



State Water Resources Control Board



Linda S. Adams

Secretary for
Environmental Protection

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

FEB 26 2009

Ms. Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, DC 20426

Dear Ms. Bose:

COMMENTS ON THE ENVIRONMENTAL ASSESSMENT FOR THE DESABLA CENTERVILLE HYDROELECTRIC PROJECT, FERC #803

State Water Resources Control Board (State Water Board) staff has reviewed the Environmental Assessment (EA) prepared by the Federal Regulatory Energy Commission (Commission) for the DeSabra Centerville Hydroelectric Project (Project), FERC #803, to determine: 1) if the impacts and/or benefits of the Project and alternatives are disclosed; 2) if the EA fully discloses whether the alternatives will meet the water quality standards; and 3) if the EA can be used to comply with the California Environmental Quality Act (CEQA).

In the EA, Commission staff assesses the environmental and economic effects of continuing to operate the Project as proposed by PG&E, and with Commission staff's recommended measures.

Basin Plan/Comprehensive Plans

Pacific Gas and Electric Company (PG&E), the licensee, must obtain water quality certification from the State Water Board, pursuant to Section 401 (a)(1) of the Federal Clean Water Act (CWA) (33 U.S.C. §1341(a)(1)) before the Commission can issue a new license for the Project. Before the State Water Board can issue certification PG&E must demonstrate that the Project will comply with the *Water Quality Control Plan for the Sacramento and San Joaquin Rivers* (Central Valley Regional Water Quality Control Board, 1998) (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. 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.¹ The Basin Plan does not specifically identify the beneficial uses of the West Branch of the Feather River (WBFR). The Basin Plan specifies that the beneficial uses of any specifically identified water body generally apply to its tributary streams. The Basin Plan beneficial uses of the WBFR, based on those identified for the North Fork Feather River, are likely municipal, irrigation and stock watering, hydropower generation, water contact recreation, warm freshwater habitat, cold freshwater habitat, warm freshwater spawning, cold freshwater spawning and wildlife habitat.

¹ Any stream segments with both "cold" and "warm" beneficial use designations will be considered cold-water bodies for application of water quality objectives.

In order for the State Water Board to issue water quality certification for the Project, PG&E must demonstrate compliance with all water quality objectives in the Basin Plan that the Project may effect and that can be reasonably controlled by PG&E. PG&E must also demonstrate that the Project does not impair the beneficial uses of Butte Creek or the WBFR. If the Project does not comply with one or more of the water quality objectives, then PG&E must describe the actions that it will take to bring its Project into compliance with the applicable water quality requirements in order to protect and maintain the beneficial uses.

An application for water quality certification must describe steps that have been or will be taken to avoid, minimize, or compensate for the loss of or significant adverse impact to the beneficial uses of waters of the State. (Cal. Code Regs., tit. 23, §3856, subd. (h)(6).). Section 10(a)(2) of the Federal Power Act requires the Commission to consider the extent to which a project is consistent with the Basin Plan, which is a comprehensive plan.

California Environmental Quality Act

Issuance of water quality certification is a discretionary action that requires the State Water Board to comply with the California Environmental Quality Act (CEQA). The EA incorrectly identifies the State Water Board as a responsible agency under CEQA. In this case, the State Water Board will be the lead agency for preparation of environmental documents.

Under CEQA, the lead agency must prepare an initial study and environmental checklist that identifies the impacts of a proposed project. The State Water Board must prepare an Environmental Impact Report if changes in the Project could have significant adverse environmental impacts or if the alternatives or mitigation measures could have significant adverse impacts, including incidental adverse impacts of changes that otherwise will provide an overall environmental benefit. For projects with less than significant impacts, a negative declaration or mitigated negative declaration can be issued. CEQA also provides categorical and statutory exemptions for certain projects.

Commission policy prevents any party from cooperating on preparation of joint National Environmental Policy Act (NEPA)/CEQA documents and intervening in the Commission's licensing proceeding. This policy prevents the State Water Board and the Commission from cooperating on the development of joint documents. CEQA directs a lead agency to use environmental documents prepared under the NEPA when possible. CEQA, unlike NEPA requires the identification of significant impacts, and the development of alternatives to avoid, reduce, or mitigate the impacts. In addition, the lead CEQA agency must prepare a mitigation, monitoring, and reporting plan to ensure that methods to avoid, reduce, or mitigate the impacts are implemented. Because NEPA documents do not specifically identify significant impacts, additional analysis may be required to identify the impacts and comply with CEQA. State Water Board staff may rely on sections of this EA, in addition to additional analysis to comply with CEQA.

Alternatives and Baseline

Under NEPA and CEQA, the environmental impacts of a project may be analyzed using existing conditions as a baseline. A description of baseline conditions is critical for this comparison and the analysis of the alternatives. The baseline description should fully describe the environmental condition at the time the document is prepared, and also describe whether the existing project complies with existing laws, including the Clean Water Act (CWA) and Endangered Species Act (ESA), as well as applicable comprehensive plans. In an analysis of an already 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. Typically, the potentially significant CEQA/NEPA impacts identified are associated with the proposed measures.

Section 5 of the EA contains a comparison of the alternatives. While the comparison includes the gross generation of each alternative, it does not include a comparison of the environmental effects of the alternatives. Rather the analysis only compares the cost and impact of the alternatives on power generation. The analysis would be more useful if it also evaluated the consistency of each alternative with the CWA, ESA, and comprehensive plans.

As stated in the EA, the Centerville Powerhouse is at the end of its useful life, and will require refurbishment or replacement (page 305). The EA does not state if refurbishment or replacement was included in the alternatives, and does not include these costs in the economic analysis. Operation of the powerhouse, specifically the diversion of water at Lower Centerville Diversion Dam (LCDD), impacts anadromous fish in Butte Creek. The EA should analyze environmental and economic impacts of the replacement or removal of Centerville Powerhouse.

The EA concludes the continued operation of the Project could adversely affect the Central Valley Spring-Run Chinook Salmon (page 10). Although this is an ongoing Project impact, not necessarily a significant impact under CEQA or NEPA, the EA should include a discussion of measures or alternatives that will avoid, reduce, or mitigate this impact. In addition, although there is a lack of data on steelhead the same water temperature and habitat alterations may impact this species in a similar manner. The EA does not adequately disclose the impact of the alternatives on steelhead.

Specific Comments

Project and Ancillary Road-Related Erosion – Page 49

The EA correctly states that a number of roads, several of which are in the Butte Creek drainage, have moderate to severe erosion problems. The roads in the Butte Creek drainage are not located on U.S. Forest Service lands. PG&E has proposed to develop a Transportation System Management Plan for approval by the U.S. Forest Service. Because some of the roads are not located on federal lands the plan should require approval of the State and Regional Water Boards, and Butte County.

Water Conveyance Geologic Hazards Risk - Page 57

This project has a high risk and history of canal failure. The EA concludes that continued operation of the Project presents ongoing risk of adverse environmental impact. Then it concludes that failure during or immediately following inclement weather is of less consequence

to the fishery. Data is not provided to support this statement. Canal failure has a high potential to cause violations of the water quality objectives. The EA states that continuation of Best Management Practices (BMPs) and compliance with a Project Canal Maintenance and Inspection Plan will provide mitigation for canal failure. The details of the measures must be provided in the EA to demonstrate they will mitigate the impacts.

Fish Entrainment at Project Diversion Dams - Page 121

The EA states that fish can move back and forth from the canals to the river. Data should be provided to support this statement because it appears the design of the intake structures and velocities in the canals may prevent fish from leaving the canals. The EA should also state that at Hendrix Head Dam and at LCDD, 100 percent of the flow is diverted to the canals, and therefore 100 percent of the fish entering the canals are entrained.

Steelhead Trout of the Central Valley ESU – Page 130

The EA does not describe the ongoing impacts of the Project on steelhead. This impact must be included to evaluate the effects of the alternatives on all life-stages of steelhead.

Water Quantity – Minimum Instream Flows – Page 167

As with all models, the W2 temperature model has certain limitations based on the calibration and validation of the model. Department of Fish and Game staff previously submitted comments on the model, and suggested the output of the model should only be used to compare the alternatives. The EA implies that the output of the model is real, which is incorrect. The water temperature model shows that the release of full flows at LCDD along with a reduction of thermal loading at the DeSabra Forebay will decrease the water temperature in Lower Butte Creek compared to current conditions (Appendix B, table 1). Under this scenario increasing flows below LCDD diversion dam will not have a negative effect on salmon holding below the Centerville Powerhouse. In the three-year period from 2001-2003, it is estimated that 10,887; 7,161; and 1,527 fish, respectively, spawned above Centerville Powerhouse, while 7,425; 5,737; and 4,536 fish, respectively, spawned below (Ward, McReynolds, and Garmin, 2003). The U.S. Fish and Wildlife Service (2003) developed a 2D PHASIM model to evaluate changes in flow on spawning habitat in Butte Creek. This study included representative reaches above and below the powerhouse. The study showed that there is more spawning habitat below the powerhouse, and by increasing flows a substantial increase in spawning habitat above the powerhouse would occur, substantially reducing redd superimposition. The EA also states that increasing flows below LCDD could result in overcrowding and prevent the utilization of habitat below the Centerville Powerhouse. State Water Board staff is not aware of any studies or substantial evidence to support this statement. Evidence to support the statement should be provided.

Lower Centerville Diversion Dam Removal - Page 214

As stated above, modeling shows that a release of full flows at LCDD, in combination with a reduction in thermal loading at DeSabra Forebay, will reduce water temperatures below Centerville Powerhouse compared to current conditions. Under this alternative, there would be a significant increase in cold water holding habitat above the powerhouse. This should reduce thermal stress and pre-spawn mortality for fish holding above the powerhouse. There is no evidence that adult salmon holding above the powerhouse under this alternative would not move downstream to spawn. In addition, this alternative will enhance cold water habitat for juvenile steelhead, and yearly Chinook that are holding through the summer.

Threatened and Endangered Species – Page 257

The EA states that removal of LCDD will reduce the delivery of cold water to Lower Butte Creek limiting the extent of cold-water habitat. Water temperature modeling shows that the release of full flows at LCDD, along with a reduction of thermal loading at the DeSabra Forebay, will not increase the water temperature in Lower Butte Creek (Appendix B, table 1) compared to current conditions. Under this scenario, there will be a significant increase in cold-water habitat above Centerville Powerhouse.

Recreation Resources – Page 269

When Philbrook Reservoir is drawn down, vehicles must navigate between large rocks in a circuitous path to reach the reservoir. This results in erosion in the exposed lake bottom, thus increasing the potential for the release of petroleum products onto the reservoir bottom. During a site visit with PG&E and U.S. Forest Service staff in the fall of 2008, there was evidence that vehicles hit or ran over large rocks. Extending the boat ramp would reduce the potential for impacts to water quality that currently exists at Philbrook Reservoir.

Centerville Powerhouse – Page 305

In this section, the EA only discusses the need to rebuild or refurbish Centerville Powerhouse on historic properties. As stated above, the EA should discuss a range of alternatives that include the impacts of rebuilding or decommissioning Centerville Powerhouse.

Staff Measures, Lower Centerville Dam Removal – Page 369

Commission staff concludes that removal of LCDD or decommissioning of Centerville Powerhouse would increase the water temperature downstream of the Centerville Powerhouse. As stated above, modeling shows that an 80 percent reduction of thermal loading in DeSabra Forebay, in combination with removal of LCDD will reduce temperatures below the Centerville Powerhouse.

DeSabra Forebay Water Temperature Improvement Plan – Page 375

Commission staff endorses PG&E's proposal to develop a DeSabra Forebay Water Temperature Improvement Plan. Operation of a device to reduce thermal loading may result in impacts to recreational uses of DeSabra Forebay. Collaborative discussions between PG&E, State Water Board, Department of Fish and Game, U.S. Forest Service, U.S. Fish and Wildlife Service, and NGO staffs have occurred concerning the reduction in thermal loading. It is generally agreed that loading should be reduced as much as possible while meeting the operational requirements of the forebay. This plan needs to be developed before the State Water Board can consider issuance of water quality certification for the Project. A preliminary design is necessary to evaluate the potential impacts of the construction and operation of the temperature reduction device in the CEQA process, and to determine compliance with water quality standards. State Water Board staff does not believe that the development of a temperature reduction device can be deferred until after license issuance.

Fish Entrainment and Passage – Page 376

Hendrix Head Diversion Dam, Butte Head Dam, and LCDD divert 100 percent of the river flow, returning the required minimum instream flow to the river some distance downstream of each dam. It is likely that these dams entrain 100 percent of the fish and macroinvertebrates moving downstream and prevent the upstream passage of fish. As discussed in section 3.3.2, the EA states that trout populations above and below the diversion are viable and generally healthy.

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Section 3.3.2 does not contain specific trout population information and does not adequately describe the baseline fish populations. The EA does not provide a threshold for "viable and generally healthy". The determination that fish screens are not warranted is solely based on costs, and does not attempt to balance the costs and benefits of screens at each dam separately. Costs for screens at each of these dams will vary based on site location and design. Individual analysis for screens at each of the dams is warranted and necessary.

Conclusion

State Water Board staff appreciates the opportunity to comment on this EA. Please contact me at (916) 341-5341 if you need additional information or would like to discuss these comments.

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. The Energy Planning and Instream Flow Branch, Sacramento, California

Ward, Paul; McReynolds, Tracy; and Clint Garman, 2004. Butte Creek Spring-Run Chinook Salmon, *Onchryhnchus Tshawytscha* Pre-Spawn Mortality Evaluation. Department of Fish and Game, Inland Fisheries, Administrative Report No. 2004-5

cc: FERC Service List



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