

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

In the Matter of Water Quality Certification for

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

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

County: Amador 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 holds the following water rights and claim of entitlement on Silver Lake: License 2541 (Application 1441), Permit 21112 (Application 5645B), and Statement S004708.

Silver Lake Reservoir covers 691 acres at full pond elevation with an active usable storage of 8,640 acre-feet. Silver Lake dam is a rock and earth filled dam 280 feet in length and 30 feet high, with a crest elevation of 7,261 feet. The existing low level outlet consists of a single, manually operated, vertical sluice-type gate mounted on the outlet pipe that transits the dam. The gate, operating stem, and operator stand are mounted atop a 3.5 by 3.5 feet rectangular laced angle steel tower that sits on a concrete slab. The operating deck is accessed from the dam crest via a steel walkway that is affixed to the masonry parapet. The gate seals a 32 inch diameter steel pipe that transitions to 28 inches through the dam and is encased in concrete at the outlet face of the dam. A 6 inch vertical air vent pipe rises within the structure. There is a four-sided steel trash rack that is mounted to the vertical legs of the tower, and extends upward 18 feet. A vertical staff gage is attached to the outlet tower. The outlet pipe releases flows to the Silver Fork of the South Fork American River.

The Silver Lake outlet works have been in continuous operation with minimal maintenance for more than 85 years. The slide gate system and outlet tower appear to be original except for the retaining pin for the gate lifting bar, which was replaced in 2006 due to corrosion failure. In June 2008, EID conducted a dive inspection of the

outlet works of Silver Lake dam, which revealed a number of structural problems. The steel bracing and other sections of the outlet tower, and the valve stem showed significant corrosion and pitting. Based on this inspection, EID concluded that repair work at the outlet gate was required because of potential failure due to sudden, unexpected toppling of the tower due to wave action, wind, impact or other stresses. If the tower is toppled and the gate valve becomes inoperable in an open position, an uncontrolled release of the entire active storage of Silver Lake could occur. If the gate valve becomes inoperable in a closed position, water cannot be released until the reservoir level is within 11 feet of maximum water surface elevation.

EID is conducting the Silver Lake Outlet Emergency Repair Project (Project) to replace the outlet tower, gate, gate frames, gate stem, trash rack, and the mechanical operators. There also may be a need for miscellaneous concrete repairs, as yet undetermined, to restore safe operation of the outlet structure. The Project will require dewatering of the outlet system, and installation of a temporary cofferdam and flow bypass system. An overflow parking area on top of the dam will be established as the staging area for construction equipment and materials. Most of the Project area is paved, which minimizes the potential for erosion. Snow removed from the work and staging areas will be stored at the far end of the parking area. Removal of trees and other vegetation will not occur for this Project. A skip box will be transported by crane and will be used for debris generated during the outlet repairs. Less than 10 cubic yards of debris are estimated to be generated during the repair operations. Debris will be transferred to dump trucks for off-site disposal. EID will provide the necessary health and safety protocols for the contractors working in or near the outlet works.

A double bladder dam and a pumped streamflow bypass system will be installed to isolate the work area and maintain constant flows to the Silver Fork of the South Fork American River. A duplicate pumping system will be installed to provide backup in the event of failure of the primary pumping system. The temporary cofferdam will consist of two eight feet high bladder dams installed in the reservoir bed approximately 100 feet upstream of the Silver Lake dam. The bladder dams will be filled with water from the reservoir. Leakage and free draining water downstream of the bladder dams will be captured, and if the water is turbid, the leakage water will be pumped to settling tanks on top of the dam in the staging area to capture heavy solids before the water is pumped back upstream of the bladder dams. When the repairs are completed, inspected and tested, the cofferdam will be removed and the outlet system re-watered. The flow bypass system will remain in place until flow has been reestablished through the outlet gate.

EID proposes to reduce the time needed for construction activities by pre-fabricating as much of the tower system as possible. Repairs will be conducted from February 2009 to April 2009, which will provide sufficient time to complete the Project without affecting lake level targets. No extraordinary drawdown of the reservoir is anticipated because the proposed work will coincide with the normal annual drawdown cycle and before reservoir refill commences for the year. Flows of less than four cubic feet per second, which is the minimum flow requirement in EID's FERC license for Project No. 184, are not anticipated.

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).) Pursuant to Water Code Section 13160, the State Water Resources Control Board (State Water Board) is designated as the state water pollution control agency for all purposes stated in the Federal Water Pollution Control Act and all other federal acts.
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 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. Because EID's Silver Lake Outlet Emergency Repair Project requires a federal section 404 permit, EID is required to obtain section 401 certification from the State Water Board. EID's application for section 401 water quality certification for the Project was received at the State Water Board on December 4, 2008.
8. The State Water Board has determined that the EID Project will be consistent with federal and state water quality standards. In issuing a section 401 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 project will not unreasonably affect the designated beneficial uses of the affected water bodies as identified in the Basin Plan.
9. EID determined that the Project is exempt from CEQA and invoked a Class 1, Section 15301 (m) categorical exemption for minor repairs to existing dams under the supervision of the Department of Water Resources. (Cal. Code Regs., tit. 14, § 15301, subd. (m).) After its own independent review of the project, the State Water Board likewise finds that the Project qualifies for a Class 1 exemption from CEQA, pursuant to Section 15301, subdivision (m).

ACCORDINGLY, BASED ON ITS INDEPENDENT REVIEW OF THE RECORD, THE STATE WATER BOARD CERTIFIES THAT THE EL DORADO IRRIGATION DISTRICT SILVER 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 (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. 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. Fresh concrete or grout that has not set shall not be allowed to contact or enter surface water.
16. 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.
17. 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.
18. EID shall provide for approval by the Deputy Director for Water Rights prior to the start of construction activities a plan for proper disposal of sediment that accumulates in the settling tanks, and for construction debris from the outlet work area. This plan shall provide, at minimum, the identification of off-site disposal areas, methods for controlling run-off of water laden sediment, and a method or


rationale for assuring excavated sediment does not contain pollutants and/or contaminants.

19. Project activities shall not cause an increase in turbidity downstream of the Project site that is greater than 20% above background turbidity levels or that causes an increase of more than 10 Nephelometric Turbidity Units (NTUs) above background.
20. To determine compliance with the turbidity limits, the following monitoring activities will be required.
 - Daily turbidity monitoring shall begin as soon as construction activities commence in the lakebed upstream of Silver Lake dam, and shall continue until 48 hours after flow releases have resumed through the outlet structure.
 - If monitoring data collected 48 hours after flow resumes through the outlet structure indicate increased turbidity, monitoring shall continue until the data show that turbidity levels are at or near background levels.
 - Turbidity may be monitored using an in-situ turbidity probe or by collecting grab samples for immediate turbidity measurement upon collection.
 - Monitoring shall occur three times daily: 1) prior to beginning work in the morning to establish daily background turbidity values, 2) midday, and 3) mid to late-afternoon.
 - Sampling locations will include: 1) within Silver Lake near the intake to the pump(s) that provide the bypass flows, and 2) downstream of Silver Lake dam below the point at which the bypass flows enter the channel.

Turbidity monitoring will not be required during the time that the outlet gates are closed and/or the outlet is plugged and the work area is isolated. Turbidity monitoring will, however, be required while the bladder dam is being removed and the outlet area is re-watered.

21. Monitoring results shall be reported to the Deputy Director for Water Rights and the Central Valley Region Executive Officer within four weeks of Project completion.
22. 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, any suspended sediment has settled and flows through the dam are re-established at a rate equivalent to the required bypass flow.
23. 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 as described in the approved disposal plan.

24. 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.
25. 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.
26. If, at any time, an unauthorized discharge to surface waters (including wetlands, rivers or streams) occurs, or any water quality problem arises (including increased turbidity in excess of limits in this certification), the associated Project activities shall cease immediately until adequate BMPs are implemented. The State Water Board and Central Valley Region, Sacramento Office, shall be notified promptly, within 24 hours after the unauthorized discharge or water quality problem arises.
27. 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.
28. 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.
29. 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.
30. 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.



Dorothy Rice
Executive Director

1.28.09

Date