

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

In the Matter of Water Quality Certification For
PARDEE DAM AND SOUTH SPILLWAY MODIFICATION
EAST BAY MUNICIPAL UTILITIES DISTRICT
LOWER MOKELUMNE HYDROELECTRIC PROJECT

FEDERAL ENERGY REGULATORY COMMISSION PROJECT NO. 2916

SOURCES: Mokelumne River

COUNTY: Amador and Calaveras Counties

WATER QUALITY CERTIFICATION FOR FEDERAL PERMIT OR LICENSE

BY THE EXECUTIVE DIRECTOR:

1. The **EAST BAY MUNICIPAL UTILITIES DISTRICT** (EBMUD) is proposing to modify the Pardee Dam and South Spillway to meet the requirements of the Federal Energy Regulatory Commission (FERC) for stability and safety. The Pardee Dam and South Spillway were constructed in 1928 at the west end of Pardee Reservoir, in Amador and Calaveras Counties. The reservoir, dam, and spillway are owned and operated by EBMUD under FERC license number 2916. Pardee Dam is a 345 foot high concrete gravity arch dam with a crest elevation of 575 feet. Two five foot high parapet walls are located at the top of the dam. The South Spillway is a concrete chute with a crest width of 850 feet and a length of 300 feet. Nineteen piers extend from the crest to support a bridge that crosses the spillway. The proposed projects include modifications to both the Pardee Dam and South Spillway. The upstream parapet wall of the dam will be raised by up to 2.5 feet, wing walls will be extended to connect the higher parapet wall to the canyon walls, and six guide piers will be installed in the South Spillway.
2. The FERC has determined that the Pardee Dam and South Spillway must be modified to pass the Probable Maximum Flood (PMF) without overtopping the dam. According to studies, the PMF would produce a peak inflow to Pardee Reservoir of 189,000 cubic feet per second (cfs), raising the water surface elevation to 581 feet resulting in an overtopping of the current parapet wall by one foot. Discharge through the spillway begins when the elevation reaches 568 feet. The channel immediately downstream of the spillway chute has been eroded by flood flows. The proposed guide piers will divert flows away from the chute walls and toward the center of the chute. This improvement to the spillway is needed to improve flow conditions and prevent undermining of the chute slab.

3. Construction of the parapet wall on the dam will involve chipping the existing wall top, drilling and grouting new reinforced dowels, placing formwork and reinforcing steel, pouring concrete, and removing the formwork. Wing wall construction will be similar, but include the excavation for footings. Construction will occur between November and May, to reduce the impact of intermittent road closures on the single lane road over the dam. The project is expected to take 2-3 months to complete.
4. Construction of the South Spillway guide piers will occur when there is not a threat of spilling from the reservoir. The guide piers will be extensions of six of the exiting bridge piers. They will be 13.5 feet tall and approximately 45 feet long. Construction of the piers extensions will include removing a portion of the existing slab, excavating until a suitable rock foundation for the pier is reached, and placing concrete for the footing and guide pier.
5. 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.
6. 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)).
7. 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. EBMUD has applied for a Section 404 NWP #3 (Maintenance). NWP #3 is a class of activity for which the State requires water quality certification on an individual project basis.
8. 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). EBMUD has completed an Initial Study and prepared a Mitigated Negative Declaration (SCH #94108019).

9. 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.
10. The Mokelumne River is a tributary to the San Joaquin 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 Pardee Reservoir as Municipal, Hydropower Generation, Contact and Non-Contact Recreation, Cold Freshwater Habitat, Warm Freshwater Habitat, Cold Water Spawning, Warm Water Spawning and Wildlife Habitat.
11. 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 limitations on discharges of pollutants from point and nonpoint sources to navigable waters and their tributaries.

ACCORDINGLY, THE SWRCB CERTIFIES THAT THE PARDEE DAM AND SOUTH SPILLWAY MODIFICATION PROPOSED BY EAST BAY MUNICIPAL UTILITIES DISTRICT will comply with sections 301, 302, 303, 306 and 307 of the Clean Water Act, and with applicable provisions of state law provided EBMUD 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 bank stabilization project 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. EBMUD shall be responsible for developing a water quality monitoring plan, and for monitoring water quality during construction. EBMUD shall submit the monitoring plan to the SWRCB and Central Valley Regional Water Quality Control Board at least 30 days prior to starting construction. Within 60 days of the completion of work, a monitoring report shall be submitted to the SWRCB and Central Valley Regional Water Quality Control Board.
 4. EBMUD shall follow the erosion control measures in the Pardee Dam South Spillway Contracts Document 1, Section 01125.
 5. Fuel and/or oil drums shall be stored in a lined, bermed area. If spills occur, contaminated soil will be removed immediately
 6. 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.
 7. All concrete removed during grinding and demolition of the parapet wall and spillway chute slab shall be contained. Control structures or methods shall be developed and utilized to prevent concrete from entering the reservoir or river.
 8. All areas disturbed by project activities shall be protected from washout or erosion.
 9. EBMUD shall notify the SWRCB and the Central Valley Regional Water Quality Control Board immediately of any spill of petroleum products, cement, or other organic or earthen materials.
 10. The Licensee shall take all reasonable measures to protect the beneficial uses of water of Pardee Reservoir and the Mokelumne River.

This water quality certification is only for the EBMUD project titled "PARDEE DAM AND SOUTH SPILLWAY MODIFICATION." This water quality certification cannot be used for any other FERC or U.S. Army Corps of Engineers action relative to FERC License No. 2916. This certification does not constitute the water quality approval necessary for the issuance of the new FERC license for Project No. 2916.



Ed Anton
Acting Executive Director

Date: **MAY 22 2000**