



Dan Skopec
Acting Secretary

State Water Resources Control Board

Division of Water Rights

1001 I Street, 14th Floor ♦ Sacramento, California 95814 ♦ 916.341.5300
P.O. Box 2000 ♦ Sacramento, California 95812-2000
Fax: 916.341.5400 ♦ www.waterrights.ca.gov



Arnold Schwarzenegger
Governor

April 26, 2006

Magalie R. Salas, Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20246

Dear Ms. Salas:

COMMENTS ON THE SETTLEMENT AGREEMENT FOR THE OROVILLE FACILITIES, FEDERAL ENERGY REGULATORY COMMISSION #2100-052

The Federal Energy Regulatory Commission (Commission) has provided an opportunity to comment on the Settlement Agreement (SA) for the Oroville Facilities (Project) that is operated by the Department of Water Resources (DWR). The purpose of the SA is to “resolve all issues that have or could have been raised by the settling parties in connection with the Commission’s issuance of a new license for the project and to establish DWR’s obligations for the protection, mitigation, and enhancement of resources affected by the project.” While State Water Resources Control Board (State Water Board) staff were participants in the settlement negotiations, the State Water Board was not a signatory to the SA. The State Water Board has now assigned separate staff to assist the State Water Board and its Executive Director with the review of the water quality certification application for the Project. The comments in this letter reflect the independent review and judgement of these staff.

Water Quality Certification

Section 401 of the federal Clean Water Act (33 U.S.C. § 1341) (CWA) requires any applicant for a federal license or permit, which may result in any discharge to navigable waters, to obtain certification from the State that the discharge will comply with the applicable water quality parameters in the Act. In this case the federal agency issuing the license is the Commission. The sections of the CWA for which a state must certify compliance before issuing a section 401 certification include sections 301 and 302 (effluent limitations), section 303 (water quality standards and implementation plans), section 306 (national standards of performance for new sources), and section 307 (pretreatment effluent standards).

Under section 303 of the CWA and under the Porter-Cologne Water Quality Control Act, the Central Valley Regional Water Quality Control Board has adopted, and the State Water Board and U.S. Environmental Protection Agency (USEPA) have approved, the *Water Quality Control Plan for the Sacramento and San Joaquin Rivers* (Basin Plan) (Central Valley Regional Water

California Environmental Protection Agency

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Quality Control Board, 1998). The Basin Plan designates the beneficial uses of waters to be protected along with the water quality objectives necessary to protect those uses. Beneficial uses designated for Lake Oroville include municipal and domestic supply, irrigation, power generation, contact and non-contact recreation, freshwater habitat (cold and warm), spawning habitat (cold and warm), and wildlife habitat. Beneficial uses for the Feather River from the fish barrier dam to the Sacramento River are municipal and domestic supply, irrigation, contact and non-contact recreation, canoeing and rafting, migration (cold and warm), freshwater habitat (cold and warm), spawning habitat (cold and warm), and wildlife habitat.

The water quality objectives set or describe the water quality limits necessary to achieve and protect the beneficial uses. DWR must demonstrate whether the Project complies with all applicable water quality objectives in the Basin Plan and that the Project does not impair the established beneficial uses of the Feather River or Lake Oroville. DWR must evaluate its Project for compliance with all water quality objectives in the Basin Plan, as well as other applicable objectives and criteria such as those included in the California Toxics Rule (CTR), the Department of Health Services' Maximum Contaminant Levels (MCLs), etc. If the Project does not comply with one or more of the water quality objectives or criteria, then DWR must describe the actions that it will take to bring its Project into compliance with the applicable water quality limits in order to protect and maintain the beneficial uses. Please note that in cases where there are multiple criteria for the same constituent, the most stringent criterion applies.

Project History

Construction of the Project began in 1961 and was completed in 1968 (under a Commission license issued in 1957). The Project has dramatically altered the hydrology and geomorphology and impacted the water quality and anadromous fisheries of the Feather River. Oroville Dam blocks access to 66.9 miles of habitat (37% of the total number of miles) for anadromous fish (Department of Water Resources, 2005). Lost habitat in the upper watershed is the highest quality habitat, with cooler water temperature along with better spawning and rearing conditions. Anadromous fish are now restricted to lower quality habitat in the Lower Feather River and experience high water temperatures and unnatural flows. In March of 1998, naturally spawned Central Valley steelhead was listed as threatened under the Federal Endangered Species Act (ESA). In 1999 the Central Valley spring-run Chinook Evolutionary Significant Unit (ESU) was listed as threatened on the ESA. The Lower Feather River is designated as critical habitat for Central Valley spring-run Chinook and steelhead (Department of Water Resources, 2005). The Feather River Fish Hatchery was opened in 1967 to mitigate for the loss of habitat from the construction of Oroville Dam. Operation of the hatchery has impacted the genetics of spring-run Chinook through its operations. National Oceanic and Atmospheric Administration Fisheries Service (NOAA Fisheries) has concluded that the hatchery produces spring-run Chinook salmon that are genetically more similar to fall-run.

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Settlement Agreement

It is the intent of the parties to the SA that the SA resolve all issues that may arise in issuance of all permits and approvals for the Project, including water quality certification. The parties to the SA request that the Commission staff include the articles of the SA in the National Environmental Policy Act documents. While not specifically stated, the SA amends the Application for New License submitted by DWR in January 2005, and becomes the application for water quality certification. Under these assumptions, State Water Board staff reviewed the SA to determine if the proposed measures will meet the water quality standards (protection of beneficial uses and compliance with the water quality objectives) in the Basin Plan.

The SA includes Appendix A, which incorporates all of the measures the parties believe are under the Commission's jurisdiction, and Appendix B, which are measures agreed to by the parties but outside the Commission's jurisdiction. State Water Board staff find the differentiation of measures in Appendix A and B to be confusing and possibly arbitrary. For example, Article A108 contains provisions for flow and temperature control in the Project, while Article B108 places certain restrictions on those conditions. The Commission must consider and include provisions of Article B108 in the license for the measure to be a complete and enforceable license condition. Other measures such as Gravel Augmentation and Feather River Fish Hatchery Funding are included in Appendix B. Because these measures mitigate impacts from the Project, they should be under the Commission's jurisdiction and included in the license issued by the Commission.

Implementation plans with adaptive management provisions, or implementation schedules that are too protracted, may not provide for timely protection of the beneficial uses. State Water Board staff must determine if the beneficial uses are being reasonably protected before making a recommendation on the issuance of water quality certification. Beneficial uses currently impacted by the Project may not be reasonably protected if the proposed measures have an adaptive management plan, an excessively long period prior to implementation, or unspecified implementation dates. For example, in Article 106 Riparian and Floodplain Improvement Program, DWR is required to develop and file a plan for a phased program to enhance riparian and other floodplain habitats. The initial phase of implementation will not be implemented until 15 years after license issuance. Phase 4 of the plan will not be initiated until 25 years after license issuance. The explanatory statement for this Article states that development of floodplain habitat should result in improvement in the quantity and quality of juvenile salmonid rearing habitat which has been impacted from the Project. If improvements to the floodplain are necessary for the protection of salmonid rearing, they should be implemented sooner than 15 and 25 years after issuance of the license.

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Comments on Specific Sections of the Settlement Agreement

Flow/Temperatures to Support Anadromous Fish

Studies have shown it is unlikely that adult Chinook salmon can use the Feather River below the Thermalito Afterbay Outlet except as a migration corridor (Department of Water Resources, 2004). DWR concluded that increased incidence of disease, developmental abnormalities, increased in-vivo egg mortality, and temporary cessation of migration could occur due to elevated water temperatures in some areas of the lower Feather River (Department of Water Resources, 2004). Articles A107, A108, and B108 provide for increased instream flow and improved water temperatures for anadromous fish at the hatchery, in the High Flow Channel (HFC) and in the Low Flow Channel (LFC) to alleviate the flow and water temperature impacts from the Project. The measure requires DWR to submit a Feasibility Study and Implementation Plan (Plan) to the Commission for facility modifications to improve water temperatures within three years of license issuance. As proposed, the Plan will recommend a specific alternative that is developed with consideration of all Project purposes. The Plan will include Table 2A, which is the temperatures the licensee shall attempt to achieve in the HFC based on preliminary modeling. DWR will be required by the measure to consult with identified agencies before submitting the Plan to the Commission. At the end of a five-year testing period, and after completion of facility modifications, DWR will develop final temperature requirements.

There are a number of problems with the Articles as proposed, including, but not limited to:

- DWR is not required to meet the temperature objectives established for anadromous fish in the HFC. Specific temperature requirements for the protection of anadromous fish are not a requirement for inclusion in the Plan.
- DWR can select a preferred alternative based on a range of Project purposes, not necessarily the alternative that provides water temperatures for protection of anadromous fish.
- The implementation date for facility modification is not specified, and a time limit for construction of the temperature control device is not included.
- Provisions in B108 place a cost cap on the measure and limit the range of alternatives. The cost cap and limitations could prevent construction of a temperature control device.
- Despite DWR's past use of the river valve to meet hatchery temperatures, use of the river valve is not proposed in measure A108 prior to facility modification. Article B108 states however, that the river valve will continue to be used primarily for meeting hatchery temperature requirements prior to facility modification. The article also states that after refurbishment or replacement of the valve and prior to construction of the facilities modifications, DWR will consider using the new valve to meet hatchery temperature targets in A107.2.

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State Water Board staff believes the measures proposed in the SA to avoid or reduce the impacts to anadromous fish from the Project do not reasonably protect the beneficial uses. Water temperature monitoring in 2002 and 2003 showed that the temperature of water released from Thermalito Afterbay was as much as 11.3°F higher than that of incoming water (Department of Water Resources, 2005). This change in water temperature clearly demonstrates that DWR alters water temperature, and that water temperature is a controllable factor. DWR has an obligation to protect the beneficial uses of the Feather River, including anadromous fish.

Habitat Expansion Agreement for Central Valley Spring-Run Chinook and Central Valley Steelhead

Appendix F of the SA is the Habitat Expansion Agreement for Central Valley Spring-Run Chinook and Central Valley Steelhead (Agreement). The stated goal of the Agreement is to expand the amount of habitat to support spawning, rearing, and adult holding of spring-run Chinook salmon and steelhead in the Sacramento River Basin. The Agreement “establishes an approach for identifying, evaluating, selecting and implementing the most promising action(s) to expand such spawning, rearing and adult holding habitat....in the relicensing of the Licensees’ Oroville, Poe, Rock Creek-Cresta, and Upper North Fork Feather River hydroelectric projects”. The specific goal of the Agreement is to accommodate an estimated net increase of 2,000 to 3,000 spring-run spawners. The threshold is focused on spring-run as this habitat will also accommodate steelhead. The Agreement includes a provision that implementation of the Agreement shall fully mitigate for any presently unmitigated impacts due to the blockage of fish passage of **all fish species** (emphasis added) caused by Feather River hydroelectric projects.

There are several problems with the Agreement. While it is attached to the SA, it is still a draft and may be altered, and/or the parties may not reach agreement. As shown above, while the stated scope of the Agreement is specific to habitat expansion for salmon and steelhead, the final language significantly expands this scope to include all fish species. State Water Board staff do not believe the State Water Board can commit to such a broad agreement. Clearly, the Agreement is well beyond the scope of this relicensing.

Fish Weir Program

Construction of the Project has restricted the spatial separation of spring-run and fall-run Chinook salmon. The reduction in spawning habitat has increased the rate of redd superimposition, which has impacted spring run salmon which spawn a few weeks prior to fall run. In addition, the Feather River Fish Hatchery has not separated spring-run and fall-run fish when collecting eggs. This has resulted in introgression (genetic interbreeding) at a very high rate. As stated above, NOAA Fisheries concluded the hatchery produces spring-run Chinook salmon that are genetically more similar to fall-run. Article A105 requires DWR to develop a weir construction and operations plan consistent with the Project’s biological opinion(s). Actual

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construction of the weir is not required until 12 years after license issuance. Protection of spring-run Chinook salmon genetics should be a priority of the Project, and not deferred. While design and construction of a weir may take some time, measures should be designed to protect spring-run Chinook sooner than 12 years after license issuance.

Monitoring of Bacteria Levels and Public Education

DWR conducted monitoring for bacterial at recreation areas during 2002 and 2003. Samples from the North Forebay Recreation Area beach had consistently high fecal coliform levels that exceed Department of Health Services (DHS) guidance and Basin Plan objectives. Results of the monitoring also showed that nearly every sample from two sites in the North Forebay, and many sites in the South Forebay exceeded DHS and USEPA criteria for enterococcus bacteria (Department of Water Resources, September 2004). Article A113 requires DWR to monitor certain recreation areas for fecal coliform, enterococcus bacteria, or other bacterial indicators as required in the Basin Plan. DWR is also required by the Article to post public notices if unsafe levels of bacteria are present. The Article does not require DWR to take any actions to prevent or reduce the occurrence of bacteria at the recreational areas. DWR must propose methods that will eliminate, or reduce to an acceptable level, bacteria that impact recreational sites.

Issues Not Addressed in the Settlement Agreement

Some resources that have been impacted by the Project were not included in the SA. State Water Board staff have identified the issues below because of their impact to water quality. This should not be construed as a complete list of issues not included in the SA.

Water Temperature Impacts to Rice Production

The SA does not include a measure to improve water temperatures for rice production. After construction of Oroville Dam, water temperatures were reduced from pre-Project levels. This reduction in water temperature has had an adverse impact on rice growers that receive deliveries of water from Thermalito Afterbay. Water temperatures needed to protect anadromous fish and rice production are different and can conflict. It is difficult for DWR to provide water at the appropriate temperature to meet both uses. DWR must provide methods to protect the rice production beneficial use.

Blue-Green Algae

In 2005 a large bloom of the blue-green algae *Anabaena flos-aquae* was observed in the Middle Fork Feather River arm of Lake Oroville. *Anabaena flos-aquae* can produce toxins (e.g., anatoxin-a, a neurotoxin) at levels hazardous to public health, pets, and wildlife. *Anabaena flos-aquae* may also have the ability to produce compounds that create taste and odor problems in

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water. At this time it is not known if this algal bloom produced toxins or caused taste and odor problems. Phosphorus has been measured in Lake Oroville at levels that can produce algal blooms (Department of Water Resources, September 2004). Additional study will be required to evaluate the causes of the bloom and develop measures to avoid or minimize the impacts of the blooms on the beneficial uses.

National Environmental Policy Act and California Environmental Quality Act

DWR has prepared an Applicant Prepared Environmental Assessment, as allowed in the Alternative Licensing Process. The Commission will be required to prepare a document to comply with the provisions of the National Environmental Policy Act (NEPA). Comments provided above on the proposed measures should be considered when Commission staff develops recommendations or preferred alternatives in the NEPA document.

Issuance of the water quality certification by the State Water Board is a discretionary action under the California Environmental Quality Act (CEQA). Cal. Pub. Resources Code § 21000 et. seq. Accordingly, the State Water Board will be required to comply with CEQA before considering issuance of water quality certification. In this case DWR will be the lead agency, and the State Water Board will be a responsible agency. CEQA differs from NEPA in that it requires the development of alternatives that will avoid, minimize, or mitigate for any significant impacts from a project. As CEQA lead agency, DWR will therefore need to develop alternatives to avoid, reduce, or mitigate for the significant impacts identified.

Under NEPA and CEQA, a project may be analyzed for its incremental effects over existing baseline conditions. In an analysis of an existing hydroelectric project, reauthorizing the project will not yield many environmental impacts because most of the impacts have already occurred and, when compared to the existing condition, do not register as significant. Thus, most of the potentially significant impacts identified in the NEPA and CEQA analysis will be associated with the proposed measures.

DWR will be required to construct a number of facilities and take other actions to implement the terms of the SA, including the Recreation Plan. Construction will often require permits from various state and federal agencies, which will require compliance with NEPA and CEQA. As much of the environmental analysis and permitting as possible should be conducted during the relicensing period. At a minimum, the cumulative impacts of these actions will need to be considered.

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Conclusion

As stated above, State Water Board staff has reviewed the SA in the limited time provided by the Commission. A complete review of the SA's ability to meet the water quality standards was not possible in the time allotted and would be inappropriate at this time. State Water Board staff will conduct a complete review of SA Article compliance with the water quality standards as we evaluate DWR's application for water quality certification.

Thank you for the opportunity to comment on the SA. If you have any questions about these comments, please contact me at (916) 341-5341.

Sincerely,

Russ J. Kanz
Staff Environmental Scientist

cc: FERC Service List

References:

Central Valley Regional Water Quality Control Board. 1998. Water quality control plan for the Sacramento and San Joaquin River Basins, Forth Edition. September 15, 1998

Department of Water Resources. 2004. Final Report, Evaluation of Oroville facilities operation on water temperature related effects on pre-spawning adult Chinook salmon and characterization of holding habitat SP-F10, tasks 1D and 1E. June 2004

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Comments on Settlement Agreement

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