

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

In the Matter of Water Quality Certification For
FORDYCE DAM OUTLET STRUCTURE MODIFICATIONS
PACIFIC GAS AND ELECTRIC COMPANY
DRUM-SPAULDING PROJECT

FEDERAL ENERGY REGULATORY COMMISSION PROJECT NO. 2310

SOURCES: Fordyce Creek tributary to the Bear River

COUNTY: Nevada County

WATER QUALITY CERTIFICATION FOR FEDERAL PERMIT OR LICENSE

BY THE EXECUTIVE DIRECTOR:

1. The **PACIFIC GAS AND ELECTRIC COMPANY** (PG&E) proposes to replace the deteriorated portion of the existing concrete structure and the steel trashrack of the low level outlet intake structure at the Fordyce Reservoir Dam. Fordyce Reservoir is located on Fordyce Creek near Donner Summit east of Lake Spaulding in Nevada County. Fordyce Dam impounds approximately 49,900-acre feet of storage. The main function of the dam is to provide storage capacity and regulation of flow for downstream power generation, domestic and irrigation uses. The dam is a 145 feet high rock fill dam with an upstream concrete face. The dam crest is 1,220 feet long and 10 feet wide. The dam crest is at elevation 6406.6 (NGVD) and the reservoir's normal maximum operating level is elevation 6405.1 (NGVD).

The low-level outlet is located at the base of the right abutment. It consists of a concrete intake structure with steel trashracks, a 274 feet long 47-inch diameter concrete encased steel outlet pipe, and a 42-inch needle valve with a 54-inch diameter butterfly guard valve at the outlet. Normal operation releases, up to 590 cubic feet per second (cfs), are made through the 47-inch diameter low level outlet.

2. Deteriorated concrete components in the upper and front sections of the existing structure would be demolished and replaced with a new concrete retaining wall and side wing walls. The existing trashrack would be replaced with a new steel trashrack and supporting steel

frames. The existing steel trashrack at the top of the intake would be removed and re-installed.

3. Fordyce Reservoir will be lowered below the intake invert (elevation 6291) to facilitate construction of the proposed modifications. Once the reservoir is drawn down to elevation 6291, a small sand bag cofferdam and pump by-pass system would be installed along the upstream end of the intake channel to de-water the intake area for construction and by-pass of a short-term reduced minimum fish release (3 cfs) to Fordyce Creek below the toe of the dam.

Construction would include excavation of the backfill around the existing concrete structure. The upper portion of the existing concrete intake structure including the back retaining wall, side wing walls, and concrete column and buttress along the front of the structure would be demolished and removed. Concrete from the structure would be placed in an area outside the high water of the reservoir and within PG&E lands. The new outlet structure will be constructed in-place and the excavated area between the concrete retaining wall and the dam would be backfilled with compacted 1-1/2" size CalTans Class 2 aggregate base material. Maximum 6" size riprap would be placed to fill the area along the sides of the wing walls to match grade.

4. In conjunction with lowering of the reservoir for the proposed intake repair and modifications, holes will be drilled along the toe of panels No. 39 and No. 40 of the dam. Approximately six 4-inch diameter and 2-foot deep holes would be drilled in each panel to penetrate the existing concrete slab. The drilled holes will be visually inspected to verify the embankment condition and the extent and size of voids under the slab. The drilled holes and any identified voids will be filled with gravity fed sand-cement grout.
5. The construction area within the existing intake would be isolated and contained. Most of the proposed construction would be performed in the dry. Any wastewater generated from the concrete demolition or construction of the new intake structure would be pumped out and treated in a local settling basin before discharge into the existing stream or lake. Oil booms would be placed along the front of the intake for additional precaution for unanticipated spills. Absorbent materials would also be available on site for minor spill clean up.
6. Storage from three lakes (Meadow Lake - 4,841 acre feet, White Rock Lake - 570 acre feet, and Sterling Lake - 1,764 acre feet) which flow into Fordyce Reservoir, will be utilized to backfill the storage in the lake to an estimated level of five to six thousand acre feet as soon as construction is completed. This storage, coupled with fall runoff, is expected to bring Fordyce Reservoir up to an end of year carryover storage of 7,000-acre feet and will provide adequate water to meet minimum flow releases through the end of the year. In the event of the dry fall and early winter, minimum storage could approach the 3,000 acre foot level.

7. The construction schedule is from mid-August through mid-October 1999. A detailed description and drawings of the propose Fordyce Dam Outlet Structure Modifications Project prepared by PG&E is attached as Appendix I and is incorporated by reference.
8. The Federal Clean Water Act (33 USC §1251, et seq.) was enacted "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters" (33USC §1251(a)). Section 101(g) (33 USC §1251(g)) requires federal agencies to "cooperate with state and local agencies to develop comprehensive solutions to prevent, reduce and eliminate pollution in concert with programs for managing water resources". Section 401 (33 USC §1341) requires every applicant for a federal license or permit to provide the responsible federal agency with certification that the project will be in compliance with specified provisions of the Clean Water Act, including section 303 ("Water Quality Standards and Implementation Plans", 33 USC §1313); directs the state agency responsible for certification to prescribe effluent limitations and other limitations necessary to ensure compliance with the Clean Water Act and with any other appropriate requirement of state law; and provides that state certification conditions shall become conditions of any federal license or permit for the project.
9. The State Water Resources Control Board (SWRCB) is the agency responsible for water quality certification in California (section 13160 of the California Water Code); and has delegated this function to the Executive Director by regulation (section 3838 of Title 23 of the California Code of Regulations (CCR)).
10. On February 10, 1997, the SWRCB issued statewide water quality certification covering several classes of activities covered under U.S. Army Corps of Engineers (Corps) 404 Nationwide Permits (NWP) and at the same time denied certification without prejudice to several classes of NWPs that were found to individually or cumulatively have a significant effect on the environment. The NWP classes that were not certified by the SWRCB were found to result in more than minimal individual impacts or contribute to cumulative impacts as a result of the range of activities contemplated under those Nationwide Permits and therefore require certification on a project by project basis. PG&E has applied for a Section 404 NWP #3 (Maintenance) for the Fordyce Outlet Modifications. NWP #3 is a class of activities for which the State requires water quality certification on an individual project basis.
11. The SWRCB staff has reviewed the proposed project and conditions incorporated into the project to protect the environment pursuant to the California Environmental Quality Act (CEQA). The project qualifies for a Class 2 Categorical Exemption from the requirements of CEQA, pursuant to Article 19 Section 15302(c) "Replacement or Reconstruction of existing utility systems and/or facilities involving negligible or no expansion of capacity. The SWRCB has prepared a Notice of Exemption for this project.
12. The California Regional Water Quality Control Boards have adopted, and the State Board has approved, Water Quality Control Plans (Basin Plans) for each watershed basin in accordance with provisions of section 303 of the Clean Water Act, related to the

establishment of water quality standards and planning (33 USC §§1313). Basin Plans identify beneficial uses of the waters within each Region.

Fordyce Reservoir is located on the Fordyce Creek, a tributary of the Bear River thence the Feather River thence the Sacramento River. The California Regional Water Quality Control Board, Central Valley Region, (CVRWQCB) in its Water Quality Control Plan for the Central Valley Region, Sacramento River and San Joaquin River Basins has identified the beneficial uses of the Bear River and tributaries from its source as Municipal, Irrigation, Stock Watering, Hydropower Generation, Contact and Non-Contact Recreation, Canoeing and Rafting, Cold Freshwater Habitat, Warm Freshwater Habitat and Wildlife Habitat.

Protection of the chemical, physical, and biological integrity of waters of the state for instream beneficial uses identified in the Basin Plans requires maintenance of adequate stream flows as well as effluent limitations and other limitation on discharges of pollutants from point and nonpoint sources to navigable waters and their tributaries.

ACCORDINGLY, THE SWRCB CERTIFIES THAT THE FORDYCE DAM OUTLET STRUCTURE MODIFICATIONS PROPOSED BY PACIFIC GAS AND ELECTRIC COMPANY (PG&E) will comply with sections 301, 302, 303, 306 and 307 of the Clean Water Act, and with applicable provisions of state law provided PG&E complies with the following terms and conditions during the prosecution of the work certified herein.

1. Except for activities permitted by the Corps under Section 404 of the Clean Water Act, soil, silt or other organic or earthen materials shall not be placed where such materials could pass into surface waters or surface water drainage courses. The use of aggregate base material and riprap shall be clean rock that is free from visible organic or earthen material.
2. In order to protect the beneficial use designations identified in the Basin Plan, the authorized outlet structure modifications and replacement activities shall not add the following substances to surface waters:
 - a. Taste or odor-producing substances to impart undesirable tastes to domestic and municipal water supplies or odors to fish flesh or other edible products of aquatic origin or to 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.
3. When the FERC licensee initiates activities requiring installation of concrete or grout, fresh concrete or grout that has not set shall not be allowed to contact or enter surface water.
 4. All areas disturbed by project activities shall be protected from washout or erosion.
 5. The FERC licensee shall notify the SWRCB and the Central Valley Regional Water Quality Control Board immediately of any spill of petroleum products or other organic or earthen materials.
 6. On July 12, 1999, PG&E agreed to develop a Water Quality Monitoring Plan and Fish Rescue Action Plan for the Fordyce Reservoir and Fordyce Creek below the dam. The Water Quality Monitoring Plan and the Fordyce Reservoir Fish Rescue Program Action Plan are attached as Appendix II and are incorporated as terms and conditions of this certification by reference.
 7. The Licensee shall take all reasonable measures to protect the beneficial uses of water of Fordyce Reservoir and Fordyce Creek. PG&E shall maintain a reduced minimum flow release of 3 cfs at all times to Fordyce Creek below Fordyce Reservoir during construction of the Fordyce Dam outlet structure. At the end of construction, the minimum flows in Fordyce Creek shall be those identified in the FERC license for Project 2310.

This water quality certification is only for the PG&E project titled " FORDYCE DAM OUTLET STRUCTURE MODIFICATIONS ". This water quality certification cannot be used for any other FERC or U.S. Army Corps of Engineers action relative to FERC License No. 2310. This certification does not constitute the water quality approval necessary for the issuance of the new FERC license for Project No. 2310.



Walt Pettit
Executive Director

Date: 8/16/99

