



State Water Resources Control Board



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Arnold Schwarzenegger
Governor

January 31, 2005

Ms. Magalie R. Salas, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, DC 20425

Dear Secretary Salas:

STATE WATER RESOURCES CONTROL BOARD COMMENTS ON SCOPING DOCUMENT 1 AND PRE-APPLICATION DOCUMENT FOR THE DESABLA CENTERVILLE HYDROELECTRIC PROJECT (FERC #803-068)

Thank you for the opportunity for State Water Resources Control Board (SWRCB) staff to review and comment on the Federal Energy Regulatory Commission (Commission) Scoping Document #1 (SD1) and Pre-Application Document (PAD) for the Pacific Gas and Electric Company's (Licensee) DeSabra Centerville Hydroelectric Project (Project). Our comments are offered below.

General Comments:

1. The Federal Clean Water Act (CWA) (33 U.S.C. §§ 1251-1387) was enacted "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." (33 U.S.C. § 1251(a).) Section 101(g) of the CWA (33 U.S.C. § 1251(g)) requires federal agencies to "cooperate with state and local agencies to develop comprehensive solutions to prevent, reduce and eliminate pollution in concert with programs for managing water resources." Section 401 of the CWA (33 U.S.C. § 1341) requires every applicant for a federal license or permit to conduct an activity which may result in a discharge into navigable waters to provide the licensing or permitting federal agency with certification that the Project will be in compliance with specified provisions of the CWA, including water quality standards and implementation plans promulgated under section 303 of the CWA. (33 U.S.C. § 1313.) CWA section 401 directs the agency responsible for certification to prescribe effluent limitations and other limitations necessary to ensure compliance with the CWA and with any other appropriate requirement of state law. Section 401 further provides that state certification conditions shall become conditions of any federal license or permit for the Project.

The SWRCB is the agency in California that is responsible for water quality certification of any potential discharge from an activity that requires a Commission license or amendment. (Wat. Code, § 13160; Cal. Code of Regs., tit. 23, § 3855, subd. (b).) The SWRCB has delegated this function to the Executive Director by regulation. (Cal. Code Regs., tit. 23, § 3838, subd. (a).)

California Environmental Protection Agency

2. The California Regional Water Quality Control Boards (RWQCB) have adopted, and the SWRCB has approved, water quality control plans (Basin Plans) for each watershed basin in the State. The basin plans designate the beneficial uses of waters within each watershed basin, and water quality objectives designed to protect those uses. Section 303 of the CWA requires the states to develop and adopt water quality standards. (33 U.S.C. § 1313.) The beneficial uses together with the water quality objectives that are contained in the basin plans constitute state water quality standards under section 303.

The RWQCB, Central Valley Region in its Basin Plan for the Sacramento River Basin adopted on September 15, 1998, has identified the beneficial uses of Butte Creek from its headwaters to Chico as municipal and domestic supply (MUN), irrigation and stock watering (AGR), hydropower generation (POW), water contact recreation (REC 1), warm freshwater habitat (WARM), cold freshwater habitat (COLD), cold freshwater migration (MGR), warm freshwater spawning (SPWN), cold freshwater spawning (SPWN) and wildlife habitat (WILD).¹

The West Branch of the Feather River (WBFR) beneficial uses are not specifically identified in the Basin Plan, and are to be determined on a case-by-case basis. The beneficial uses of the WBFR based on those identified for the North Fork Feather River are likely (MUN), irrigation and stock watering (AGR), hydropower generation (POW), water contact recreation (REC 1), warm freshwater habitat (WARM), cold freshwater habitat (COLD), warm freshwater spawning (SPWN), cold freshwater spawning (SPWN) and wildlife habitat (WILD).²

Protection of the instream beneficial uses identified in the Basin Plans requires maintenance of adequate stream flows as well as limitations on the discharge of waste.

3. The SWRCB staff hope to work with Commission staff to develop an environmental document that can be used by both agencies for our respective decisions. The SWRCB staff request that the Commission add some additional sections to Scoping Document 2 (SD2) in order to conform the information in the Commission's National Environmental Policy Act (NEPA) environmental document with information that is required for any SWRCB California Environmental Quality Act (CEQA) document to be used for issuing a water quality certification. The additional sections that need to be incorporated into SD1 are the following:

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

² Any stream segments with both "cold" and "warm" beneficial use designations will be considered cold water bodies for application of water quality objectives.

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- Growth Inducing Impacts
- Cumulative Impacts
- Mitigation and Monitoring

GLOBAL COMMENTS REGARDING CONTENT OF SD-1 AND PAD:

1. **Nexus:** The nexus between Project operations and effects on the aquatic and associated resources is that water is being impounded, diverted and discharged by the Licensee. The nexus between the Project and the resources to be studied is that any alteration in the streamflow resulting from Project diversions and the reservoirs has the potential to affect the beneficial uses of that water body and will need to be evaluated by the SWRCB staff to insure that beneficial uses are reasonably protected.

In order to affirmatively issue a water quality certification for the Project, the effects of the Project on beneficial uses in the reaches of Butte Creek, its tributaries and the WBFR must be studied and documented. SWRCB staff comments are intended to guide the Licensee in refining proposed studies and preparing additional study plans so that comprehensive data can be collected that will help the SWRCB staff define the current state of the water quality and decide how to best balance and protect the beneficial uses within the Project Area.

2. **Goals and Objectives:** The SWRCB's goals and objectives for studies and environmental analysis are outlined in the Basin Plans described earlier.

Section 303 of the CWA requires states to adopt water quality standards that “consist of the designated uses of the navigable waters involved and the water quality criteria for such waters based upon such uses.” Basin Plans consist of a designation or establishment for the waters within a specified area of beneficial uses to be protected, water quality objectives to protect those uses. Beneficial uses are critical to water quality management in California. Protection and enhancement of existing and potential beneficial uses are primary goals of water quality planning.

All water quality problems can be stated in terms of whether there is water of sufficient quantity or quality to protect or enhance beneficial uses. The protection and enhancement of beneficial uses require that certain quality and quantity objectives be met for surface and groundwaters. Fish, plants, and other wildlife, as well as humans, use water beneficially.

For instance, **Cold Freshwater Habitat (COLD)** refers to “the uses of water that support cold water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.”

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Water quality certification is an affirmative statement by the State that the hydroelectric project will operate consistent with standards or objectives for the protection of the designated beneficial uses as identified in the Basin Plans or will do so if certain mitigation measures identified in the water quality certification are incorporated into the Project.

The studies requested or supported by the SWRCB are to provide data that reasonably support the finding that operation of the Project is consistent with the goals of the Basin Plans.

3. Water Rights: The Licensee needs to provide documentation on all the water rights that are claimed for the operation of the DeSabra-Centerville Hydroelectric Project (FERC Project No. 803).
4. Study and Methodology Development: The SWRCB disagrees that it is the responsibility of PAD commentors to prescribe specific study methodologies and cost analysis in any greater detail than is provided by the Licensee in the PAD. If the Licensee proposes conceptual studies and methodologies, then the level of respective comments necessary by the commenting agency in this early phase of the ILP is also conceptual. If the proposed studies and methodologies are detailed it is indeed fair to expect agency comments of a similar level. We acknowledge that the methodologies in the PAD are allowed to be conceptual and preliminary. Likewise we believe at this point in the ILP study development process our comments need only be preliminary.

If the above is not the accepted practice by the Commission, then a Licensee not acting in good faith is free to just list conceptual studies and pass what the SWRCB believes is the Licensee's responsibility to ultimately propose detailed studies to the Commission on to the agency commentors. The SWRCB rejects that premise for it ensures that the ILP will always result in disputes and defeats any reason for agencies to collaborate with Licensees in the development of agreed upon studies and study protocols.

In the case of the PAD, the SWRCB staff is unable to make specific comments on the methodology sections provided in the PAD because the studies and concomitant methodologies are conceptual and not yet been clearly defined by the Licensee. We look forward to collaborating with the Licensee, other agencies and interested parties in the development of detailed study plans including methodologies that will address the potential Project effects in a timely and cost effective manner. If at the end of collaboration for study development it becomes clear that the SWRCB must ask for additional studies, we will provide justification, a delineated study plan along with time and cost estimates as prescribed in the Commission's regulations.

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Once methodologies have been agreed to by the Licensee, agencies and interested parties, the rule of practice must be that any deviation from the agreed upon methodology needs to be explained, documented, and if significant, approved by the agencies before the study is conducted.

5. References Cited: In the future, it would be quite helpful when PAD study methods rely on a referenced publication that the entire publication be included in a PAD appendix for review. This is important in that most publics will not have access to the publications and the Commission will also need the full publication in its administrative record.
6. Study Area: The study area must be consistent throughout the study plans. The Project Area, as defined in Section 5.1.1 of the SD-1 and Section 3.1 of the PAD includes the Butte Creek headwaters of the Butte Creek down to the Parrott-Phelan Diversion Dam, and from the headwaters of the WBFR including Round Valley and Philbrook Reservoirs down to the Miocene Diversion Dam. Some of the plans exclude the study of the effects on biota and water quality in the WBFR and in Butte Creek between the Butte Head Dam and the Lower Centerville Diversion Dam. The proposed study areas need to characterize all areas that are affected directly or indirectly by the Project. The SWRCB staff needs to have data on existing background conditions on the upper portion of Butte Creek as well as for the WBFR below the Hendricks Head Dam. Furthermore, tributary diversions that are not currently in use, but may be used in the future, need to be studied to the same extent as other Project-affected reaches to understand how beneficial uses within these areas will be protected.
7. Study Area Map: A map that shows the study area, monitoring locations, and/or reaches that will be modeled should accompany each study plan. This will help clearly define for reviewers how the Project may influence study results.

COMMENTS ON SCOPING DOCUMENT 1

SWRCB staff would like to complement Commission staff on their preliminary list of environmental issues. SWRCB staff comments on SD1 are as follows:

2.1 Purposes of Scoping

Based on SWRCB staff discussions with Commission staff, there has been a commitment to develop an SD2 that can be used by both the Commission and the SWRCB to meet our respective scoping requirements under the NEPA and CEQA. SWRCB appreciates the cooperation and commitment of the Commission to develop documents that can serve both agencies.

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2.2 Scoping Meetings and Written Comments

SWRCB made initial agency comments regarding the scope of the SD1 and the role of the SWRCB in Commission relicensing on November 17 and 18, 2004. Those comments were recorded as part of administrative record for the DeSabra Centerville relicensing and are not be reiterated in this written submittal.

5.1 Cumulative Effects

SWRCB staff concurs with the preliminary list of cumulative affects and with the 5.5.1 Geographic Scope except that it is unclear if the scope includes tributary streams currently being diverted by the project and those tributaries that have been historically diverted by the Project.

5.1.2 Temporal Scope

The SWRCB staff agrees with studying the Project effect on resources within Project Area 30 to 50 years in the future. However, the SWRCB cannot, at this time, support a license in excess of the standard 30-year term.

5.2.1 Water Quantity and Quality

Turbidity: The SWRCB staff recommends that turbidity monitoring stations be established that will alert the Licensee when a flume failure or unintended spill has occurred resulting in increased Butte Creek turbidity. The public has expressed concerns that these events tend to occur during the Spring-run Chinook spawning and juvenile rearing season. This information will be valuable in assessing whether project operations are the proximate cause of the turbidity events reported by local residents.

Fecal Coliform Contamination: The SWRCB is concerned about the potential for fecal coliform contamination from recreation resulting from private and public recreation Project features such as Philbrook and Round Valley Reservoirs.

5.2.2 Aquatic Resources

A preliminary environmental issue identified the concerns about the use of herbicide/pesticides in Project flumes and canals. The Licensee claims that herbicides/pesticides are not used in flumes or canals within the Project Area. However, if the Licensee plans to use herbicides or pesticides within the Project Area, the SWRCB will require that studies be conducted to show what effects these chemicals will have on beneficial uses of water within the Project Area.

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SWRCB staff concurs with Commission staff that the effect of project operations on fish entrainment is an issue. While the Licensee did not propose any studies to address this issue, we assume that Commission staff would support such a study if precursor population studies by the Licensee indicate that significant fishery resources are entrained by Project operations. By agreement between the agencies and the Licensee the request for entrainment studies are being deferred until fish population data is available. The SWRCB reserves its right to request such studies for Butte Creek, its tributaries, and WBFR diversions after review of the fish population data to be developed in 2005 by the Licensee. However, should a study be found necessary, the SWRCB, by reference, agrees with the study proposed by the U.S. Forest Service in its comments to SD1 and the PAD.

COMMENTS ON STUDIES IN THE PAD

Nexus to Studies

See Global Comment #1

Goals and Objectives of Studies

See comment on basic goals and objectives in Global Comment #2 above.

6.3.1 Geology and Soils

SWRCB staff agrees that there is a need for the proposed Forest Service study, *Risk Assessment of Facility Failure*, and have inserted our comments **underlined in bold**. See Attachment 1.

6.3.1-1 Survey Project Road-Related Erosion and Sediment

The SWRCB staff agrees with the Licensee that this study should be completed for Project-affected reaches. SWRCB staff are unable to comment on schedule, analysis, methodologies, costs and level of effort presented because the Licensee has not provided a specific study plan. The SWRCB staff request that the study plan be expanded to consider not only Project roads, but also any OHV trails. The erosion from these roads is more likely to contain high concentrations of sediment runoff. The nexus to the Project is that these trails, while possibly not maintained by the Licensee, are more frequently used by the public visiting the Project recreation areas.

A map should be included showing the locations where studies/surveys will be conducted.

6.3.1-2 Evaluate Spillway-Related Sediment Transport below Philbrook and Round

The SWRCB staff agrees with the Licensee that this study should be completed for Project-affected reaches. SWRCB staff are unable to comment on schedule, analysis, methodologies,

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costs and level of effort presented because the Licensee has not provided a specific study plan. The SWRCB staff agrees with the Forest Service's comments that the sides of the spillway gullies continue to erode and that options should be developed on how to stabilize and revegetate these eroding slopes. The nexus to the Project is that these Project features are causing sediment erosion into the WBFR.

A map should be included showing the locations where studies/surveys will be conducted.

6.3.1-3 Valley Reservoirs Evaluate Spillway-Related Sediment Transport below Canal Spillways

The SWRCB staff agrees with the Licensee that this study should be completed for Project-affected reaches. SWRCB staff are unable to comment on schedule, analysis, methodologies, costs and level of effort presented because the Licensee has not provided a specific study plan. The SWRCB recommends that the sediment transport studies be expanded to include sediment/turbidity impacts due to flume or canal failures. This analysis should include a discussion of any locations where recent flume failures have occurred; a description of repairs to the flumes, and analysis of how future flume failure occurrences will be detected; what mitigation will occur when future failures are detected; and how future failures can be avoided.

A map should be included showing the locations where studies/surveys will be conducted.

6.3.2 Water Resources:

6.3.2-1 Develop Unimpaired and Regulated Hydrology for Project-Affected Stream Reaches

The SWRCB staff agrees with the Licensee that this study should be completed to assess Project effects on the Butte Creek and WBFR. We echo the Forest Service's comment that information collected in this study will be used for several other key studies in the relicensing including the spillway evaluation, the water temperature modeling, the project operations modeling, and the instream flow evaluations.

The SWRCB staff requests that the study area include all diverted or potentially diverted tributaries and the entire WBFR down to the Miocene Diversion, as the lower portion of the river is affected by the removal of water at the Hendricks Head Diversion Dam. The Licensee should include a description of how historical hydrology data will be used to supplement data collected in these field studies, or to identify areas where significant alteration in hydrologic conditions have occurred.

A map should be included in the study plan that shows all study monitoring or measurement locations.

6.3.2-2 Evaluate Future Use of the Four Feeder Diversions

If the Licensee does plan to reserved the right to use these feeder diversions, they will need to complete studies that detail the existing conditions, the consequences of using the feeder diversions, and potential mitigations that will be used to protect the beneficial uses of water. The SWRCB cannot issue a water quality certification without adequate characterization of stream reaches that may be Project-affected. SWRCB staff are unable to comment on schedule, analysis, methodologies, costs and level of effort presented because the Licensee has not provided a specific study plan.

6.3.2-3 Develop Project Operations Model

The SWRCB agrees with the Licensee that it is necessary to develop a Project operations model of the Project-affected reaches to determine how to operate Project features during different hydrologic conditions. However, no detail has been provided about the details of the model. SWRCB staff looks forward to working with the Licensee to choose a model such as CHEOPS or OASIS that meet the needs of the Licensee and relicensing participant for modeling this complex system. Also, SWRCB staff recommends that the Project-affected reaches should include diverted and formerly diverted tributaries as well as the WBFR to the Miocene Diversion, again because the hydrology in this reach is directly affected by water diversion at the Hendricks Head Dam.

6.3.2-4 Develop Water Temperature Model and Monitor Water Temperatures

The Licensee proposed to use a different temperature modeling method for the WBFR. The goal of the temperature monitoring is to develop a model that will protect the Spring Run Chinook Salmon, as well as other aquatic resources within the Project Area. To adequately model the effects from water diversions from the WBFR, the model must be used to demonstrate the influence within the reaches downstream of the Hendricks Head Diversion. The temperature modeling boundaries should extend down the WBFR to the Miocene diversion. The SWRCB staff recommends that CE-QUAL-W2 be chosen for modeling the WBFR reach so that diurnal fluctuations in water temperature to be used for planning management criteria to protect species in the WBFR. This will also reduce the level of complexity associated with transferring data between models. If the Licensee chooses to use a less rigorous model, such as Stream Network Temperature Model (SNTTEMP), a justification of why another model was not chosen should be prepared for review and comment.

The SWRCB staff recommends that redundant data loggers be established in the temperature monitoring network, in particular at critical monitoring locations or sites that are readily accessible to the public. Temperature monitoring data loggers are relatively inexpensive, and redundancy at these critical locations will help avoid data gaps that would decrease modeling accuracy.

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The California Department of Water Resources has in the past collected water temperature data and other water quality data in the Butte Creek watershed. The SWRCB recommends that the historical temperature monitoring data be used to help calibrate the model for wet/dry year conditions that may not be observed during the two years of monitoring prescribed during this study. Although weather conditions will be used as a boundary condition to model wet and dry years, actual field data will help determine whether the model accurately predicts stream and reservoir conditions during these years.

SWRCB also requests that the study plan include detail regarding how the DeSabra Forebay will be included in the modeling effort. If CE-QUAL-W2 is not the model used, a justification of why another model was chosen, and a description of the modeling approach should be prepared for review and comment.

As noted in the Forest Service's comments, the SWRCB staff also recommend that temperature monitoring be conducted at WBFR amphibian sites to collect data during periods of amphibian reproduction. Staff also echoes the Forest Service's comment that an assessment be done of low flow conditions during the winter directly below the two reservoirs where the natural hydrograph is the most altered. (See U.S. Forest Service comments on the PAD.)

The Licensee should include a description of how the temperature model will be used to develop a water temperature management protocol.

6.3.2-5 Measure and Evaluate Water Quality in Project Reservoirs and Project-Affected Stream Reaches

The SWRCB staff agrees with the Licensee that a water quality study should be conducted on Project-affected reaches of the Butte Creek and WBFR and the Round Valley and Philbrook Reservoirs. SWRCB staff, as stated above, recommends that the WBFR below the Hendricks Head Diversion Dam be included in the Project-affected area for this study because water diverted upstream could potentially have a negative effect on the overall water quality in the lower portion of the WBFR.

SWRCB staff are unable to comment on schedule, analysis, methodologies, costs and level of effort presented because the Licensee has not provided any specifics in a study plan. A comprehensive monitoring plan will be necessary to characterize the water quality in the Project-affected reaches and Project reservoirs. The water quality monitoring plan should also include a list or descriptions of the standard field collection methods that will be followed, QA/QC procedures, laboratory methods that will be employed, and reporting limits for each sampling parameter. (See USEPA for accepted sampling protocols) The SWRCB staff will need to review the plan to determine if the sampling locations, parameters, and frequency are sufficient to collect data that will define the Project effects on water quality. (See comment for section 5.2.1 of SD1 regarding fecal coliform.)

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6.3.3 Fish and Aquatic Resources (Including related RT&E and Riparian, Wetland and Littoral Habitat Resources)

6.3.3-1 Survey Spring-run Chinook Salmon Pre-Spawning Mortality and Spawning Escapement

SWRCB agrees with continuing the ongoing monitoring program to provide additional information on the Spring-run Chinook Salmon and that the licensee should continue to fund Department of Fish and Game's pre-spawning mortality surveys.

6.3.3-2 Perform Instream Flow Studies on Butte Creek

The current Instream Flow Incremental Methodology (IFIM) modeling area, which excludes modeling of the WBFR below the Hendricks Head Diversion Dam and the Butte Creek between the Butte Head Dam and the Lower Centerville Diversion Dam, is inadequate to characterize the Project effects on the **COLD** freshwater habitat beneficial use over the entire Project area. Although an IFIM study was conducted on the WBFR in 1984, that study has not yet been determined to be sufficient given today's study and data standards. The SWRCB staff require data that demonstrate the beneficial uses of the WBFR are protected below the Hendricks Head Dam. Additionally, any tributaries that are, or will be diverted need to be considered as a Project-affected reach and added to the IFIM studies.

SWRCB staff agrees with NOAA fisheries (as expressed in the January 10, 2005 workshop meeting) that adult spring-run Chinook salmon and steelhead as target species, and their fry life stage should be included in the IFIM study to be conducted.

The proposed one-year study to develop site-specific Habitat Suitability Curves (HSC) needs to be further evaluated. The validity of gathering enough data to accurately derive these curves in a one-year study is questionable, and the licensee should consider using existing HSC if representative curves cannot be developed. The Agencies will work with the Licensee in evaluating existing published HSC curves and their appropriateness for use in the IFIM study.

SWRCB staff will participate in the Instream Flow Technical Group meeting scheduled for February 14th to discuss the IFIM study plan and make further recommendations after this meeting is conducted. One of the issues that will be covered in this meeting will be to determine whether one-dimensional or two-dimensional IFIM modeling will be appropriate for characterizing these reaches.

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6.3.3-3 Perform Visual Encounter Surveys of RT&E Amphibian Species Near Project Reservoirs and Project-Affected Stream Reaches

The study area needs to be better defined and accompanied by a map outlining the study area. Any tributary that is diverted by the Project needs to be defined as a part of the Project-affected stream reach and must be included in the study. SWRCB staff also concur with the U.S. Forest Service comment made in the workshop meeting on January 10, 2005 that the success of finding egg-laying sites during the survey is time-sensitive and having adequate field surveying teams is important. A one-year study may not be adequate to capture the necessary field visual encounter survey data; therefore, a two-year study is recommended.

6.3.3-4 Characterize Fish Populations in Project Reservoirs and Project-Affected Stream Reaches

SWRCB staff agrees with the proposed study but would like the methodologies further defined. We would also recommend that any stream reach that is diverted or water upstream of the reach is diverted by the Project be considered a Project-affected reach and those reaches should be included in the study.

As agreed by the Licensee at the January 10, 2005 Workshop meeting, results from the 2005 Fish Population study will be analyzed to determine if an entrainment study will be needed. For now a "placeholder" will be put in for that study. However, the SWRCB staff currently supports the entrainment study proposed by the U.S. Forest Service in its comments to the PAD. (See U.S. Forest Service entrainment study recommendations)

6.3.3-5 Survey Benthic Macroinvertebrates in Project-Affected Stream Reaches Using CSBP Protocols

SWRCB staff agrees with the proposed Licensee study but would like the methodologies further defined. As mentioned in the Global Comments section above and during the PAD study meetings in January 2005 with Commission staff and the Licensee, any deviation from the CSBP protocols need to be explained, documented, and reviewed by the Agencies before field sampling is conducted. The results of the Habitat Mapping study should be used to determine site locations for the BMI study, and the SWRCB looks forward to participating in the selection process for those survey locations.

6.3.4 Wildlife Resources (Including related RT&E and Riparian, Wetland and Littoral Habitat Resources

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6.3.4-1 Assess Valley Elderberry Longhorn Beetle Habitat and Presence within the Project Boundary

The SWRCB staff agree that this study is important to determine if diversions within the Project Area and have effects on elderberry habitats. However, study methodologies need to be more specific and better defined before SWRCB staff can review and comment on the studies. The Licensee should use established survey protocols for determining the extent and effects of elderberry habitat within the Project boundary.

6.3.4-2 Assess Bald Eagle and Peregrine Falcon Habitat and Presence in the Project Area

The SWRCB staff agrees that this study is important to determine how Project diversions or operations affect wildlife beneficial uses within the Project Area. However, study methodologies need to be more specific and better defined before SWRCB staff can review and comment on these. Sampling of fish tissue for mercury may be required to examine for both wildlife and human health issues.

6.3.4-3 Assess RT&E Raptor Habitat and Presence within the Project Boundary

The SWRCB staff agree that this study is important to determine how the beneficial uses of water resources could affect wildlife resources within the Project Area. However, study methodologies need to be more specific and better defined before SWRCB staff can review and comment on the studies.

6.3.4-4 Assess Willow Flycatcher Habitat and Presence within the Project Boundary

The SWRCB staff agree that this study is important to determine how the beneficial uses of water resources could affect wildlife resources within the Project Area. However, study methodologies need to be more specific and better defined before SWRCB staff can review and comment on the studies.

6.3.4-5 Survey RT&E bats at High Potential Project Facilities

The SWRCB staff agrees that this study is important to determine if Project diversions and operations could affect wildlife resource beneficial uses within the Project Area. However, study methodologies need to be more specific and better defined before SWRCB staff can review and comment on the studies.

6.3.4-6 Survey RT&E Forest Carnivores within One Mile of the Project Boundary

The SWRCB staff agrees that this study is important to determine if Project diversions and operations could affect these wildlife resources within the Project Area. However, study

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methodologies need to be more specific and better defined before SWRCB staff can review and comment on the studies.

6.3.5 Botanical Resources (Including related RT&E and Riparian, Wetland and Littoral Habitat Resources)

6.3.5-1 Map RT&E Plant Species in the Project Area

SWRCB staff agrees with the proposed study but would like the methodologies further defined. Staff would also suggest that results from these studies be put into GIS and a map included with this study.

6.3.5-2 Classify and Map Vegetation Community Types in the Project Area

SWRCB staff agrees with the proposed study. Staff agrees with comments mentioned in the January 6, 2005 Workshop Meeting that areas upstream of the Butte Creek Head Dam and upstream of the Philbrook Reservoir should be considered for inclusion in this study. More detail is needed in the methodology section with specific emphasis on which riparian and wetland areas will be mapped by ground-truthing, and which will be mapped using aerial photography.

6.3.5-3 Map and Assess Noxious Weeds in the Project Boundary

SWRCB staff agrees with the proposed study. Staff would expect that with any herbicidal use, the Licensee would follow all labeled instructions and that use would be evaluated to insure that they do not enter into Project waterways. If herbicides are used near waterways, the Licensee should include management practices that will show how aquatic resources may be protected.

6.3.6 Recreation and Land Use

6.3.6-1 Assess Existing Recreation Use and Demand in the Project Area

The SWRCB staff agree that this study is important to determine how the recreational beneficial uses of water, as identified in the Basin Plan, are currently utilized within the Project Area. The SWRCB staff recommends that recreation use data is collected during a two-year time period, to account for economic and weather conditions that may skew one year of data. The SWRCB staff would also like to echo the U. S. Forest Service's comment that some accounting for whitewater boating needs to be made.

6.3.6-2 Assess Projected Recreation Use and Demand in the Project Area

The SWRCB staff agree that this study is important to determine how the beneficial uses of water resources, as identified in the Basin Plan, may be utilized within the Project Area in the future. The recreation demand assessment should include a tool to estimate current carrying capacity and future recreational demand over the life of the license. See comment regarding fish tissue sampling for mercury in section 6.3.4-2. SWRCB staff are unable to comment on schedule, analysis, methodologies, costs and level of effort presented because the Licensee has not provided a specific study plan.

6.3.6-3 Survey Recreation Visitor Characteristics, Preferences, and Attitudes in the Project Area

The SWRCB staff does not have any comments on this study, but we believe that this study is important to help the Licensee understand recreational uses within the Project Area. Staff also echo the U. S. Forest Service's comment that if only sampling among users already in the Project recreation areas, you will not gain any information as to why people aren't using the areas. We also support the ideas of expanding the questionnaire sampling to include local recreation shops, outdoor recreational clubs, or other local interest groups to get at this question. SWRCB staff also wonders if the questionnaire sample size is large enough to adequately establish visitor usage patterns. The Licensee should describe what measures will be taken if not enough completed surveys are returned to establish the 95 percent confidence interval.

6.3.6-4 Assess Condition and ADA Compliance of Project Recreation Facilities and Signs

The SWRCB staff does not have any comments on this proposed study, but we believe that this study is important to help the Licensee understand the condition of signs, facilities and American Disabilities Act compliance within the Project Area. SWRCB staff are unable to comment on schedule, analysis, methodologies, costs and level of effort presented because the Licensee has not provided a specific study plan.

6.3.6-5 Assess Suitability of Project Area Land For Recreation Use

The SWRCB staff does not have any comments on this study, but we believe that this study is important to help the Licensee understand the potential for recreational development within the Project Area. SWRCB staff are unable to comment on schedule, analysis, methodologies, costs and level of effort presented because the Licensee has not provided a specific study plan.

6.3.6-6 Assess Recreation Carrying Capacity of the Project Area

The SWRCB staff does not have any comments on this study, but we believe that this study is important to help the Licensee understand potential need for future recreational development, and the possible effects on the beneficial uses of waters within the Project Area. SWRCB staff are

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unable to comment on schedule, analysis, methodologies, costs and level of effort presented because the Licensee has not provided a specific study plan.

6.3.6-7 Assess Regional Uniqueness and Significance of the Project Area's Primary Recreation Opportunities

The SWRCB staff does not have any comments on this study, but we believe that this study is important to help the Licensee understand the potential for use of primary recreational uses and identify recreational alternatives within the Project Area. SWRCB staff are unable to comment on schedule, analysis, methodologies, costs and level of effort presented because the Licensee has not provided a specific study plan.

6.3.6-8 Assess and Inventory Recreation Use Impact

The SWRCB staff requests this study consider the nexus of the effects of recreation induced erosion, turbidity, fecal coliform and hydrocarbon concentrations in waterways. SWRCB staff are unable to comment on schedule, analysis, methodologies, costs and level of effort presented because the Licensee has not provided a specific study plan.

6.3.6-9 Assess Adequacy of Flows for River Recreation Opportunity

The SWRCB staff believes that this study is important to help the Licensee understand the potential for use of flow-dependent recreational uses within the Project Area and any adverse effects additional uses would have on the other beneficial uses of the rivers and reservoirs. SWRCB staff are unable to comment on schedule, analysis, methodologies, costs and level of effort presented because the Licensee has not provided a specific study plan.

6.3.6-10 Assess Fire Hazards from Project-Induced Recreation

The SWRCB staff does not have any comments on this study, but we believe that this study is important to help the Licensee understand the potential for increased fire risk due to recreational uses, possibilities for fires spreading, adequacy of fire prevention measures, and adequacy of fire suppression methods within the Project Area. SWRCB staff are unable to comment on schedule, analysis, methodologies, costs and level of effort presented because the Licensee has not provided a specific study plan.

6.3.6-11 Assess Impact of ORV Use in Project Lands

The SWRCB staff does not have any comments on this study, but we believe that this study is important to help the Licensee understand the impacts from ORV use on waterbodies within the Project Area. SWRCB staff are unable to comment on schedule, analysis, methodologies, costs and level of effort presented because the Licensee has not provided a specific study plan.

6.3.6-12 Assess Project Recreation Needs

The SWRCB staff does not have any comments on this study and wonder if this study could be combined with 6.3.6-6 (Recreation Carrying Capacity). SWRCB staff are unable to comment on schedule, analysis, methodologies, costs and level of effort presented because the Licensee has not provided a specific study plan.

6.3.7 **Aesthetic Resources**

6.3.7-1 Perform Visual Assessment of Project to Surrounding Landscape

The SWRCB staff believes that this study is important to help the Licensee understand the potential visual improvements to the Project Area. SWRCB staff are unable to comment on schedule, analysis, methodologies, costs and level of effort presented because the Licensee has not provided a specific study plan.

6.3.8 **Cultural Resources**

6.3.8-1 Document, Evaluate for National Register of Historic Places, and Identify Project-Related Effects on Archaeological and Historic-Era Properties

The SWRCB staff have no specific comments but believe that this study will help the Licensee determine if any property within the Project Area may be eligible for the National Register of Historic Places, or may contain sites with archaeological significance. Please include a map to clarify the APE. The SWRCB echoes the U.S. Forest Service's comment that the Licensee may need to expand the planned study area to include land that needs to be surveyed in order to make decisions for on-going operational procedures and future PM&E's that don't conflict with existing cultural resources.

6.3.8-2 Document, Evaluate for National Register of Historic Places, and Identify Project-Related Effects on Traditional Cultural Properties (TCPs)

The SWRCB staff believe that this study will help the Licensee determine if any property within the Project Area may meet the definition of a TCP as specified in the National Register Bulletin. The SWRCB supports the efforts of the Licensee to work with the Native American tribes that have interests in the Butte Creek and WBFR watersheds. See also the comment above in section 6.3.8-2 regarding expanded survey area requested by the U.S. Forest Service.

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6.3.8-3 Document, Evaluate for National Register of Historic Places, and Identify Project-Related Effects on Historic Project Features

The SWRCB staff does not have any comments on this study. Would it be possible to combine this study with 6.3.8-1?

6.3.9 Socio-Economic Resources

6.3.9-1 Assess Future and Economic Viability of Centerville Powerhouse

The SWRCB staff agree with assessing the long-term viability and benefits associated with upgrades to the Centerville Powerhouse. However the Licensee should be aware that any future changes to Project structures may need a separate water quality certification. SWRCB staff are unable to comment on schedule, analysis, methodologies, costs and level of effort presented because the Licensee has not provided a specific study plan.

6.3.9-2 Assess Socio-Economic Effects of Alternative Project Management Actions

The SWRCB staff does not have any comments on this study. SWRCB staff are unable to comment on schedule, analysis, methodologies, costs and level of effort presented because the Licensee has not provided a specific study plan.

6.3.10 Tribal Resources

6.3.10-1 Document, Evaluate for National Register of Historic Places, and Identify Project Effects on Traditional Cultural Properties (TCPs):

As stated in 6.3.8-2, the SWRCB staff believe that this study will help the Licensee determine if any property within the Project Area may meet the definition of a TCP as specified in the National Register Bulletin. The SWRCB supports the efforts of the Licensee to work with the Native American tribes that have interests in the Butte Creek and WBFR watersheds. SWRCB staff are unable to comment on schedule, analysis, methodologies, costs and level of effort presented because the Licensee has not provided a specific study plan.

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Closing

The SWRCB staff appreciates the level of effort already put forth by the Licensee in developing the conceptual or preliminary study recommendations and look forward to working with the Licensee to expand and refine the details of the proposed study plans. If you have any questions, or would like to discuss any of the SWRCB comments, please contact me at (916) 341-5308 or by email at jcanaday@waterboards.ca.gov.

Sincerely,

ORIGINAL SIGNED BY

Jim Canaday
Senior Environmental Scientist

Enclosures

- 1.Mailing List
- 2.SWRCB Staff Comments on Risk Assessment of Facility Failure

RISK ASSESSMENT OF FACILITY FAILURE
[SWRCB Staff – January 26, 2005]

GOALS AND OBJECTIVES OF STUDY

This study will use existing information, to the extent possible, to provide an assessment of the risk of facility failure. The goal is to assess potential of facility failure and the magnitude of the effects from natural or operational events. The Licensee's PAD discusses known areas of landslides, debris flows, flume failures, etc. These events can lead to water turbidity, sedimentation of aquatic resource life stages, changes to flows leading to either rapid inundation or reductions in stream flow, fish stranding, a potentially significant alteration of operations (i.e. a shut down), etc. Operational failures have occurred on this Project, some in recent years. This information could provide the ability to predict, prevent, or prepare for contingencies to minimize damage to the affected aquatic resources.

If existing data is not available (e.g. fish stranding from rapid changes in flow stage), some additional collection of data may be necessary either as a part of this study or a related study.

RELEVANT RESOURCE MANAGEMENT GOALS

The applicable Forest Land and Resource Management Plans provide this management direction related to facilities management:

- Maintain all dams on NF land to: a) protect human lives and downstream property; b) protect adjacent resources; c) meet contractual and legal obligations, and d) function efficiently.
- Prior to any site development, perform a Geologic Resources Inventory allowing classification of soils, surface deposits, and rock materials and identifying engineering properties of soil and rock materials as may be relevant to the project.
- Consider volcanic, earthquake, and avalanche hazards when planning facility locations.
- Evaluate all proposed projects for potential impacts to the fishery resource, particularly projects that may affect anadromous fisheries.

NEXUS BETWEEN PROJECT AND RESOURCE TO BE STUDIED AND HOW THE RESULTS WILL BE USED

The Licensee has identified (see "Existing Information" below) known areas of periodic landslide activity that have affected Project facilities, they are considering the status of the Centerville Powerhouse which may be reaching obsolescence, and have over the past few years incurred repeated operational events that have resulted in turbidity to Project waters and sudden changes instream flows, and other aquatic effects. These events are all directly related to operations of the existing facilities. When these events occur above or on NFSL, they induce changes to the flows on NFSL that affect the aquatic resources of that reach. Additionally,

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present flows are regulated, in part to enhance summertime thermal conditions for listed anadromous fishes in Butte Creek. If system failure prevents anticipated benefits to Butte Creek anadromous fisheries, do not offset losses to values in WBFR system.

STUDY AREA

Project facilities on or above NFSL where failure or changes in operation could result in affects to NFSL. **[SWRCB staff requests that the study area include Project facilities where failures or changes in operation could affects water quality within the Project Area.]**

STUDY SITES

Study sites should include facilities and affected reaches in the upper and lower WBFR (including Philbrook Creek) and Toadtown Canal where an event could effect NF lands **[water quality or water resources within the Project Area]** and resources.

SCHEDULE

Either 2005 or 2006.

METHODS

PG&E operational data and information of occurrences of past natural events would provide the baseline information from which further exploration of geologic stability of an area could be assessed, if necessary. In discussions it sounded like PG&E may understand that mechanism for landslides and other failure (oversteepened banks adjacent to canals, etc.), but other cases may not be that clear cut. The extent of needed additional information gathering is not known at this time. Additional fish stranding data may need to be collected here or in a related study.

ANALYSIS

Licensee would analyze known and any additionally gathered data to develop a better understanding of the locations and periodicity of events in order to develop a plan to predict, prevent, or prepare for contingencies to minimize damage to the affected aquatic resources. Results may also result in recommendations for revised maintenance or facility improvements.

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CONSISTENCY WITH GENERALLY ACCEPTED SCIENTIFIC PRACTICE

No specific methodology is being proposed at this time. PG&E has a better understanding than the FS of known information and what additional information might be needed to complete a thorough assessment of the risk of their facilities and affected resources that might be incurred from damage induced by operational or natural events. There are standard protocols available for fish stranding studies.

PRODUCTS

A report that addresses the risks to facilities and affected resources so that mitigations can be developed to minimize this risk.

RELATIONSHIP TO OTHER STUDIES

Information gained from this study can have a direct bearing on the three PG&E proposed "Geology and Soils" studies, many of the "Water Resource" studies, and many of the "Fish and Aquatic Resource" studies.

LEVEL OF EFFORT AND COST

The level of effort and cost cannot be developed by the Forest Service at this time because we are not aware of how much of the needed information might already be known by PG&E. Costs are estimated to be between \$5,000 for an analysis, if the majority of information is already known by PG&E up to \$100,000 if geologic and engineering investigative studies or fish stranding studies are needed for this analysis.

EXISTING INFORMATION

PG&E's PAD (Pages 4-20, @ 5.1-3, 5.2-18/19) discusses landslides, debris flows, flume failures, etc., and implies that there are repeated and known locations of events. However, the information available in the PAD is limited so the Forest Service is not aware of the extent of existing information.

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REFERENCES

Pacific Gas and Electric Company. October 4, 2004. DeSabra-Centerville Hydroelectric Project FERC Project No. 803, Pre-Application Document (PAD), Volume 1: Public Information.

USFS. 1992. Land and Resource Management Plan, Lassen National Forest. United States Department of Agriculture, Forest Service, Pacific Southwest Region.

USFS. 1988. Land and Resource Management Plan, Plumas National Forest. United States Department of Agriculture, Forest Service, Pacific Southwest Region.

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