

STATE OF CALIFORNIA  
STATE WATER RESOURCES CONTROL BOARD

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In the Matter of Water Quality Certification for the  
**FRIANT POWER AUTHORITY AND ORANGE COVE IRRIGATION DISTRICT  
NEW FRIANT RIVER OUTLET POWERHOUSE**  
**FEDERAL ENERGY REGULATORY COMMISSION PROJECT NO. 11068**

SOURCES: San Joaquin River  
COUNTY: Fresno

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

BY THE EXECUTIVE DIRECTOR:

Project Description

1. Friant Power Authority (FPA) and the Orange Cove Irrigation District (OCID), co-Licensees of Federal Energy Regulatory Commission (Commission) Project No. 11068, have applied to the Commission for a capacity related amendment to their existing hydropower license.
2. OCID was the original Licensee for Project No. 11068 and has operated the facility since May 1991. OCID had previously applied for, and received in 2006, an amendment to the license for Project No. 11068 for an increase in installed capacity of 1.8 megawatts (MW), however subsequent developments, most notably the San Joaquin River Settlement Agreement, require significantly higher discharges to the San Joaquin River than were contemplated at the time OCID filed its amendment application. In August 2008, the Project 11068 license was transferred to FPA and OCID jointly.
3. The proposed project, New Friant River Outlet Powerhouse (Project), would increase the power-generating capacity at the Friant Dam River Outlet site to utilize flow releases required by the San Joaquin River Settlement Agreement to generate energy. The Project would expand the power generation capacity at the River Outlet site from 2 MW to approximately 9 MW and would take place in lieu of the facility authorized under the 2006 license amendment.
4. FPA holds Water Rights License No. 13286 for diversion and use of up to 4,345 cubic feet per second (cfs) issued by the State Water Resources Control Board (State Water Board) on July 2, 1997. OCID was granted two water rights permits that will also be utilized in conjunction with the New Friant River Outlet Powerhouse. Water Rights Permit No. 20967 allows for the use of 30 cfs for the Fishwater Release Powerplant. Water Rights Permit No. 21126 allows for the use of 100 cfs at the site in conjunction with its 2006 License Amendment. OCID transferred water right Permit No. 20967 and 21126 to FPA in March 2008. FPA has filed a petition with the Division of Water Rights to add the New

Friant River Outlet Powerhouse to the current place of use for Water Rights License No. 13286.

5. The Project would produce an estimated 7 MW of additional output. With a design head of 254 feet the discharge would be approximately 370 cfs, bringing the total discharge at the Friant Dam River Outlet site to approximately 500 cfs. Construction of the Project will not alter the final use, scheduling, or quantity of water delivered to the San Joaquin River, or impact reservoir levels in Millerton Lake.
6. The Project is located at Friant Dam on the San Joaquin River in Fresno County, California, approximately 20 miles northeast of the City of Fresno. The Project is located adjacent to and downstream (west) of FPA's existing Fish Release Hydropower Project powerhouse within fenced land owned by the federal government and administrated by the U.S. Bureau of Reclamation (Reclamation). The south bank includes paved access roads, offices, outbuildings, ornamental plantings, and the existing Fish Release Hydropower Project powerhouse. There is no public access.
7. The Project involves construction and operation of a new powerhouse, turbine, generator, penstock, bypass valve, tailrace connection, and electrical control equipment within the paved lot adjacent to the existing Fish Release Hydropower Powerhouse. The proposed project would reduce the size of the paved parking and maintenance area and contribute an additional 0.3 acres to the 0.5-acre powerhouse project area. No additional impervious area will be added; a temporary easement is required from Reclamation.

#### Construction Activities

8. Excavation will be required for the below ground portion of the Project and into the dam to replace the existing penstock with a larger diameter connection to the existing 110-inch diameter outlet pipe, which will bifurcate into a penstock to each powerhouse. The new penstock will be constructed similarly to the existing penstock, by excavating a tunnel into the mass concrete.
9. A 5-foot by 14.5-foot excavation area through the stilling basin wall will be required for the new tailrace. During excavation, a retaining wall will be required to stabilize the adjacent slope.
10. The Project also includes replacement of the electrical control equipment (keeping the turbine and generator) at the existing River Outlet Powerhouse, and replacement of the existing 35 megavolt amperes, 11 kilovolt/69 kilovolt transformer located outside of the Friant-Kern Powerhouse with one with a capacity of approximately 40 megavolt amperes.

#### Regulatory Authority

11. 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."

12. 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 Board has delegated this function to the Executive Director by regulation. [Cal. Code Regs., tit. 23, § 3838, subd. (a)]
13. The California Regional Water Quality Control Boards have adopted, and the State Water Board has approved, water quality control plans for each watershed basin in the state. These 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 plans constitute state water quality standards under section 303.
14. The Central Valley Regional Water Quality Control Board (Central Valley Water Board) has adopted, and the State Water Board and the U.S. Environmental Protection Agency have approved, the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, 4<sup>th</sup> ed. (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.
15. The Basin Plan identifies the existing beneficial uses for the San Joaquin River between Friant Dam and the Mendota Pool as municipal and domestic supply; agriculture (irrigation and stock watering); industrial process supply; contact and non-contact recreation (including canoeing and rafting); warm and cold freshwater habitat; warm and cold migration; warm water spawning; and wildlife habitat. Cold water spawning is identified as a potential use. The beneficial uses for the San Joaquin River from Mendota Dam to the Merced River are the same as for the reach upstream of Mendota Dam, with the exception of cold freshwater habitat, which is not designated as a beneficial use for this reach, and municipal and domestic supply, which is designated as a potential beneficial use.
16. Protection of the instream beneficial uses identified in the Basin Plan requires maintenance of adequate instream flows as well as effluent limitations and other limitations for discharges of pollutants from point and non-point sources to the San Joaquin River and its tributaries.
17. The State Water Board has reviewed and considered the plans and project description provided by the Licensees for the Project. Further, the State Water Board has considered the Basin Plan, the existing water quality conditions and Project-related controllable factors.
18. On August 5, 2010, the U.S. Fish and Wildlife Service (USFWS) concurred with the Commission's determination that the proposed Project would not affect any federally listed species under its jurisdiction.

## California Environmental Quality Act

19. After reviewing and considering all of the pertinent information available for this Project, including the Initial Study and Negative Declaration prepared by Friant Power Authority, the State Water Board, as a responsible agency under the California Environmental Quality Act (CEQA) has determined that there will be no significant effect on the environment from the Project. The State Water Board will file a Notice of Determination within five days from issuance of this water quality certification.

**ACCORDINGLY, BASED ON ITS INDEPENDENT REVIEW OF THE RECORD, THE STATE WATER BOARD CERTIFIES THAT THE CONSTRUCTION AND OPERATION OF THE NEW FRIANT RIVER OUTLET POWERHOUSE PROJECT BY THE FRIANT POWER AUTHORITY AND THE ORANGE COVE IRRIGATION DISTRICT**, will comply with sections 301, 302, 303, 306 and 307 of the Clean Water Act, and with applicable provisions of state law, provided FPA and OCID comply with the following terms and conditions:

### Construction Conditions

1. Licensees shall obtain all necessary permits prior to beginning the construction phase of the Project, including the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2009-0009-DWQ).
2. All Best Management Practices (BMPs) described in the application for water quality certification and supplemental information are hereby incorporated by reference and are conditions of approval for this certification.
3. Hazardous waste products such as grease cartridges and oil absorbents will be placed in proper containers and transported from the job site to an authorized Hazardous Waste Collection Site.
4. Material such as fuel (gasoline/diesel), hydraulic oil, and motor oil, will be used during construction of the Project. Material Safety Data Sheets for all substances used on the job site must be on file at the job headquarters and at the job site as required by the Hazard Communication Law, General Industry Safety Orders, Sec. 5194.
5. Trucks and equipment will be refueled as required from 110-gallon capacity diesel tanks carried in the back of pickup trucks. No fuel storage tanks will be placed on the site.
6. All equipment using gas, oil, hydraulic fluid or other petroleum products shall be steam cleaned 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, absorbent pads, etc.) shall be maintained onsite at all locations where such equipment is used.
7. No construction material, spoils, debris, or any other substances associated with the Project that may adversely impact water quality standards shall be located in a manner likely to result in a discharge or a threatened discharge to waters of the United States.

8. BMPs for erosion and sediment 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.
9. The Licensees shall provide access to Project sites during construction to staff of the State Water Board and Central Valley Water Board to document compliance with this certification.
10. 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 sites as described in the approved disposal plan.
11. Within seven days of completion of the new powerhouse, the Licensees shall notify the State Water Board Deputy Director for Water Rights (Deputy Director) and the Assistant Executive Officer of the Central Valley Water Board - Fresno Office in writing that the construction phase of the Project is complete.

#### Water Quality Conditions

12. Repair and construction activities shall not cause fluctuations in temperature or dissolved oxygen (DO) concentration and total dissolved gas (TDG) saturation to the water compared to water entering the facility. Changes to temperature and DO can potentially impact warm freshwater habitat, cold freshwater habitat, and wildlife habitat.
  - At no time shall the temperature of cold or warm intrastate waters be increased more than 5°F above natural receiving water temperature to protect fish and other aquatic life.
  - DO concentrations shall not be reduced below 7.0 milligram per liter (mg/l) to protect fish and other aquatic life.
  - TDG shall not exceed 110 percent saturation to protect fish and other aquatic life.
13. Waters shall not contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses.
14. Activities shall not cause turbidity increases in surface water to exceed:
  - a. where natural turbidity is less than 1 Nephelometric Turbidity Unit (NTU), controllable factors shall not cause downstream turbidity to exceed 2 NTUs;
  - b. where natural turbidity is between 1 and 5 NTUs, increases shall not exceed 1 NTU;
  - c. where natural turbidity is between 5 and 50 NTUs, increases shall not exceed 20 percent;
  - d. where natural turbidity is between 50 and 100 NTUs, increases shall not exceed 10 NTUs;
  - e. where natural turbidity is greater than 100 NTUs, increases shall not exceed 10 percent.

In determining compliance with the above NTU limits, appropriate averaging periods may be applied provided that beneficial uses will be fully protected. Any averaging period utilized to assess compliance with the turbidity standards will be based on consultation with State Water Board and Central Valley Water Board - Fresno Office staff.

#### Required Plans and Monitoring and Reporting Conditions

15. Licensees shall prepare a Storm Water Pollution Prevention Plan and Soil Erosion Control Plan for the review and approval of the Deputy Director for Water Rights, prior to beginning construction of the Project. The plans shall address specific site mitigation measures to prevent erosion and protect water quality. The plan shall include BMPs to mitigate any potential erosion caused by rain events during the construction phase of the Project, as needed. These may include temporary surface drainage ditches, water bars, and/or filter barriers along the access road
16. Licensees shall prepare a plan for proper disposal of sediment, and for construction debris from the Project work area for the review and approval of the Deputy Director for Water Rights, prior to beginning construction of the Project. This plan shall provide, at a 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.
17. The Licensees shall prepare a construction phase and post-construction phase water quality monitoring plan after consultation with State Water Board and Central Valley Water Board - Fresno Office staff. The monitoring plan shall then be submitted for review and approval by the Deputy Director for Water Rights prior to beginning construction of the Project. The construction phase monitoring plan shall be used to verify that construction activities are not causing impacts to the following water quality parameters: turbidity, water temperature, DO or suspended sediment in the San Joaquin River downstream of the Project area. Monitoring results for the construction phase shall be reported to the Deputy Director for Water Rights and the Assistant Executive Officer of the Central Valley Water Board - Fresno Office within four weeks following completion of Project construction.
18. The post-construction monitoring plan shall provide for the periodic collection of water quality data to show that operation of the new powerhouse is not affecting water quality in the San Joaquin River downstream of the Project. The monitoring plan shall describe the frequency of water quality data collection and shall provide for the collection of water quality data at locations both upstream and downstream from the Project. Post-construction water quality monitoring results shall be provided to the Deputy Director for Water Rights and the Assistant Executive Officer of the Central Valley Water Board - Fresno Office as described in the approved Monitoring Plan.
  - As described in the Licensees Application for Amendment of Hydropower License, water samples will be collected at the tap that will be installed in the main penstock or new diversion penstock to the Project to provide information regarding water quality conditions prior to entering the power plant.
  - Water samples will be collected at the downstream end of the power plant. These samples will be collected at the end of the tailrace before the water enters the river

outlet channel to allow comparison with the water quality data collected from the penstocks to determine the impact the powerhouse has on water quality.

- Water samples will be collected in the river outlet channel to evaluate water quality after the water has passed through the turbine.
- Water samples that are collected for measuring water temperature will be collected after the turbine has run for several hours, so that the water absorbs any latent heat. The monitoring data shall specify how long the turbine was in operation at the time the water temperature data were collected.

#### Notification Conditions

19. A copy of this certification shall be provided to the contractor and all subcontractors conducting work on this Project, and copies shall remain in their possession at the worksite. Licensees shall be responsible for work conducted by their contractor or subcontractors.
20. The Deputy Director for Water Rights and the Assistant Executive Officer of the Central Valley Water Board-Fresno Office shall be notified one week prior to the commencement of ground-disturbing activities, and upon request, a construction schedule shall be provided to State Water Board and Central Valley Water Board staff. A copy of the construction schedule and the water quality certification shall also be available onsite in case of any public inquires during construction and to document compliance with the certification.
21. If at any time an unauthorized discharge to surface waters (including rivers or streams) occurs, or any water quality parameter exceeds a threshold value, as identified in the construction or post-construction monitoring plans, the associated Project activities shall cease immediately until adequate measures are taken to prevent violations of any water quality objective. The Deputy Director for Water Rights and the Assistant Executive Officer of the Central Valley Water Board - Fresno Office shall be notified within 24 hours after the unauthorized discharge or water quality threshold exceedance.
22. Any changes to the Project, including changes to the proposed Project operations, that would have a significant or material effect on the findings, conclusions, or conditions of this certification must be reported to the Executive Director of the State Water Board for review and written approval. Failure to report a significant change to the Project, or implementation of a significant change without prior written approval by the Executive Director, will be considered a violation of this certification.

#### General Conditions

23. No construction shall commence until all necessary federal, state and local approvals have been obtained.
24. The Deputy Director reserves the authority to modify the conditions of this water quality certification to incorporate load allocations developed in any Total Maximum Daily Load approved by the State Water Board.
25. 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 Act or section 303 of the Clean Water Act.

26. This certification is contingent on compliance with all applicable requirements of the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins.
27. 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 (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 the Licensee, the Licensee shall obtain authorization for the take prior to any construction or operation of the project. The Licensee shall be responsible for meeting all requirements of the applicable Endangered Species Act for the project authorized under this certification.
28. 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, including annual fees or similar charges that may be imposed by future statutes or regulations for the State's reasonable costs of a program to monitor and oversee compliance with conditions of water quality certification.
29. 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 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.
30. 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 reports, shall bear a reasonable relationship to the need for reports and the benefits to be obtained from the reports.
31. 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 in the future.
32. 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 the section 3867).
33. Licensee must submit any change to the Project, including project operations, which would adversely affect water quality to the Deputy Director for Water Rights for review and written approval. If such a change would also require submission to the Federal Energy Regulatory Commission, the change must first be approved by the Deputy Director.



34. 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.
35. 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 hydrologically connected water development projects, where coordination of operations is reasonably necessary to achieve water quality standards or protect beneficial uses of water.
36. This certification is not intended and shall not be construed to apply to issuance of any FERC license or FERC license amendment other than the FERC license amendment specifically identified in the Licensee's application for certification.
37. The State Water Board reserves authority to modify this certification if monitoring results indicate that construction or operation of the Project would cause a violation of water quality objectives or impair the beneficial uses and/or the public trust of the San Joaquin River watershed.
38. The State Water Board shall provide notice and an opportunity for hearing in exercising its reserved authority as described in the General Conditions above.

6/3/2011  
Date

Thomas Howard  
Thomas Howard  
Executive Director