



State Water Resources Control Board



Division of Water Rights

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2008 MAR 31 P 4: 35

FEDERAL ENERGY
 REGULATORY COMMISSION

P-803

MAR 26 2008

Tom Jereb
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 Pacific Gas & Electric Company
 P.O. Box 770000
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Dear Mr. Jereb:

COMMENTS ON THE APPLICATION FOR NEW LICENSE FOR DESABLA-CENTERVILLE PROJECT, FERC #803

Pacific Gas and Electric Company (PG&E) submitted an Application for New License (Application), dated October 2007, and updated study results (dated December 2007), to the Federal Energy Regulatory Commission (Commission) for the DeSabra-Centerville Project (Project), FERC #803. At this time the Application is incomplete because not all studies have not been completed and reviewed by the Commission. (18 CFR §5.15.) Once the Commission issues the Ready for Environmental Assessment notice, PG&E will be required to apply for water quality certification. (18 CFR § 4.34(b)(5)(i).) The Application must be complete before the application for water quality certification can be deemed complete. (Cal. Code Regs. tit. 23, §3856). In this letter State Water Resources Control Board (State Water Board) staff provide information on the requirements for a complete application for water quality certification, and recommend additional studies to complete the application for water quality certification.

Water Quality Certification

Pursuant to the federal Clean Water Act (CWA), section 401 (33 U.S.C. §1341), any applicant for a federal license or permit to conduct an activity that may result in any discharge to navigable waters must obtain certification from the State in which the discharge originates or will originate, that the discharge will comply with the applicable provisions of the CWA. The State Water Board is the certifying agency in California for water quality certification. (Wat. Code, § 13160.) In issuing a water quality certification, the State Water Board certifies that the project will comply with specified provisions of the CWA, including water quality standards that are developed pursuant to state law and in satisfaction of section 303 of the CWA. (33 U.S.C. § 1313.) The State Water Board may condition certification to ensure compliance with CWA requirements and any other appropriate requirement of state law. (33 U.S.C. § 1341, subd. (d).) Conditions of certification become conditions of any federal license or permit for the project.

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 Quality Control Board, 2007). The Basin Plan designates the beneficial uses of waters to be protected along with the water quality objectives necessary to protect those uses. California water quality standards consist of both beneficial uses and the water quality objectives based

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on those uses. Beneficial uses designated for Butte Creek (sources to Chico) include municipal and domestic supply, irrigation, stock watering, power generation, contact and non-contact recreation, freshwater habitat (cold and warm), migration (cold), spawning (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. PG&E must demonstrate whether the Project complies with all applicable water quality objectives in the Basin Plan and whether the Project impairs the established beneficial uses of Butte Creek. PG&E 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 PG&E 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.

Additional Studies/Information

Chinook Salmon

In 1999 Central Valley spring-run Chinook salmon (SRCS) were listed as threatened under the Endangered Species Act. Restoration of lower Butte Creek, and removal of passage barriers has significantly increased the population of SRCS in Butte Creek. After the listing of SRCS PG&E has operated the Project to enhance and protect the habitat for this species. The Application states that a "significant primary benefit" of the Project is enhanced cool water habitat for threatened SRCS and Central Valley steelhead in Butte Creek. Butte Creek currently supports a majority (about 70%) of the total population of SRCS. Operation of the Project is critical to this population until additional Central Valley habitat is restored. PG&E will need to demonstrate the Project fully protects the beneficial uses in its application for water quality certification, including the SRCS that are supported by the beneficial uses.

Diversion of water to the Centerville Powerhouse reduces the amount of habitat available to all life stages of SRCS and increases water temperature in Butte Creek above the Centerville Powerhouse. Currently, flows above Centerville Powerhouse significantly reduce the amount of spawning habitat, and flows in excess of 200 cubic feet per second (cfs) are needed for the September through December period to increase habitat (U.S. Fish and Wildlife Service, 2003.) Reduced flows above Centerville Powerhouse in conjunction with cooler tailrace water may create a thermal barrier preventing movement of adult fish above the powerhouse. Higher water temperatures above the powerhouse may increase pre-spawn mortality and decrease fitness of holding fish. The instream flow studies conducted by PG&E and included in the Application do not include habitat suitability curves for adult holding. The Physical Habitat Simulation model should allow for an evaluation of changes in flow on holding habitat. PG&E must evaluate the impact of reduced flows in Butte Creek on adult SRCS holding and spawning habitat.

Water Temperature Model

PG&E has developed a CEQUAL-W2 water temperature model for the Project. The initial version of the model did not perform well enough to be useful in alternatives analysis. A revised

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version of the model should be available soon. A water temperature model that performs to the satisfaction of State Water Board staff is critical for evaluating operations alternatives, as well as providing data for future operations. PG&E should consult with State Water Board staff on the status and adequacy of the model.

DeSabra Forebay Water Temperature

PG&E conducted a study on the reduction of heating in the DeSabra Forebay. The consultant identified a number of physical modifications that could be used to achieve a reduction in temperature of 50%. Once the water temperature model is completed and approved by the agencies, State Water Board staff recommend conducting a series of model runs to evaluate the change in water temperature in Butte Creek resulting from a 50% and 100% reduction in the change in water temperature resulting from forebay modifications. This information will be useful in determining which of the alternatives will best achieve the desired improvement in water temperature. It will be important to select a desired alternative for inclusion into the new Commission license. The selection of the alternative will be necessary for issuance of the water quality certification.

Fish Passage

The updated environmental analysis (Pacific Gas and Electric Company, 2007) concludes that differences between upstream and downstream fish populations at the diversions are not considerable and there is little or no negative impact from Project operations on fish abundance and recruitment due to entrainment. The Hendricks Diversion Dam diverts 100% of the flow of the West Branch Feather River and only returns a small amount of the flow well downstream of the dam. There is a complete disconnect in habitat, and a significant loss of stream energy (fish and macroinvertebrates) to the system. It is also not possible to separate the impact of reduced flow, elevated water temperature, and lack of upstream passage from that of entrainment. All of these factors impact overall fish populations. Additional studies should be conducted to support claims that entrainment does not impact fish populations.

The updated environmental analysis also concludes that fish can swim freely between each canal and river at the mainstream diversion points. Velocity data should be provided that shows fish are able to swim back upstream once entrained into the canals.

Conclusion

PG&E will be required to apply for water quality certification within 60 days of the Commission's issuance of the Ready for Environmental Analysis notice. A complete application for water quality certification must include a description of any steps that have been, or will be taken to avoid, minimize, or compensate for loss of, or significant adverse impacts to beneficial uses of water. (Cal. Code Regs. tit. 23, §3856(h)(6).) We may request additional information to clarify, amplify, correct, or otherwise supplement the contents of the application. Supplemental information may include evidence of compliance with the water quality control plan. (Cal. Code Regs. tit. 23, §3836.) In addition, 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. A CEQA document is required before the State Water Board can act on issuance of water quality

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certification. (Cal. Code Regs., tit. 23, §3856 (f).) If you have any questions or would like to discuss this letter in more detail please call me at (916) 341-5341.

Sincerely,


Russ J. Kanz
Staff Environmental Scientist

References:

U.S. Fish and Wildlife Service. 2003. Flow-Habitat Relationships for Spring-Run Chinook Salmon Spawning in Butte Creek. August 29, 2003. Sacramento Fish and Wildlife Office, Energy Planning and Instream Flow Group.

Pacific Gas and Electric Company. 2007. Updated Study Results and License Application Sections. DeSabra-Centerville Hydroelectric Project. December 2007

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