

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

In the Matter of Water Quality Certification for the

**SOUTHERN CALIFORNIA EDISON
TIOGA LAKE DAM OUTLET AND GRIZZLY REPAIR PROJECT**

**LEE VINING HYDROELECTRIC PROJECT
FEDERAL ENERGY REGULATORY COMMISSION PROJECT NO. 1388**

SOURCES: Glacier Creek

COUNTY: Mono

WATER QUALITY CERTIFICATION FOR FEDERAL PERMIT OR LICENSE

BY THE EXECUTIVE DIRECTOR:

I. Project Description

Southern California Edison Company's (SCE or Applicant) Tioga Lake Dam Outlet and Grizzly Repair Project (Project) consists of improvements and repairs to the Tioga Lake main dam outlet works, which are part of the Lee Vining Hydroelectric Project (Federal Energy Regulatory Commission [FERC] Project No. 1388). The Lee Vining Hydroelectric Project is located in the Mono Lake Basin, along Lee Vining Creek, approximately 15 miles west of Lee Vining, California.

Tioga Lake is located in the Inyo National Forest, outside the Ansel Adams Wilderness Area, at an elevation of 9,650 feet above mean sea level on the eastern slope of the Sierra Nevada mountain range, in Mono County, California (See Attachment A: Figure 1 – Project Location). Tioga Lake is a man-made waterbody fed by natural runoff from Glacier Creek and a small unnamed stream. Tioga Lake drains into Ellery Lake, which is the intake and regulating reservoir for the Lee Vining Hydroelectric Project's Poole powerhouse. There are no man-made reservoirs or diversions upstream of Tioga Lake. At full pool, Tioga Lake has a surface area of 73 acres and a gross and usable storage capacity of 1,254 acre-feet.

Tioga Lake is impounded by a timber-face, rock-fill, 27-foot high and 270-foot long main dam and a 19-foot high and 50-foot long auxiliary dam. Visual observations of the redwood planks lining the upstream face of the main dam indicate deterioration, leading to an increase in the porosity of the wood face. The increased porosity is causing water to seep through the main dam. Monitoring data indicates that seepage is increasing over time. SCE has made commitments to FERC and the California Division of Safety of Dams to mitigate the increasing seepage.

In 2014 SCE installed a geomembrane along the upstream side of Tioga Lake's main dam to mitigate seepage. However, SCE did not install a geomembrane liner in the immediate vicinity of the outlet works because the concrete surrounding the outlet pipe and the grates on the steel trash rack (grizzly) were deteriorated and required additional repairs. The extent of repairs cannot be fully determined until the lake level is drawn down and sediment and rip rap are removed so the

existing plinth (i.e., base of the dam) and outlet structures can be carefully inspected. The Project includes making the needed repairs to the outlet structure and installing a geomembrane on the surface of the upstream side of the dam in the immediate vicinity of the outlet works. The repairs and installation of the geomembrane are expected to minimize seepage, retain the integrity of the dam and outlet structure, and improve Tioga Lake operations. All work associated with the Project will occur in previously disturbed areas located within the FERC boundary for the Lee Vining Hydroelectric Project.

Project Activities

Project construction consists of repairs to the deteriorated areas of the main dam outlet works and installation of a geomembrane liner on the upstream face of the dam in the vicinity of the outlet works. The Project includes the following steps:

- *Lake Draining.* Tioga Lake will be drained to expose the upstream side of the main dam and outlet works. The outlet valve will remain open for the duration of the Project, thus allowing all natural flow to pass through to Glacier Creek. The FERC license requires SCE to maintain a minimum instream flow into Glacier Creek of two cubic feet per second (cfs) or the natural inflow, whichever is less. Dewatering Tioga Lake has the potential to cause adverse effects upon aquatic resources in violation of state water quality standards. This certification contains conditions to protect aquatic resources in compliance with water quality standards.
- *Construction.* Sediment in the immediate vicinity of the main dam will be temporarily removed so the dam, plinths and outlet works can be inspected. SCE estimates that approximately 60 cubic yards of lake bed will need to be excavated and temporarily removed to expose the dam and outlet works. After exposing the dam face and outlet works, select areas of the dam face and outlet works will be demolished, cleaned and removed, as needed based on inspection of the dam and outlet structures. Demolition work is expected to include the following steps:
 - Demolish and/or remove the corroded steel grating on the grizzly structure in front of the 24-inch steel outlet pipe;
 - Demolish or remove eroded concrete and rip rap that supports the existing grizzly;
 - Remove any eroded and damaged concrete supporting or partially supporting the existing 24-inch steel pipe inlet collar;
 - Remove the remnant of the 24-inch steel pipe collar; and
 - Clean the main dam face in the vicinity of the outlet works.

All debris generated as a result of demolition and construction activities will be temporarily stored in containers to be placed in one of the staging areas and then removed to an off-site disposal facility. The debris will be disposed of in accordance with SCE hazardous waste policies.

Repair and installation work will include the following steps, as appropriate based on inspection of the exposed structures:

- Fabricate a new steel collar of the same size as the original steel pipe and weld splice it onto the original steel pipe;
- Pour concrete to frame and support the new steel pipe collar, such that the concrete is flush with the original concrete profile, to the extent possible;
- Replace the existing steel grate with a new fiberglass grate of approximately the same overall size and shape (fiberglass bars will be 0.5-inch by 4-inch); and
- Pour concrete support structure for the new grate at the same location of the original grate, matching, to the extent possible, the geometry of the original concrete structure.

The existing plinth of the dam will be modified on both sides of the new fiberglass grate. This modification is required to anchor the geomembrane to the base of the dam. A single 30-foot step plinth will be installed on the north side of the outlet and four 7.5-foot step plinths (30 feet total length) will be installed on the south side of the outlet. Each plinth will be 2-feet high by 3-feet wide. Based on these dimensions, the new step plinths require approximately 360 cubic feet or 13.3 cubic yards of concrete. During all work activities, any uncured concrete will be covered either by polyethylene plastic sheeting or wooden forms secured to the surface, which will prevent water from making direct contact with the concrete surface.

After the new step plinths have cured, a contractor will clean and prepare the new concrete plinths and existing wood frame dam surface and install a geomembrane liner on the upstream timber-faced surface of the dam, around the outlet works. At the bottom of the existing liner and near the foundation of the dam, anchors will fasten the liner to the dam.

Following construction, the lake bottom will be restored to its pre-Project contours. All construction debris, including soil excavated from the construction site and spent fabric filtration socks will be promptly removed and taken to an approved disposal site. Finally, the temporary coffer dam will be removed and Tioga Lake will be allowed to refill with natural run-off.

- *Monitoring.* SCE will monitor turbidity for the duration of the Project as required by this water quality certification (certification). Changes in turbidity will not cause nuisance or adversely affect the beneficial uses identified in the *Water Quality Control Plan for the Lahontan Region* (Lahontan Basin Plan). Increases in turbidity will not exceed baseline levels by more than 10 percent, or 15 nephelometric turbidity units (NTUs) during in-water work.

Environmental Commitments

Drawdown of the reservoir and dewatering of the in-reservoir work area, subsequent excavation and use of construction vehicles and equipment within the reservoir bed, and use of potentially hazardous materials such as fuels and cement could potentially result in degradation of aquatic habitat in Tioga Lake and downstream in Glacier Creek. SCE is proposing to implement a number of environmental measures and best management practices (BMPs), which are described in Attachment B (Attachment F of the certification application) of this certification. SCE intends to implement these environmental measures and BMPs to minimize the potential for Project impacts to water quality in Tioga Lake, Glacier Creek, and Lee Vining Creek during construction.

Project Schedule

Prior to in-water work, SCE plans to start drawing down Tioga Lake on or around August 1, 2016, and expects to complete drawdown by August 22, 2016. SCE anticipates that drawdown of Tioga Lake to facilitate access and construction will take approximately five weeks, which includes time for the work area to dry. SCE proposed construction activities would begin on September 6, 2016 and be completed by November 15, 2016.

II. Regulatory Authority

Water Quality Certification and Related Authorities

The Federal Clean Water Act (CWA) (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 CWA (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.”

Section 401 of the CWA (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 CWA, including water quality standards and implementation plans promulgated pursuant to section 303 of the CWA (33 U.S.C. § 1313). CWA section 401 directs the agency responsible for certification to prescribe effluent limitations and other limitations necessary to ensure compliance with the CWA 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) is the state agency responsible for such certification in California. (Wat. Code, § 13160.) The State Water Board’s Executive Director may issue a decision on a certification application. (Cal. Code Regs., tit. 23, § 3835, subd. (a).)

Notice of Water Quality Certification Application

SCE’s application for certification was received by the State Water Board on September 17, 2015. On April 1, 2016, SCE submitted a formal withdrawal and re-filing request for certification of the Project.

The State Water Board provided public notice of the application pursuant to California Code of Regulations, title 23, section 3858 by posting information describing the Project on the State Water Board's website on January 21, 2016. No public comments were received.

The State Water Board forwarded the portions of the application that have the potential to cause adverse water quality impacts other than specific impacts resulting from alterations to instream flows to the Lahontan Regional Water Quality Control Board (Lahontan Regional Water Board) on March 8, 2016. No comments were received.

Other Agencies' Permits

On September 14, 2015, SCE applied for a Nationwide Permit (NWP) from the Army Corps of Engineers (USACE) under section 404 of the CWA, and submitted an application for a Lake or Streambed Alteration Agreement to the California Department of Fish and Wildlife (CDFW) for Project activities. The NWP verification letter from the USACE is contingent on certification by the State Water Board.

Water Quality Control Plans

The California Regional Water Quality Control Boards (Regional Water Boards) adopt, and the State Water Board and United States Environmental Protection Agency (USEPA) approves, water quality control plans, also known as 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 pursuant to Section 303 of the Clean Water Act. (33 U.S.C. § 1313.) The State Water Board may also adopt water quality control plans. The beneficial uses, together with the water quality objectives that are contained in the basin plans and state water quality control plans, and state and federal anti-degradation requirements, constitute California's water quality standards.

The Lahontan Regional Water Board adopted, and the State Water Board and USEPA approved, the Lahontan Basin Plan. Existing beneficial uses designated for Lee Vining Creek apply to Glacier Creek and include: municipal and domestic supply; agricultural supply; ground water recharge; freshwater replenishment; hydropower generation; water contact recreation; non-contact water recreation; commercial and sport fishing; cold freshwater habitat; wildlife habitat; and spawning (spawning, reproduction, and development). Protection of the instream beneficial uses identified in the Lahontan Basin Plan requires maintenance of adequate instream flows as well as effluent limitations and other limitations on discharges of pollutants from point and non-point sources to Lee Vining Creek and its tributaries.

California Environmental Quality Act

The State Water Board has reviewed the proposed Project and conditions incorporated into the Project to protect the environment and beneficial uses designated for Lee Vining and Glacier creeks. The State Water Board has determined that this Project involves the repair and maintenance or minor alteration of an existing facility and therefore is categorically exempt from the requirements of the California Environmental Quality Act (Cal. Code Regs., tit. 14, § 15301). The State Water Board will file a Notice of Exemption within five days of issuance of this certification.

ACCORDINGLY, BASED ON ITS INDEPENDENT REVIEW OF THE RECORD, THE STATE WATER RESOURCES CONTROL BOARD CERTIFIES THAT SOUTHERN CALIFORNIA EDISON COMPANY'S TIOGA LAKE DAM OUTLET AND GRIZZLY REPAIR PROJECT will comply with sections 301, 302, 303, 306, and 307 of the CWA, and with applicable provisions of State law, if the Applicant complies with the following terms and conditions during the Project activities certified herein.

CONDITION 1. The Applicant shall comply with the Project description submitted to the State Water Board.

CONDITION 2. The Applicant shall monitor water quality during construction and immediately report any discharge or violation of the Lahontan Basin Plan water quality objectives to the State Water Board and Lahontan Regional Water Board staff.

CONDITION 3. The Applicant shall submit a Tioga Lake and Glacier Creek Water Quality Monitoring Plan to the Deputy Director for review and approval. Construction of the Project shall not start until the Tioga Lake and Glacier Creek Water Quality Monitoring Plan has been approved by the Deputy Director. At a minimum, the Tioga Lake and Glacier Creek Water Quality Monitoring Plan shall include how the Applicant will: 1) determine baseline conditions prior to construction; 2) determine monitoring locations and monitoring schedule; and 3) report monitoring results. All monitoring results, including a map of monitoring locations, shall be submitted to State Water Board staff on a monthly basis until the Project is completed.

CONDITION 4. The Applicant shall follow the *Water Quality Best Management Practices* included as Attachment B of this certification. Notwithstanding any more specific conditions in this certification, the Applicant shall comply with all measures described in Attachment B to this certification and in the application for certification and its supplements.

CONDITION 5. Construction work shall occur during the dry season. The Applicant shall maintain the required minimum instream flows of two cfs or the natural flow into Tioga Lake, whichever is less, below Tioga Lake at all times. Fisheries effects (e.g., a fish kill or fish observed in obvious distress) resulting from any deviations from prescribed flow shall be minimized and reported immediately to CDFW, the Lahontan Regional Water Board Executive Officer (Executive Officer) and the Deputy Director.

CONDITION 6. In 2013, the United States Fish and Wildlife Service proposed critical habitat for Yosemite toad (federally listed as threatened) and Sierra Nevada yellow-legged frog (federally listed as endangered). Both of these species are known to have occurred along the margins of Tioga Lake in the past and may still occupy lakeside habitats. An Environmental Awareness Program shall be implemented so that all construction crew are aware of the potential for these species' presence and the procedures to follow if encountered during construction. The Applicant shall conduct a pre-construction survey to confirm the absence of these species within 15 days of initiating construction equipment mobilization. If Yosemite toad or Sierra Nevada yellow-legged frog is encountered, a qualified biologist shall be present on-site for the duration of the Project to ensure the Environmental Awareness Program is properly implemented and to minimize impacts to Yosemite toad and Sierra Nevada yellow-legged frog.

CONDITION 7. All water quality compliance monitoring shall be conducted using procedures described in Code of Federal Regulations Title 40, Chapter I, Subchapter D, Part 136 (40 C.F.R. § 136) and State Water Board's Surface Water Ambient Monitoring Program methods.

CONDITION 8. Project activities shall not cause an increase in turbidity downstream of the Project area greater than those identified in the Lahontan Basin Plan. Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses. Increases in turbidity shall not exceed natural levels by more than 10 percent, except during in-water working periods when a turbidity increase of 15 NTU over background turbidity measured in Glacier Creek 300 feet downstream from the working area will be allowed. Minimum sampling frequency shall be three times per day when construction activities have the potential to discharge to surface waters. Samples and measurements taken for the purpose of monitoring shall be representative of the activity. The Applicant shall monitor turbidity levels approximately 50 feet upstream of Project activities (i.e., natural background) and approximately 300 feet downstream of the construction activities. Turbidity shall be measured using nephelometry and in accordance with Condition 7 requirements. A hand-held field meter may be used, provided the meter uses a USEPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. For each meter used for monitoring, a calibration and maintenance log shall be maintained onsite and provided to State Water Board staff upon request.

If an increase in turbidity caused by Project activities is measured between the upstream and downstream sampling locations, monitoring frequency shall be increased to a minimum of every hour during this period. If three consecutive sample results or a 24-hour average turbidity indicate that turbidity levels exceed the limits established in this condition, the associated Project activities shall cease immediately and the violation shall be reported immediately to the Deputy Director and the Executive Officer. Construction activities may not re-start without the permission of the Deputy Director. In addition, any and all actions shall be implemented immediately to reduce and maintain turbidity at or below the given thresholds.

CONDITION 9. Project activities shall not cause settleable matter to exceed 0.1 milliliters per liter in Glacier Creek as measured approximately 300 feet downstream from Project activities.

CONDITION 10. All equipment must be washed prior to transport to the Project site and must be free of sediment, debris and foreign matter. Equipment used in direct contact with surface water shall be steam cleaned prior to use. Wash water shall be contained and disposed of in compliance with State and local laws, ordinances, and regulations.

CONDITION 11. Construction material, debris, spoils, soil, silt, sand, bark, slash, sawdust, rubbish, steel, other organic or earthen material, and any other substances which could be hazardous to aquatic life resulting from Project-related activities shall be prevented from entering surface waters.

CONDITION 12. No unset cement, concrete, grout, damaged concrete, concrete spoils, and wash water used to clean concrete surfaces shall contact or enter surface waters.

CONDITION 13. Any maintenance or refueling of vehicles or equipment occurring on-site will be done in a designated area with secondary containment, located away from drainage courses to prevent the runoff of stormwater and the runoff of spills. All equipment using gas, oil, hydraulic fluid or other petroleum products shall be inspected for leaks prior to use and shall be monitored for leakage. Stationary equipment (motors, pumps, generators, etc.) and vehicles not in use shall be positioned over drip pans or other types of containment. Spill and containment equipment (oil spill booms, sorbent pads, etc.) shall be maintained onsite at all locations where such equipment is used or staged.

CONDITION 14. All imported riprap, rocks, and gravels used for construction shall be pre-washed. Wash water shall be contained and disposed of in compliance with State and local laws, ordinances, and regulations.

CONDITION 15. All construction debris and trash shall be contained and regularly removed from the work area to the staging area during construction activities. Upon completion, all Project-generated debris, building materials, excess material, waste, and trash shall be removed from all the Project sites for disposal at an authorized disposal site. Excavated material may be left in place in the reservoir bed or used to backfill the liner bottom anchoring provided that Basin Plan water quality objectives are not exceeded. If excavated material is left on site, the Applicant shall monitor water turbidity and settleable solids during and after filling up Tioga Lake and report the results to the Deputy Director and the Executive Officer.

CONDITION 16. A copy of this certification shall be provided to all contractors and subcontractors conducting construction work, and copies shall remain in their possession at the Project site. The Applicant shall be responsible for work conducted by its contractors or subcontractors.

CONDITION 17. The Deputy Director and the Executive Officer shall be notified one week prior to the commencement of ground disturbing activities. Upon request, a construction schedule shall be provided to State Water Board and Lahontan Regional Water Board staff in order for staff to be present onsite should they elect to do so. The Applicant shall provide State Water Board and Lahontan Regional Water Board staff access to the Project site to document compliance with this certification.

CONDITION 18. If at any time an unauthorized discharge to surface waters (including rivers or streams) occurs or monitoring indicates that the Project has or could soon be in violation of water quality objectives, the associated Project activities shall cease immediately and the Deputy Director and the Executive Officer shall be notified. Associated activities may not resume without prior approval from the Deputy Director.

CONDITION 19. Unless otherwise specified in this certification or at the request of the Deputy Director, data and/or reports must be submitted electronically in a format accepted by the State Water Board to facilitate the incorporation of this information into public reports and the State Water Board's water quality database systems in compliance with Water Code section 13167.

CONDITION 20. The State Water Board reserves authority to modify this certification if monitoring results indicate that continued operation of the Project could violate water quality objectives or impair the beneficial uses of Lee Vining Creek or its tributaries.

CONDITION 21. This certification is contingent on compliance with all pertinent permits and orders issued by the Lahontan Regional Water Board, and compliance with the terms and conditions of all water right licenses and permits applicable to this Project, existing, or as amended, by the State Water Board.

CONDITION 22. 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 CWA. The Applicant must take all reasonable measures to protect the beneficial uses of Lee Vining Creek and its tributaries.

CONDITION 23. This certification does not authorize any act which results in the taking of a threatened, endangered or candidate species or any act, which is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (ESA) (Fish and G. Code, §§ 2050-2097) or the federal ESA (16 U.S.C. §§ 1531-1544). If a "take" will result from any act authorized under this certification or water rights held by the Applicant, the Applicant must obtain authorization for the take prior to any construction or operation of the portion of the Project that may result in a take. The Applicant is responsible for meeting all requirements of the applicable ESAs for the Project authorized under this certification.

CONDITION 24. In the event of any violation or threatened violation of the conditions of this certification, the violation or threatened violation is subject to any remedies, penalties, process or sanctions as provided for under applicable state or federal law. For the purposes of section 401(d) of the CWA, the applicability of any state law authorizing remedies, penalties, processes 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.

CONDITION 25. In response to a suspected violation of any condition of this certification, the State Water Board or Lahontan Regional 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. The State Water Board may add to or modify the conditions of this certification as appropriate to ensure compliance.

CONDITION 26. Construction shall not commence until all necessary federal, state, and local approvals are obtained.

CONDITION 27. Any requirements in this certification that refer to an agency whose authorities and responsibilities are transferred to or subsumed by another state or federal agency, will apply equally to the successor agency.

CONDITION 28. The Applicant must submit any changes to the Project, including Project operation, which would have a significant or material effect on the findings, conclusions, or conditions of this certification, to the State Water Board for prior review and written approval. If the State Water Board is not notified of a significant change to the Project, it will be considered a violation of this certification.

CONDITION 29. The State Water Board will provide notice and an opportunity to be heard in exercising its authority to add or modify any of the conditions of this certification.

CONDITION 30. 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 section 3867).

CONDITION 31. This certification is not intended and shall not be construed to apply to any activity involving a hydroelectric facility and 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 that application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.

CONDITION 32. Nothing in this certification shall be construed as State Water Board approval of the validity of any water rights, including pre-1914 claims. The State Water Board has separate authority under the Water Code to investigate and take enforcement action if necessary to prevent any unauthorized or threatened unauthorized diversions of water.

CONDITION 33. This certification is conditioned upon total payment of any fee required under California Code of Regulations, title 23, division 3, chapter 28.


Thomas Howard

Executive Director

6/3/16
Date

Attachment A: Figure 1 – Project Location

Attachment B: Water Quality Best Management Practices (as submitted by the Applicant)