

STATE OF CALIFORNIA  
STATE WATER RESOURCES CONTROL BOARD

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In the Matter of Water Quality Certification for

**SOUTHERN CALIFORNIA EDISON COMPANY  
RUSH MEADOWS DAM GEOMEMBRANE INSTALLATION PROJECT**

Sources: Rush Creek at Waugh Lake tributary to Mono Lake

County: Mono County

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**WATER QUALITY CERTIFICATION FOR FEDERAL PERMIT OR LICENSE**

BY THE EXECUTIVE DIRECTOR:

Project Description

1. Southern California Edison Company (SCE) operates Rush Meadows Dam that creates Waugh Lake located within the Ansel Adams Wilderness of the U.S. Inyo National Forest, as shown on Attachment A, Vicinity and Site Map.
2. Rush Meadows Dam is a 50 foot high concrete arch dam constructed between 1918 and 1925, and is operated as part of the SCE hydroelectric power generation system under Federal Energy Regulatory Commission (FERC) Project No. 1389. The dam impounds Rush Creek to maintain minimum instream flows and replenish Gem Lake which is the forebay for the system. SCE holds storage rights under Water Right Licenses 61 (Application 1026) and 564 (Application 3969).
3. Increased leakage through Rush Meadows Dam compromises its holding capacity. SCE proposes to install a geomembrane liner (Liner) to the upstream face of the dam to prevent leakage and to extend the life of the dam by about 30 years. SCE also proposes to repair any deteriorated areas of concrete on the upstream and downstream faces of the dam and will replace deteriorating post-tension anchors to re-establish the structural integrity of the dam. SCE anticipates that the project work should start by July 6 and should be completed within 16 weeks.

Construction Activities

4. Construction material, equipment, and supplies will be brought in by pack animals and trash will be transported out on their return trip. A helicopter will be used to transport heavier material and equipment to and from the project site and will also

be used to transport waste materials for off-site disposal. Housing for the work crews will be at a campground located 0.25 miles northeast of the dam.

5. Membrane installation will be performed after the impoundment is drained. The minimum instream flow required under the FERC license is 10 cubic feet per second (cfs) or the natural flow into Waugh Lake, whichever is less. This flow will be maintained during the project activities and can be contained within the original creek channel that bisects the work area.
6. A work area will be established on the upstream side of the Rush Meadows Dam. Four staging areas will be established immediately downstream of the dam and one will be on the upstream side within the lake bed (Attachment A). Access to the work area will be around the south side of the dam adjacent to the spillway. Heavy rubber mats will be placed in all stream crossings, upstream and downstream of the dam.
7. Construction equipment will consist of a compact excavator, utility vehicle, gasoline powered electric generators, air compressors, concrete drilling machine, air powered grout mixer/pump, gasoline powered cement fixers, powered chipping hammers, powered hammer drills, hydraulic anchor rod tensioning device, and powered swing stage scaffolding. The dam face will be accessed using the swing stage scaffold positioned at the top and along the walkway of the dam. The electric generator(s) and air compressor(s) will be placed on the walkway. The grout mixer/pump will be located downstream of the south abutment of the dam about 200 feet away from the stream channel.
8. An excavator will dig a three foot wide trench to expose the foundation on the north side of Rush Creek on the upstream side of the dam for anchoring the Liner. Hand tools are preferred for trenching on the south side of creek, but the excavator may need to cross the creek and may be used for trenching, depending on the depth of the sediment overburden. The trench will be lined with plastic sheets and sandbags and will serve as a catchment for any debris that may fall from the upstream dam face during repair activities.
9. The downstream face of the dam will be inspected to determine if repairs are needed. If needed, plastic sheets or tarps will be spread on the ground to contain falling debris.
10. Excavated material will be used to fill sand bags for sediment and erosion control. Any unused material will be moved to a designated stockpile site within the upstream staging area.
11. Deteriorated concrete will be chipped and brushed to expose the base material, and loose material will be rinsed, as needed. The dam abutments will be prepared by power washing and grinding the surface smooth. Rinse waters will be allowed to evaporate due to the small volume generated during repair activities. Cement patches will be placed by hand troweling and/or pressure grouting.

12. The Liner will be installed on the upstream face of the dam in sections, beginning in the middle and continuing laterally across the face of the dam. Installers will use hand-held power tools. Liner installation consists of the following:
  - geonet/geotextile composite cushioning/drainage layer spread vertically over the upstream face of the dam;
  - geomembrane sheets spread vertically over the upstream face of the dam and attached to stainless steel profiles;
  - six-inch wide stainless steel perimeter seal anchors along the abutments, crest and bottom of the dam; and
  - stainless steel tensioning profile that secures geomembrane to the face of the dam.
13. After completion of the Liner installation procedures, adjacent sheets will be heat welded, followed by quality control testing of the welds. New post-tension anchors will also be installed near the spillway by drilling and grout injection from the crest of the dam through the dam into the foundation.
14. The plastic sheets will be removed from the open trench after all repair and installation activities are completed. The trench will be backfilled with material from the sandbags and the stockpile. Any material not used as backfill will be evenly spread across the terrain of the lake bed.
15. At the completion of the project, the work and staging areas will be cleaned of all construction related materials, spoils, trash and waste, and will be transport offsite for disposal.

#### Construction Best Management Practices (BMPs)

16. No native vegetation will be removed in the staging or work areas. Staging areas will have a minimum setback of 100 feet from any drainage channel and stream. The upstream work area will be restricted to the 40 foot zone extending out from and across the width of the dam.
17. Silt and/or fiber fencing will be installed between the stream channel and the work area to control erosion and sediment run-off. Fencing will be inspected prior to and after any precipitation event.
18. Fueling of equipment will be conducted at a designated location within a staging area and will be kept at a minimum necessary for the work. A containment vessel will be used for storage of fuels and other petroleum products within one of the staging areas. Materials will be stored on plastic sheets with berms formed by sandbags to control potential run-off. Absorbent pads and spill kits will be kept onsite and will be used during fueling.

19. Equipment maintenance will be at a designated downstream staging area. Heavy equipment will be stored overnight in designated portions of the staging and work areas and drip pans or other types of containment will be placed under the vehicles.
20. Equipment and grout hoses shall be inspected daily for leaks. If leaks are found, they will be immediately repaired or the equipment will be removed from the project site.
21. Spills will be immediately cleaned up and the contaminated material will be placed and sealed in containers. Contaminated material will be temporarily stored within a staging area, 200 feet from any drainage channel or stream, until transported for offsite disposal.
22. Excavated material will be re-deposited in the trench in a manner that minimizes silt from entering the stream. The weight of snow pack on the dry lake bed and the gradual refill of the Waugh Lake will naturally compact the fill material in the trench.
23. All construction related debris, waste, and trash will be collected, deposited in designated containers, and removed daily from the work area for temporary storage at the staging area before final disposal at an authorized site.

#### Regulatory Authority

24. 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) 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."
25. 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) is the state agency responsible for such certification in California. (Wat. Code § 13160.) The State Water Board has delegated this function to the Executive Director by regulation. (Cal. Code Regs., tit. 23, § 3838, subd. (a).)

26. The US Army Corp of Engineers (ACOE) has determined a permit under section 404 of the Clean Water Act is required for this project. The ACOE identification number for the project is 2009-00151-BAH.
27. 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.
28. The Lahontan Regional Water Quality Control Board (Lahontan Region) has adopted, and the State Water Board and the U.S. Environmental Protection Agency have approved, the Water Quality Control Plan for the Lahontan Region (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.
29. The Basin Plan identifies the beneficial uses for the Gem Lake watershed within the Mono Hydrologic Unit as municipal and domestic supply; hydropower generation; water contact recreation; non-contact water recreation; commercial and sport fishing; cold freshwater habitat; wildlife habitat; and spawning, reproduction, and/or early development.
30. The State Water Board has reviewed and considered the plans and project description provided by SCE. Further, the State Water Board has considered the Lahontan Region Basin Plan, the existing water quality conditions and project-related controllable factors.
31. After reviewing and considering all of the pertinent information available for this project, the State Water Board has determined that there will be no significant effect on the environment from the project, and that it meets the criteria for both Class 1 and Class 4 categorical exemptions under the California Environmental Quality Act for the ongoing operation, repair, and maintenance of an existing facility and the minor alteration of land. (Pub. Resources Code, § 21083; Cal. Code Regs., tit. 14, § 15301 and § 15304.) The State Water Board has prepared a notice for the Class 1 and Class 4 categorical exemptions and will file a Notice of Exemption within five days from the issuance of this certification.

**ACCORDINGLY, BASED ON ITS INDEPENDENT REVIEW OF THE RECORD, THE STATE WATER BOARD CERTIFIES THAT THE SOUTHERN CALIFORNIA EDISON COMPANY RUSH MEADOWS DAM GEOMEMBRANE INSTALLATION PROJECT** will comply with sections 301, 302, 303, 306, and 307 of the Clean Water Act, and with applicable provisions of State law, if SCE complies with the following terms and conditions during the project activities certified herein.

Construction Conditions

1. All BMPs described in the application for water quality certification and supplemental information are hereby incorporated by reference and are conditions of approval of this certification. Notwithstanding any more specific conditions in this certification, SCE shall comply with all measures described in the application for water quality certification and its supplements.
2. All equipment must be washed prior to transport to the project site and must be free of sediment, debris and foreign matter.
3. Control measures for erosion, excessive sedimentation and turbidity shall be implemented and be in place at commencement of, during and after any ground clearing activities, excavation, or any other project activities that could result in erosion or sediment discharges to surface waters.
4. 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. Equipment refueling shall be conducted in a designated and contained area. Stationary equipment (motors, pumps, generator, etc.) 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.
5. The grout mixer/pump shall be placed in a containment vessel and a spillage fiber roll shall be placed between the grout hose line and stream channel to control potential leaks. Unset cement, concrete, or grout is prohibited from contacting or entering surface waters.
6. Rubber mats shall be placed in all stream channel crossings. Operation of the excavator within the stream channel is prohibited.
7. A setback of 100 feet from the high water mark of any stream or surface water shall be maintained during construction activities. Construction material, debris, spoils, soil, silt, sand, bark, slash, sawdust, rubbish, steel, or other organic or earthen material from any construction activity shall be prevented from entering surface waters.

8. Erosion control blankets, liners with berms, and/or other erosion control measures shall be used for the stockpile of excavated material to control runoff resulting from precipitation.
9. Temporary sanitary facilities shall be installed in the work area 200 feet from any stream or surface water and shall be properly maintained. Sanitary waste shall be removed from the project for offsite disposal. A latrine shall be provided at the camp ground housing the workers and shall be 200 feet from any drainage channel or stream.
10. Tethered pack animals shall be kept 200 feet away from any drainage channel or stream. Manure is prohibited from contacting or entering surface waters.
11. Upon completion, all project-generated debris, waste, and trash shall be removed from the project site for final disposal at offsite landfill or other authorized waste disposal site.

#### Notification Conditions

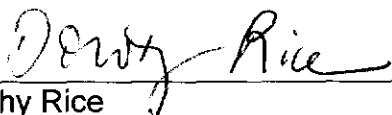
12. A copy of this certification shall be provided to the contractor and all subcontractors conducting the work, and copies shall remain in their possession at the work site. SCE shall be responsible for work conducted by its contractor or subcontractors.
13. The State Water Board Deputy Director for Water Rights (Deputy Director for Water Rights) and the Executive Officer of the Lahontan Region shall be notified one week prior to the commencement of ground disturbing activities, and upon request, a construction schedule shall be provided to agency staff in order for staff to be present onsite, to answer any public inquiries during construction, and to document compliance with this certification.
14. If at any time an unauthorized discharge to surface waters (including rivers or streams) occurs, or any water quality problem arises, the associated project activities shall cease immediately until adequate BMPs are implemented. The Deputy Director for Water Rights and the Executive Officer of the Lahontan Region shall be notified within 24 hours after the unauthorized discharge or water quality problem arises.
15. SCE must submit any changes 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. If the State Water Board is not notified of a significant change to the project, it will be considered a violation of this certification.

## General Conditions

16. 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. SCE shall take all reasonable measures to protect the beneficial uses of the Gem Lake watershed.
17. This certification is contingent on compliance with all applicable requirements of the Lahontan Region Basin Plan, except as may be modified by the specific conditions of this certification.
18. This certification does not authorize any act which results in the taking 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 (Fish & Game Code, §§ 2050 - 2097) or the federal Endangered Species Act (16 U.S.C. §§ 1531 - 1544). If a take will result from any act authorized under this certification or water rights held by SCE, SCE shall obtain authorization for the take prior to any construction or operation of the project. SCE shall be responsible for meeting all requirements of the applicable Endangered Species Act for the project authorized under this certification.
19. 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.
20. The authorization to operate the project pursuant to this certification is conditioned upon payment of all applicable fees 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.
21. 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.



22. 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.
23. 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.
24. 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).
25. The State Water Board reserves authority to modify this certification if monitoring results indicate that the project would violate water quality objectives or impair the beneficial uses of the Gem Lake watershed.
26. 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.
27. The State Water Board may add to or modify the conditions of this certification as appropriate to coordinate the operations of this project and other water development projects, where coordination of operations is reasonably necessary to achieve water quality standards or protect beneficial uses of water.
28. The State Water Board shall provide notice and an opportunity for hearing in exercising its authority under conditions 25, 26, and 27 above.

  
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Dorothy Rice  
Executive Director

6-25-09  
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Date

Attachment