UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

September 28, 2010

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

Subject: Draft Environmental Impact Statement (DEIS) for Hydropower License McCloud-Pit Hydroelectric Project, Shasta County, California (CEQ # 20100299, FERC Project Number 2016)

Dear Secretary Bose:

We appreciate the opportunity to review the subject document pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act. This letter conveys our comments, which were also prepared under the authority of, and in accordance with, the provisions of the Federal Guidelines promulgated at 40 CFR 230 under Section 404(b)(1) of the Clean Water Act (CWA).

EPA acknowledges the need for energy generation that does not create greenhouse gas emissions. We also value the process created by the Federal Energy Regulatory Commission (FERC) that allowed federal and state agencies, the project proponent or licensee, and many other stakeholders to contribute to the relicensing and the DEIS. We commend FERC and its stakeholders for license conditions requiring the placement of gravel and coarse sediment in the McCloud River and large woody debris placement downstream of the project dams to improve aquatic and riparian habitat.

We have rated the project Environmental Concerns – Insufficient Information (EC-2) (see attached "Summary of the EPA Rating System"), due to our concerns about water resources and cumulative impacts. In regards to water resources, EPA is concerned the DEIS did not give full consideration to meeting all beneficial uses of the McCloud River in making its minimum flow determination. We encourage seasonal variation of water release from McCloud dam, to create a more natural flow regime that better supports beneficial downstream uses of the river. Additionally, a Clean Water Action Section 404 permit, which is not discussed in the DEIS, may be required for some activities, such as the construction of power generating facilities as well as placement of gravel and coarse sediment in the McCloud River. On cumulative impacts, we are concerned the DEIS has not adequately evaluated the reasonably foreseeable introduction of endangered species, anadromous salmonids, into McCloud Creek over the life of the FERC license. We have provided more information on these and other points in our enclosed detailed comments.

We appreciate the opportunity to review this DEIS. When the FEIS is released, please send one (1) hard copy to the address above (mail code: CED-2). If you have any questions, please contact me at (415) 972-3521, or contact Tom Kelly, the lead reviewer for this project. Tom can be reached at (415) 972-3852 or kelly.thomasp@epa.gov.

Sincerely,

Kathleen M. Goforth, Manager
Environmental Review Office
Communities and Ecosystems Division

Enclosures: Detailed Comments
Summary of Rating Definitions

cc: Bob Foster, National Marine Fisheries Service
Stacey Smith, U.S. Forest Service
Russ Kanz, California, State Water Quality Board
Matt Myers California Department of Fish and Game

EPA DETAILED COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS) FOR HYDROPOWER LICENSE MCCLOUD-PIT HYDROELECTRIC PROJECT, SHASTA COUNTY, CALIFORNIA, SEPTEMBER 28, 2010

Water Resources

Water Quality

EPA is concerned the DEIS did not give full consideration to meeting all beneficial uses in making its minimum flow determination for the McCloud River. As the DEIS notes, the FERC license is dependent on the project receiving a Clean Water Act Section 401 Water Quality Certification from the California State Water Resources Control Board (p. 16). The Water Quality Certification supports the beneficial uses for each river. For the McCloud River, beneficial uses include municipal and domestic supply, hydropower generation, water contact recreation, non-contact water recreation, canoeing and rafting, cold freshwater habitat, coldwater spawning, and wildlife habitat. The DEIS explained that FERC selected a flow regime proposed by California Trout, Trout Unlimited, and the McCloud River Club, because it strikes the best balance between "angling opportunities, aquatic resources, and recreational boating" (p. 327). This flow regime would provide "lower instream flows and . . . more wadeable conditions during the early trout fishing season" (p. 136). FERC's conclusion about flow on the Lower McCloud River balanced the interests of the blue ribbon fishery, from the perspective of recreational fishing opportunities, against the interest of recreational boaters (p. 327). EPA is concerned the flow regime may not be the best alternative for long-term health of the river ecosystem.

While the dam-controlled Lower McCloud no longer experiences a natural flow regime, the river can still benefit from an attempt to mimic natural flow, fostering greater ecological integrity. More natural flows benefit native vegetation, which often disperses seeds as seasonal high flows subside. The DEIS has already noted the accumulation of fine sediment in gravel spawning grounds, the reason for the proposal to place gravel and coarse sediment in the river. High spring flows serve to scour and redeposit fine sediment, reducing the need for human intervention. Even aquatic biota benefit from high seasonal flows. A report of a controlled experiment[1] on the Colorado River below Glen Canyon Dam discusses the benefits of high flow for that river, which resulted in "an unusually high growth and survival rate of rainbow trout" following a high flow release. The researchers proposed that high flow removed non-native species, creating an abundance of high quality food (midges and black flies) for rainbow trout.

Recommendation:
The FEIS should consider the long-term value of seasonally higher flow, mimicking natural flow, to aquatic resources of the Lower McCloud River.

Discharge of Dredge or Fill Material to Waters of the United States

The purpose of the Clean Water Act is to restore and maintain the chemical, physical and biological integrity of waters of the United States (WUS). These goals are achieved, in part, by controlling discharges of dredged or fill material pursuant to EPA's *Federal Guidelines for Specification of Disposal Sites for Dredged or Fill Materials* (40 CFR 230), promulgated pursuant

[1] United States Geological Survey Fact Sheet: 2008 High-Flow Experiment at Glen Canyon Dam Benefits Colorado River Resources in Grand Canyon National Park, Melis et al. Web. 24 Sept. 2010. <http://pubs.usgs.gov/fs/2010/3009/fs2010-3009.pdf>

to Section 404(b)(1) of the CWA (Guidelines). Fundamental to the Guidelines is the principle that dredged or fill material should not be discharged into the aquatic ecosystem, unless it can be demonstrated that there is no less environmentally damaging practicable alternative that achieves the Applicant's project purpose. In addition, no discharge can be permitted if it will cause or contribute to significant degradation of waters.

The DEIS does not state whether the rivers and reservoirs of the project are considered WUS. We encourage FERC and its licensee to discuss this issue with the U.S. Army Corps of Engineers, which issues permits for the fill or discharge of dredged material in WUS. If WUS are present, a Clean Water Act Section 404 permit may be required for several activities described in the DEIS, such as the excavation of gravel and coarse material from the Star City Creek and other potential sites, the placement of gravel and coarse material in the McCloud River, construction of additional power generating facilities at the base of the McCloud and the Pit 7 afterbay dams, shoreline boat ramps, and other recreational improvements.

Recommendations:
FERC or its licensee should consult with the Corps to determine if the project will impact WUS.

The FEIS should discuss the applicability of Clean Water Act Section 404 permitting to the project and quantify the amount of direct and indirect impacts to WUS.

Vehicle Use and Erosion Control

EPA supports restriction of Off-Highway Vehicle use on shorelines and between roads (p. 40). We suggest the FEIS include a discussion of the need for monitoring and enforcement of these restrictions. In development of the erosion and sediment monitoring plan, EPA encourages: prioritization of inspections and maintenance based on impacts to water (e.g. erodibility of soils and proximity to water bodies and drainage areas); decommissioning of minimally used roads; and paving, with asphalt or gravel, any well traveled (unpaved) roads.

Cumulative Impacts

The cumulative impact assessment of the DEIS is incomplete. It mentions studies to evaluate fish passage at downstream dams that block anadromous salmonids (p.148), but downplays the likelihood of these endangered species arriving in the project area over the 50-year term of the FERC license. The species at issue are the Sacramento River winter-run Chinook salmon (*Oncorhynchus tshawytscha*) (winter-run), Central Valley spring-run Chinook salmon (*O. tshawytscha*) (spring-run), and the distinct population segment of Central Valley steelhead (*O. mykiss*) (steelhead). Winter-run is listed as endangered and spring-run and steelhead are both listed as threatened under the Endangered Species Act.

The National Marine Fisheries Service (NMFS) has issued a biological opinion that concludes that dams and water conveyance by the U.S. Bureau of Reclamation jeopardize the continued existence of the species[2] noted above. NMFS has identified a Reasonable and Prudent Alternative (RPA) to avoid extinction of these species. The RPA includes fish passage to Shasta

[2] Central Valley Project and State Water Project, Operations, Criteria and Plan Biological Assessment and the NMFS Biological Opinion, National Marine Fisheries Service, Web. 22 Sept. 2010. <http://swr.nmfs.noaa.gov/ocap.htm>

Reservoir and reintroduction of Sacramento River winter-run and spring-run Chinook salmon and steelhead into the McCloud River.

This federal reintroduction effort, re-establishing listed salmonids into the Shasta Reservoir and the McCloud River, is reasonably foreseeable[3]. Therefore, this scenario should be fully evaluated in the cumulative impact assessment for this project. Furthermore, the DEIS and FERC license should include mitigation, and license conditions, that require the licensee to evaluate and, if appropriate, implement restoration activities for anadromous salmonids. NMFS recommended measures that create a process to accomplish this. However, FERC considered the recommendations "premature given lack of anadromous fish on the McCloud River" (Table 5-2). EPA is concerned that this reasonably foreseeable opportunity to further anadromous salmonid recovery may be lost for up to 50 years, the maximum duration of FERC's license. If FERC's intention is to modify the license to promote anadromous salmonid recovery following the species' reintroduction to the McCloud River, this course of action is unclear in the DEIS.

Recommendations:
The FEIS should discuss the current status and planned reintroduction of threatened winter-run and spring-run Chinook Salmon and steelhead into Shasta Lake and the McCloud River and assess how the project will impact this reasonably foreseeable scenario.

In addition, we strongly recommend that the FEIS include NMFS recommendations as license measures, to be triggered by clear indications of the successful reintroduction of winter-run and spring-run Chinook Salmon or steelhead to Lake Shasta and the McCloud River.

Climate Change

While we recognize the greenhouse gas benefits of the project, the DEIS does not discuss the impacts of climate change on the project. A number of studies specific to California have indicated the potential for significant environmental impacts as a result of changing temperatures and precipitation.[4] A change in the timing and quantity of precipitation may impact dam stability, hydropower operation, water releases, and erosion of project roads. The FEIS should describe any reasonably anticipated impacts of climate change on the proposed project, and any measures that could be incorporated to address these impacts.

Project Scope

The DEIS limits the project scope on the McCloud River to the mouth of Squaw Valley Creek (p. 61). The project controls water flow down to Shasta Reservoir. The scope of analysis should be modified to reflect this.

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[3] As the DEIS notes on page 60, "According to the Council on Environmental Quality's regulations for implementing NEPA (40 CFR §1508.7), an action may cause cumulative effects if its impacts overlap in space and time with the impacts of other past, present, and *reasonably foreseeable* future actions, regardless of what agency or person undertakes such other actions."

[4] For example: Our Changing Climate: Assessing the Risks to California, A Summary Report from the California Climate Change Center, July 2006; Climate Change and California Water Resources, Brandt, Alf W.; Committee on Water, Parks & Wildlife, California State Assembly, March 2007 and Draft 2009 Climate Action Team Biennial Report to the Governor and Legislature. See internet address: http://www.climatechange.ca.gov/publications/cat/index.html.

SUMMARY OF EPA RATING DEFINITIONS*

This rating system was developed as a means to summarize the U.S. Environmental Protection Agency's (EPA) level of concern with a proposed action. The ratings are a combination of alphabetical categories for evaluation of the environmental impacts of the proposal and numerical categories for evaluation of the adequacy of the Environmental Impact Statement (EIS).

ENVIRONMENTAL IMPACT OF THE ACTION

"LO" (Lack of Objections)

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

"EC" (Environmental Concerns)

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

"EO" (Environmental Objections)

The EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

"EU" (Environmentally Unsatisfactory)

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

ADEQUACY OF THE IMPACT STATEMENT

Category "1" (Adequate)

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category "2" (Insufficient Information)

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

Category "3" (Inadequate)

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640, Policy and Procedures for the Review of Federal Actions Impacting the Environment.

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