
State Water Resources Control Board

AUG 27 2014

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

Dear Secretary Bose:

COMMENTS ON THE PROPOSED STUDY PLANS FOR THE BUCKS CREEK
HYDROELECTRIC PROJECT, FEDERAL ENERGY REGULATORY COMMISSION
PROJECT NO. 619; PLUMAS COUNTY

Pacific Gas and Electric Company and the City of Santa Clara (collectively referred to as Licensees) own and operate the Bucks Creek Hydroelectric Project (Project), Federal Energy Regulatory Commission (Commission) Project No. 619. On May 29, 2014, the Licensees filed the Project's Proposed Study Plan (PSP) with the Commission as required by the Integrated Licensing Process. The PSP was developed by the Licensees in an attempt to address the issues and study requests identified by the Relicensing Participants (RPs) and the Commission during the scoping process. State Water Resources Control Board (State Water Board) staff has reviewed the PSP and provides their comments in Attachment A.

Pursuant to Section 3(b) under the Pre-Application Filing Activities Under the ILP of the *Memorandum of Understanding between the Federal Energy Regulatory Commission and the California State Water Resources Control Board Concerning Coordination of Pre-Application Activities for Non-Federal Hydropower Proposals in California*, State Water Board staff is to note what studies they anticipate will be needed for the issuance of a water quality certification. At this time State Water Board staff feels that the PSP, along with the additional information requested in Attachment A, will meet State Water Board needs. State Water Board also understands that this is an ongoing process and many of the proposed studies require consultation. As the studies proceed, the need for additional information may become apparent. State Water Board staff will make every effort to identify informational needs as early as possible and is committed to working collaboratively with the Licensees.

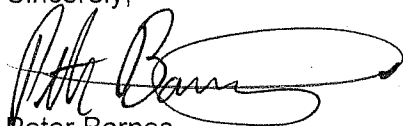
FELICIA MARCUS, CHAIR | THOMAS HOWARD, EXECUTIVE DIRECTOR

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If you have any questions regarding this letter, please contact me at (916) 445-9989 or by email at Peter.Barnes@waterboards.ca.gov. Written correspondence should be directed to:

State Water Resources Control Board
Division of Water Rights
Water Quality Certification Program
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Sincerely,



Peter Barnes
Engineering Geologist
Water Quality Certification Program
Division of Water Rights

Enclosure: Attachment A – Comments on the Proposed Study Plan
Attachment B – Water Temperature Model Guidance Document

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ATTACHMENT A:
COMMENTS ON THE PROPOSED STUDY PLAN
FOR THE BUCKS CREEK HYDROELECTRIC PROJECT

The following comments are provided by State Water Resources Control Board (State Water Board) staff on the Proposed Study Plan (PSP) for the Bucks Creek Hydroelectric Project (Project), Federal Energy Regulatory Commission (Commission) Project No. 619. The Project is owned and operated by Pacific Gas and Electric Company and the City of Santa Clara (collectively referred to as Licensees).

General Comments

State Water Board staff is encouraged by and appreciative of the Licensees' willingness to meet regularly with relicensing participants (RPs) to discuss the proposed study descriptions. These meetings have contributed to the refinement and improvement of some study descriptions. Continued collaboration is vital to the efficient development of study descriptions which will meet the informational needs of all RPs.

Due to these ongoing collaborative efforts, some of the comments contained within this document may have already been addressed in revised study descriptions.

Consultation Process

Many of the proposed studies call for consultation with various RPs. The goal of these consultations is to come to agreement on issues that have not yet been resolved, such as specific study sites or primary Project roads. While State Water Board staff believes that agreement on all of these issues is possible, we also understand the potential for some consultations to end in an impasse. A uniform process should be applied to each study requiring consultation. The process should identify a way in which differences will be resolved when agreement cannot be met. State Water Board staff recommends that once it becomes apparent that agreement cannot be met, all involved parties will submit their recommendations to the Commission who will issue a determination. Additionally, State Water Board staff believes that a cutoff date for consultation be considered to avoid unnecessary delays to study implementation.

State Water Board staff request that the Licensees develop a consultation process that they believe can be applied uniformly across all of their Study Descriptions. The RPs should be provided an opportunity to comment, after which the Commission would issue a final determination.

Study Description Schedules

The level of detail regarding study description schedules varies from study to study. To allow for the participation of all interested RPs, each schedule should be presented in the highest level of detail possible at this time. Additionally, studies which require consultation should have estimates as to when that is to occur in order to allow RPs to plan accordingly.

Water Temperature Model

In rejecting the State Water Board's initial request for a Water Temperature Model, the Licensees ask for further rationale in support of the request. As stated in the initial study request, water temperature affects both water quality and designated beneficial uses, and therefore it is important for State Water Board staff to understand how water temperature in Project affected streams is influenced by Project operations. Additionally, the North Fork Feather River is listed under section 303(d) of the Clean Water Act as impaired for temperature.

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Hydromodification has been identified as a potential source of impairment, something that results from the implementation of hydroelectric projects in the watershed.

In an effort to address some of the Licensees' concerns, State Water Board staff has reviewed the historical data provided by the Licensees' and feel that the scope of the original request can be narrowed in an effort to better evaluate Project related impacts. The current data set appears to have enough information to determine Project related effects on water temperature for most of the Project affected area. However, data is lacking regarding the effects of various instream flows in Grizzly Creek on water temperature in the North Fork Feather River below Cresta dam. As a result, State Water Board staff request that the Licensees develop a water temperature model focusing on this area. Specifically, State Water Board staff is requesting a water temperature model that looks at how changes in flow in Grizzly Creek alter temperature in the lower Grizzly Creek and in the North Fork Feather River below Cresta dam. The specific scope and methodology of the study should be developed in collaboration with the RPs.

On August 18, 2014, State Water Board staff, along with members of CDFW and USFS, met with the Licensees to further discuss the request for a Water Temperature Model. State Water Board staff believes that the discussion was very valuable and allowed for significant progress. Attachment B provides an outline of what was developed by CDFW, USFS, and State Water Board staff at this meeting. State Water Board staff request that the Licensees consider this to be an updated study request and use it as a guideline in the development of a proposed study description.

Channel Morphology Assessment

The Licensees rejected the State Water Board's request for a Channel Morphology Assessment Study due to their belief that the objectives of the requested study were broadly defined and "don't necessarily relate directly to potential project effects on biological resources of concern." As a result, the Licensees did not include a study in the PSP which fully met the State Water Board's informational needs. State Water Board staff originally requested this study in an effort to develop information on how the Project has the potential to influence channel morphology, which in turn could lead to effects on instream aquatic habitat and riparian vegetation. However, State Water Board staff has reviewed Study Descriptions GS-S: Erosion and Sedimentation and Study Description FA-S4: Bucks, Grizzly, and Milk Ranch Creeks Stream Habitat and Passage Barrier Assessment and found that they meet some of the informational needs. State Water Board staff believes that Study Description GS-S1 can be updated to meet the specific informational needs that were intended to be addressed in the Channel Morphology Assessment Study. Please see comments on Study Description GS-S1 below for more specific information.

Fish Population Study

The Licensees have proposed to conduct fish population surveys in Project-affected reaches where they feel that data is lacking. Specifically, the Tributary Stream Fish Population Study Description proposes to sample the perennial tributaries that are diverted by Milk Ranch Conduit. The Licensees do not propose any other sampling sites because they believe that the existing data compiled from sampling efforts following the 2006 increases to the Project minimum flows is sufficient.

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While State Water Board staff has not been able to review all of this information, USFS and CDFW staff has consistently stated that they do not believe it to be sufficient in identifying potential Project related impacts and informing protection, mitigation, and enhancement (PM&E) measures. State Water Board staff urges the Licensees to work with these agencies and other interested RPs to develop a study description that is acceptable to all parties. It is important that the informational needs of both USFS and CDFW are met as the State Water Board relies heavily on their respective expertise in evaluating the impacts of the Project on aquatic resources. If the existing information, along with that gathered through the implementation of the Tributary Stream Fish Population Study Description, is insufficient to meet certain informational needs, additional studies may be required prior to the issuance of a water quality certification from the State Water Board.

Study Description WR-S2: Water Quality Assessment

During previous study plan development meetings, State Water Board staff indicated that it may be more informative and representative if the bacteriological monitoring sites were moved, or if additional sites were added, to areas where contact recreation (swimming, wading, etc.) is most likely to occur. Currently, the Licensees are proposing to perform bacteriological monitoring on Bucks Lake at three boat launches. State Water Board staff is unsure if these are the best locations because they may not be representative of potential water quality issues. It is State Water Board staffs' understanding that these locations are primarily used by boaters as access points to Bucks Lake and little contact recreation occurs at each site. State Water Board staff is concerned about water quality in areas of concentrated recreation where facilities may not be adequate to meet demand. These areas could be either formal or informal recreational sites.

In order to ensure that the study properly identifies any potential water quality issues, State Water Board staff recommends that the Licensees develop a consultation process to select monitoring locations that are more representative of water quality conditions at contact recreation sites. The consultation process would use anecdotal information from RPs and existing information data from current monitoring efforts to develop an agreed upon list of sites. At this time, State Water Board staff is not proposing any additional sites.

Study Description GS-S1: Erosion and Sedimentation

State Water Board staff has heard a significant amount of concern from stakeholders regarding the effect that Bucks Lake levels have on the ability of fish to access upstream spawning habitat. In the Study Description FA-S4, the Licensees indicate that a study element assessing upstream fish passage barriers within reservoir fluctuation zones is to be included in Study Description GS-S1.

State Water Boards staff has reviewed Study Description GS-S1 and believes that the study has the potential to collect the information necessary to address upstream fish passage barriers within reservoir fluctuation zones, but it is not a stated objective. State Water Board staff request that the Licensees update Study Description GS-S1 so that it explicitly addresses this issue.

Additionally, State Water Board staff requests that the Licensees update Study Description GS-S1 to identify how the Milk Ranch Conduit, and its associated intakes, affects the transport of sediment in the tributaries.

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Study Description LU-S1: Maintenance of Project-Related Roads

State Water Board staff request that the consultation process be updated to include State Water Board staff as necessary. Any water quality certification issued as part of a new license is intended to cover all Project related actions for the term of the new license, including the maintenance of Project-related roads as the activity relates to water quality. Early consultation will help ensure that any potential issues are addressed in a manner that allows for their evaluation under the California Environmental Quality Act (CEQA), which must be completed prior to the issuance of a water quality certification. Additionally, the consultation process may help inform future PM&E measures which could be included as part of the water quality certification.

Study Description RR-S1: Recreational Facilities and Use

On August 14, 2014, the Licensees held a meeting with RPs to discuss the proposed studies that are related to recreation. During this meeting, Study Description RR-S1 was presented and thoroughly discussed. In general, there was some confusion over what was actually being proposed and how the study was going to be implemented. This is a large study with many different components. While the intent of the study seems to meet the needs of the RPs, it is not clear how each objective is to be met. State Water Board staff request that the Licensees review the notes from the meeting and update the study accordingly. The new study description should clearly outline how each objective is going to be met and when each specific portion of the study description is to be implemented.

Study Description RWL-S1: Riparian and Wetland Study

Currently, the Licensees are not proposing to include the mainstems of Grizzly, Bucks, and Milk Ranch creeks in Study Description RWL-S1 since these creeks were surveyed in 2002. However, the 2002 surveys were done prior to the implementation of new minimum instream flows on Grizzly and Bucks creek, which have the potential to alter riparian and wetland habitat. Due to a change in the flow regime, State Water Board staff request that Grizzly, Bucks, and Milk Ranch creeks are resurveyed. This information would truly inform the potential of the Project to affect riparian and wetland habitat along Project creeks as it would allow for the comparison of data from two different flow regimes.

The inclusion of Grizzly, Bucks, and Milk Ranch creeks in the areas to be surveyed in Study Description RWL-S1 will also help fill the data gaps of Study Description BR-S1: Vegetation Community Mapping. Currently, Study Description BR-S1 does not propose to include Project affected streams in the study area. Surveying Grizzly, Bucks and Milk Ranch creeks as part of Study Description RWL-S1 will help develop information necessary to address issue *BR-1: Effects of the Project on Vegetation communities*, identified in Study Description BR-S1.

ATTACHMENT B:
WATER TEMPERATURE MODEL
GUIDANCE DOCUMENT

Mass Balance:

A mass balance analysis will be conducted on the temperature changes where water is combined from Bucks Creek Powerhouse (PH) with the North Fork Feather River (NFFR) temperature at the confluence. (Using Bucks PH temperature data [Bucks 2] and NFFR temperature data above Bucks PH [PG&E gaging location NF12])

Stream Network Temperature (SNTEMP) Modeling Proposal:

Goal: Develop a model which will predict how increases in flow in Grizzly Creek would impact temperature in the North Fork Feather River, below Cresta Reservoir. The model is intended for sensitivity analysis-level comparison of base case and alternatives only. The model will not be used for considering absolute temperature.

1. Extent
 - a. Grizzly Creek from Grizzly Forebay to the NFFR
 - b. NFFR from confluence with Grizzly Creek to NF56 (1.6 miles downstream)
2. Meteorology Data Collection
 - a. Rock Creek Dam (Air Temp, Solar Radiation, Wind Speed, Humidity)
 - b. Lower Bucks Creek Reservoir (Air Temp, Solar Radiation, Wind Speed, Humidity)
3. Flow Data Collection
 - a. Outflow from Grizzly Forebay (both spill and low flow outlet) – already gaged
 - b. Flow at mouth of Grizzly Creek - already gaged
 - c. Flow in NFFR above confluence with Grizzly Creek - already gaged
 - d. NF 56 (1.6 miles downstream) - compliance flow gage on Cresta Reach
 - e. Wildcat Creek (spot measurements if possible)
 - f. Grizzly Creek above Wildcat Creek (spot measurements if possible)
4. Temperature Data Collection
 - a. NF 14 (Below Cresta Reservoir)
 - b. NF 56 (1.6 miles downstream of confluence of NFFR and grizzly creek)
 - c. May, July, October temperature profiles in Grizzly Forebay (already collecting this as part of Study Description WR-S2: Water Quality Assessment)
 - d. Wildcat Creek (tributary to Grizzly Creek)
 - e. Grizzly Creek above Wildcat Creek
5. Test Flows
 - a. Current instream flow requirements
 - b. Use data 2006 (50 cfs spill in mid-August) flow increase
 - c. Test flow 18 cfs release from Grizzly Forebay for 5 days starting August 1, 2015 (depending on results of amphibian surveys and water year type. If WY is critically dry, discuss test flows with RPs)

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6. Time Step
 - a. Daily Time step
 - b. June 1st through September 1st
 - c. 2006 (if possible, understanding there is no data from Grizzly Creek tributaries)
 - d. 2013 and 2014 (if possible, understanding that there is no data from Grizzly tributaries)
 - e. 2015 (main calibration year)
 - f. 2016 (additional year of monitoring/modeling will be evaluated by Licensee and Relicensing Participants in Fall of 2015)
7. Node Spacing
 - a. Nodes every 0.2 miles
8. Calibration/Validation
 - a. Conducted at bottom of Grizzly Creek and at NF56