensure that activities necessary to implement the above-reference mitigation measure are occurring.

The 401 WQC requires that the project be constructed and operated as described in the Draft EIR and Final EIR. Section 2.6.2.4 of the Final EIR specifies that if seasonal high river flows are predicted to exceed 2,000 cfs, no construction activities shall be allowed within the river channel for that construction season.

SPPC has prepared a SWPPP as required by the Storm Water General Permit. The Regional Board is responsible for enforcing the Storm Water General Permit, which requires implementing an acceptable SWPPP. Section 3.1.9 of the SWPPP specifies that equipment and supplies will not be staged within the flood plain until the risk of seasonal flooding has passed. Section 7 of the SWPPP specifies that storage of hazardous materials, chemicals, fuels, and oils and fueling of construction equipment will not take place within 200 feet of any drainage, wetland, spring, or other water feature. The Regional Board will ensure these mitigation measures are implemented through the implementation of a mitigation monitoring and reporting plan and/or other enforcement mechanisms.

Implementation of these mitigation measures will reduce this impact to a less-than-significant level.

- c. **Significant impact** – Degradation of water quality due to dewatering activities.

Dewatering activities will occur in the flood plain and channel of the Truckee River. As discussed above, a diversion channel will be temporarily installed to divert surface waters from the construction area. The Discharger also intends to temporarily install and pump four well points around the perimeter of the construction area to create a relatively dry working environment. The groundwater from the well points will be pumped to the existing sedimentation basin and discharged directly from there back to the Truckee River. Any remaining surface water in the construction area (seepage from the diversion channel) is susceptible to degradation (increases in turbidity and suspended solids concentrations) from heavy equipment operations. Fine sediments may not have sufficient time to settle out of suspension in the sedimentation basin prior to discharge to the Truckee River. A direct discharge of sediment-laden water to the Truckee River associated with the dewatering activities is considered significant.

Mitigation Finding – Compliance with the dewatering plan and the NPDES Limited Threat Discharge Permit.

Regional Board staff has reviewed the dewatering plan for the Project. The dewatering plan involves five options for handling sediment-laden waters (to be used in combination or individually):

- 1) Use for fugitive dust control on the project site,
- 2) Pump water into the existing flume (which contains sediment traps and discharges to land),
- 3) Installation of a filtration system in or around the existing sedimentation basin,
- 4) The use of Baker tanks for sedimentation, and/or
- 5) Disposal to land at an alternate location to be approved by Regional Board staff.

Waters pumped from the well points will be clean once the wells have been purged. Purge water will be handled in one or more of the five options described above.

The Regional Board will regulate the discharge of dewatering activities under a NPDES Limited Threat Discharge Permit. This Permit will require the Discharger to develop a BMP plan, implement BMPs that will achieve compliance with water quality standards, monitor constituents of concern and report monitoring results in a timely manner. Compliance with the measures and requirements incorporated in the dewatering plan

and the Limited Threat Discharge Permit will reduce this impact to a less-than-significant level.

- d. The EIR identifies other potentially significant impacts and significant impacts that are not related to water quality. The Regional Board is not responsible for implementing the mitigation measures identified in the EIR or additional mitigation measures other parties have deemed necessary for impacts unrelated to water quality.
- 7. The Regional Board has notified SPPC and interested agencies and persons of its intent to adopt this Resolution.
- 8. The Regional Board, in a public meeting, heard and considered all comments and determined that the Project satisfies the exemption criteria stated above.

THEREFORE, BE IT RESOLVED THAT:

- 1. The criteria established for exemptions to the Basin Plan prohibition stated in Finding No. 5 above are satisfied for the SPPC Farad Dam Diversion Replacement Project.
- 2. The Regional Board hereby grants an exemption to the Basin Plan prohibition stated in Finding No. 4 for the SPPC Farad Dam Diversion Replacement Project.

I, Harold J. Singer, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of a Resolution adopted by the California Regional Water Quality Control Board, Lahontan Region, on July 9, 2003.

HAROLD J. SINGER
EXECUTIVE OFFICER

Attachments: A. Project Vicinity Map/Site Plan
B. River Channel Cross-Sections at Diversion Structure

RFM/cgT: Resolution/Farad Dam Exemption Resolution
[Pending/Nevada County/Sierra Pacific Power Company (SPPC) Farad Dam Project/WDID No. (new file)]