

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

In the Matter of Water Quality Certification for

**EL DORADO IRRIGATION DISTRICT
CAPLES LAKE OUTLET EMERGENCY REPAIR PROJECT**

Sources: Caples Lake tributary to Caples Creek thence Silver Fork of South Fork American River thence South Fork American River thence American River

County: Alpine County

Project Description

El Dorado Irrigation District (EID) Project 184 is located on the South Fork American River and its tributaries. The project was initially constructed to provide irrigation water, and hydroelectric operations began in 1924. EID purchased Project 184 from the Pacific Gas and Electric Company and in April 1999, the Federal Energy Regulatory Commission (FERC) approved the transfer of the federal license to EID to operate Project 184. In September 1999, the California Public Utilities Commission approved the transfer of project facilities and related assets, including water rights, to EID. EID now holds the following water rights on Caples Lake: License 438 (Application 654), License 2541 (Application 1441), and Permit 21112 (Application 5645B).

Caples Lake Reservoir covers 624 acres with an active usable storage of 20,338 acre-feet. Full pond elevation is at 7,797.7 feet National Geodetic Vertical Datum (NGVD). Caples Lake dam is 1,200 feet in length, with an 84.5 feet high gunite core, earthfill main dam, with a crest elevation of 7,804.4 feet NGVD. The discharge tunnel is 403 feet in length and is controlled by three 2.5-feet by 2.5-feet slide gates at different elevations in a gate shaft that releases flows to Caples Creek, then the Silver Fork of the American River and ultimately to the South Fork American River.

The Caples Lake outlet works have been in continuous operation, without any known replacement or major repairs for more than 85 years. EID staff has experienced recent and increasing operational difficulties, including binding, strain accumulation, lurching, and leakage through closed slide gates, debris blockages of the trash rack, and faulty operation of the lower slide gate. In June 2008, EID conducted a dive inspection of the outlet works of Caples Lake dam, which revealed a number of structural problems. Based on the inspection, EID concluded that any attempt to operate the lower slide gate carried a substantial risk of gate failure and that repair work at the outlet gate

valves was required. If the gate failed in an open position, the result would be an uncontrolled release of the entire active storage of Caples Lake. If it failed in a closed position, the upper slide gate would be the only means of releasing stored water from the lake.

EID is conducting the Outlet Emergency Repair Project (Project) to replace the damaged gate valve and trash rack, to conduct concrete repairs to the conduit, and to install new mechanical operators and floor stands in the gate control building. The Project will require (1) dewatering the outlet system, (2) lowering the reservoir level, and (3) installing a temporary cofferdam and flow bypass system. EID will also need to provide necessary health and safety protocols for the contractors working in the outlet works, including the vertical shaft and inlet and outlet conduits.

The temporary cofferdam will consist of two five to six feet high water-filled bladder dams installed in the reservoir bed approximately 1,200 feet upstream of the Caples Lake dam. The volume of water held behind the bladder dam will serve to provide bypass flows during the Project operations and carry-over storage through the winter. When the repairs are completed, inspected and tested, the cofferdam and flow bypass system will be removed and the outlet system re-watered. Winter releases and refilling of the reservoir will occur after the repairs.

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 101 of the Clean Water Act (33 U.S.C. § 1251 (g)) requires federal agencies to "co-operate with the State and local agencies to develop comprehensive solutions to prevent, reduce and eliminate pollution in concert with programs for managing water resources."
2. Section 401 of the Clean Water Act (33 U.S.C. § 1341) requires every applicant for a federal license or permit which may result in a discharge into navigable waters to provide the licensing or permitting federal agency with certification that the project will be in compliance with specified provisions of the Clean Water Act, including water quality standards and implementation plans promulgated pursuant to section 303 of the Clean Water Act (33 U.S.C. § 1313). Section 401 of the Clean Water Act directs the 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. Section 401 further provides that State certification conditions shall become conditions of any federal license or permit for the project. The State Water Resources Control Board (State Water Board) has delegated this function to the Executive Director by regulation. (Cal. Code Regs., tit. 23, § 3838, subd. (a).)

3. The California Regional Water Quality Control Boards have adopted, and the State Water Board has approved, water quality control plans (basin plans) for each watershed basin in the State. The basin plans designate the beneficial uses of waters within each watershed basin and water quality objectives designed to protect those uses. Section 303 of the Clean Water Act requires the states to develop and adopt water quality standards. (33 U.S.C. § 1313.) The beneficial uses, together with the water quality objectives that are contained in the basin plans, constitute State water quality standards under section 303.
4. The Central Valley Regional Water Quality Control Board (Central Valley Region) has adopted, and the State Water Board and the U.S. Environmental Protection Agency have approved, the Central Valley Region Water Quality Control Plan for the Sacramento River Basin and San Joaquin River Basin (Basin Plan). The Basin Plan designates the beneficial uses of waters to be protected along with the water quality objectives necessary to protect those uses.
5. The existing and potential beneficial uses of the South Fork American River and its tributaries in the Central Valley Region Basin Plan are municipal and domestic supply; irrigation; hydropower generation; contact water recreation including canoeing and rafting; non-contact water recreation; cold and warm freshwater habitat; wildlife habitat; and cold-water spawning, reproduction and development habitat.
6. The State Water Board has reviewed and considered the plans and project description provided by EID for the Project. Further, the State Water Board has considered the Central Valley Region Basin Plan, the existing water quality conditions, and project-related controllable factors.
7. EID's application for section 401 water quality certification for the Project was received at the State Water Board on August 22, 2008.
8. The State Water Board is issuing a 401 water quality certification because it has determined that the EID Project will be consistent with federal and state water quality standards. In issuing a water quality certification, the State Water Board certifies compliance with provisions of the Clean Water Act and the state's parallel Porter Cologne Water Quality Control Act, including all water quality objectives necessary to protect the designated beneficial uses of affected water bodies, as defined in the Central Valley Region Basin Plan. Pursuant to the Clean Water Act, the State Water Board must analyze potential project-related environmental effects on the specified waters prior to making a determination that the proposed retrofit projects will protect the designated beneficial uses of the affected water bodies as identified in the Basin Plan.
9. EID issued Resolution No. 2008-048 on July 14, 2008, finding that repair of the dam outlet gate is an emergency pursuant to Public Contract Code, section 1102, which defines emergency as "a sudden, unexpected occurrence that poses a clear and imminent danger, requiring immediate action to prevent or mitigate the loss or

impairment of life, health, property, or essential public services." The resolution also finds that the potential gate failure qualifies as an emergency under California Environmental Quality Act (CEQA) Guidelines section 15359, which defines emergency as "a sudden, unexpected occurrence, involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to life, health, property, or essential public services." EID, as lead agency, found that the Project is exempt from CEQA because specific actions are needed to prevent or mitigate an emergency pursuant to Public Resources Code, section 21080(b)(2) and CEQA Guidelines, section 15269(c).

ACCORDINGLY, BASED ON ITS INDEPENDENT REVIEW OF THE RECORD, THE STATE WATER BOARD CERTIFIES THAT THE EL DORADO IRRIGATION DISTRICT CAPLES LAKE OUTLET EMERGENCY REPAIR PROJECT will comply with sections 301, 302, 303, 306, and 307 of the Clean Water Act, and with applicable provisions of State law, if the Applicant complies with the following terms and conditions during the project activities certified herein:

1. This certification is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to Water Code section 13330 and California Code of Regulations, title 23, division 3, chapter 28, article 6 (commencing with § 3867).
2. This certification action is not intended and shall not be construed to apply to any discharge from any activity involving a hydroelectric facility requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license unless the pertinent certification application was filed pursuant to California Code of Regulations, title 23, section 3855, subdivision (b), and the application specifically sought a FERC license or amendment to a FERC license for a hydroelectric facility.
3. Notwithstanding any more specific conditions in this certification, the Project shall be 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. EID shall take all reasonable measures to protect the beneficial uses of the South Fork American River watershed.
4. 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 any State or federal law. For the 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.

5. In response to a suspected violation of any condition of this certification, the State Water Board may require the holder of any federal permit or license subject to this certification to furnish, under penalty of perjury, any technical or monitoring reports the State Water Board 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.
6. In response to any violation of the conditions of this certification, the State Water Board may add to or modify the conditions of this certification as appropriate to ensure compliance.
7. This certification does not authorize any act which results in the "take" of a threatened or endangered species or any act which is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (California Fish and Game Code, § 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C., § 1531 to 1544). If a "take" will result from any act authorized under this certification or water rights held by the EID, EID shall obtain authorization for the take prior to any construction or operation of the Project. EID shall be responsible for meeting all requirements of the applicable Endangered Species Act for the Project authorized under this certification.
8. EID shall comply with all California Department of Fish and Game Streambed Alteration Program requirements for the Project (California Fish and Game Code, § 1600 to 1607).
9. The authorization to operate the Project pursuant to this certification is conditioned upon payment of all applicable deposits for review and processing of the application for water quality certification and administering the State's water quality certification program provided under California Code of Regulations, title 23, section 3833.
10. EID shall provide to staff of the State Water Board and Central Valley Region access to Project sites during construction to document compliance with this certification and to answer any public inquiries.
11. The certification is valid for the duration of the Project. EID shall notify in writing the State Water Board Deputy Director for Water Rights and the Central Valley Region Executive Officer within seven days of project completion.
12. All Best Management Practices (BMPs) described in the application for water quality certification and the supplemental information furnished are hereby incorporated by reference and are conditions of approval of this certification. Notwithstanding any more specific conditions in this certification, EID shall comply with all measures described in the application for water quality certification.
13. No construction material, spoils, debris, or any other substances associated with this Project that may adversely impact water quality standards shall be located in a

manner resulting in a discharge or a threatened discharge to waters of the United States.

14. A minimum of 50 feet of setback from the water edge of any stream or reservoir shall be maintained to prevent runoff. No debris, soil, silt, sand, bark, slash, sawdust, rubbish, steel, cement or concrete washings, oil or petroleum products, or other organic or earthen material from any construction or associated activity of whatever nature, other than that authorized by this Order, shall be allowed to enter waters of the State.
15. Disturbance or removal of vegetation shall not exceed the minimum necessary to complete the Project.
16. Fresh concrete or grout that has not set shall not be allowed to contact or enter surface water.
17. All equipment using gas, oil, hydraulic fluid or other petroleum products shall be steam cleaned prior to its use in the waterway. All equipment shall be inspected for leaks prior to use and shall be monitored for leakage. Equipment refueling shall only take place in a designated, contained area. Spill and containment equipment (oil spill booms, sorbent pads, etc.) shall be maintained onsite at all site locations where such equipment is used.
18. BMPs for erosion, sediment and turbidity control shall be implemented and be in place at commencement of, during and after any ground clearing activities or any other Project activities that could result in erosion or sediment discharges to surface waters.
19. Project activities shall not cause turbidity increase in surface waters to exceed:
 - a. where upstream natural turbidity is between 0 and 5 Nephelometric Turbidity Units (NTUs), increase shall not exceed 1 NTU;
 - b. where upstream natural turbidity is between 5 and 50 NTUs, increase shall not exceed 20 percent;
 - c. where upstream natural turbidity is between 50 and 100 NTUs, increase shall not exceed 10 NTUs;
 - d. where upstream natural turbidity is greater than 100 NTUs, increase shall not exceed 10 percent.

These limits will be eased during in-water working periods to allow a turbidity increase over the upstream natural turbidity, as measured in the surface water 300 feet downstream of the working area.¹ In determining compliance with the above limits, appropriate averaging periods may be applied, provided that beneficial uses will be fully protected.

¹ The Project work area is defined as the area downstream of the bladder dams and upstream of Caples Lake dam, and the outlet pool immediately downstream of the Caples Lake dam.

20. In the event that Project activities result in the deposition of soil material or creation of visible plume in surface waters outside the work area, field grab samples for turbidity shall be collected every 4 hours, 100 feet upstream and 300 feet downstream of the work area, until such time as the plume is no longer visible. The results shall be reported to the State Water Board and Central Valley Region within two weeks of monitoring activities.
21. After completion of Project construction repairs, new gate installation, and dry testing, EID shall maintain and operate the Bypass Pumping System for delivering downstream flows until the work area upstream of the dam is refilled and flows through the dam are re-established at a rate equivalent to the required bypass flow.
22. Upon completion of the Project construction, all Project-generated debris, building materials, excess material, and trash shall be removed from the Project sites with disposal at appropriate waste disposal sites.
23. This certification is contingent on compliance with all applicable requirements of the Basin Plan, except as may be modified by the specific conditions of the certification.
24. EID shall provide a copy of this certification to the contractor and all subcontractors conducting the work, and require that copies remain in their possession at the work site. EID shall be responsible for work conducted by its contractor or subcontractors.
25. If, at any time, an unauthorized discharge to surface waters (including wetlands, rivers or streams) occurs, or any water quality problem arises, the associated Project activities shall cease immediately until adequate BMPs are implemented. The State Water Board and Central Valley Region, Rancho Cordova Branch Office, shall be notified promptly, within 24 hours after the unauthorized discharge or water quality problem arises.
26. All project work shall be conducted as described in this Order and in the application submitted by EID. If the State Water Board is not notified of a significant alteration to the project, it will be considered a violation of this Order, and EID may be subject to State Water Board enforcement action.
27. Any modifications of the proposed Project, including plans for off-site disposal of excavated material, may require submittal of a new Clean Water Act Section 401 Water Quality Certification application. EID must submit any change to the Project, including Project operation that would have a significant or material effect on the findings, conclusions, or conditions of this certification, to the Executive Director of the State Water Board for review and written approval.

28. The State Water Board 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.
29. The State Water Board reserves authority to modify or revoke this certification if monitoring results indicate that the Project would violate water quality objectives or impair the beneficial uses.

Tom Howard for DR
Dorothy Rice
Executive Director

9/4/08
Date