



**Pacific Gas and
Electric Company**

FILED
OFFICE OF THE
SECRETARY

ORIGINAL

Power Generation

245 Market Street
San Francisco, CA 94105

Mailing Address
Mail Code N11C
P.O. Box 770000
San Francisco, CA 94177

2005 DEC 15 P 4: 04

December 12, 2005

FEDERAL ENERGY
REGULATORY COMMISSION

Magalie R. Salas, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, DC 20426

**Re: Upper North Fork Feather River Project (FERC No. 2105)
Comments on Final Environmental Impact Statement**

Madam Secretary,

The Pacific Gas and Electric Company (PG&E) appreciates the opportunity to comment on the final environmental impact statement (final EIS) for the North Fork Feather River Project (FERC No. 2105) and respectfully submits the following comments for consideration in the Federal Energy Regulatory Commission's order on Project No. 2105-089. As a member of the 2105 Licensing Group (2105LG) which is composed of numerous federal, State, and local government agencies, non-governmental organizations, Tribes, and members of the public, PG&E has been working collaboratively and diligently since October, 2002 to resolve as many issues as possible with regard to the FERC relicensing of FERC No. 2105. On April 22, 2004, the 2105LG stakeholders identified below signed a Settlement Agreement that resolved issues related to lake level, streamflow, and recreation. The 2105LG submitted the April 2004 SA to FERC and requested that FERC use the provisions of the agreement as an alternative to be considered in the NEPA analysis process. Stakeholders who signed the April 2004 Settlement Agreement are: PG&E, US Dept. of Agriculture Forest Service (FS), California Dept. of Fish and Game (CDFG), Plumas County, American Whitewater (AW), Chico Paddleheads, Shasta Paddlers, Mountain Meadows Conservancy, and California Sportfishing Protection Alliance.

PG&E and the 2105LG continue to work collaboratively, seeking solutions to the remaining unresolved issues identified in the April 2004 Settlement Agreement, focusing primarily on water temperature issues. In September 2005 during the State CEQA scoping process, the 2105LG submitted the April 2004 Settlement Agreement to the State Water Resources Control Board (SWRCB) and encouraged an evaluation of it as an alternative supported by the above-mentioned signatories. PG&E continues to support the 2004 Settlement Agreement as submitted and appreciates the opportunity to comment specifically on Section 10(j) recommendations and Section 18 fishway prescriptions filed by NOAA Fisheries Service after draft EIS issuance and the analyses by FERC staff relative to potential measures for providing colder water to the Upper North Fork Feather River during the summer. PG&E concurs with the Staff conclusions regarding NOAA Fisheries Service's Section 18 prescription and Section 10(j) recommendations as discussed in Section 5 of the final EIS.

Magalie R. Salas, Secretary
December 12, 2005
Page 2

Further, PG&E also concurs with the FERC Staff analysis of the potential measures for providing colder water to the Upper North Fork Feather River. In addition, PG&E offers the attached comments related to the Staff alternatives discussed in the final EIS that PG&E believes deserve due consideration in the Commission's order.

If you have any questions, please give me a call at (415) 973-9320.

Sincerely,



Tom Jereb
Upper North Fork Feather River Relicensing Project Manager

Cc: Project 2105 Service List
Additional Interested Parties List

Attachment

Additional Interested Parties:

CA Dept. of Fish and Game
Ms. Sandra Morey
Region 2 Manager
1701 Nimbus Road, Suite A
Rancho Cordova, CA 95670

Steve Wald
California Hydropower Reform
Coalition
2140 Shattuck Ave. 5th Floor
Berkeley, CA 94704

Maidu Cultural and Development Group
Mr. Farrell Cunningham
P. O. Box 426
Greenville, CA 95947

CA Dept. of Fish and Game
Robert Hughes
Native Anadromous Fish and
Watershed Branch
830 S Street
Sacramento, CA 95814

Trout Unlimited
Chuck Bonham
828 San Pablo Ave., Suite 208
Albany, CA 94706

Greenville Rancheria
Ms. Lorie Jaimes, Tribal Chair
410 Main Street
Greenville, CA 95974

Ms. Frankie Green
Lois Berger Group
655 Cherokee Heights Road
Talladega, AL 36078

U. S. Forest Service
Mr. Bob Hawkins
Regional Hydropower Coordinator
650 Capitol Mall, Room 7524
Sacramento, CA 95814

Susanville Indian Rancheria
Valerie Edwards, Tribal Chairperson
Drawer U
Susanville, CA 96130

Dave Steindorf
Chico Paddleheads
1325 Deadara Way
Paradise, CA 95969

U. S. Forest Service
Ms. Terri Simon-Jackson
159 Lawrence Street
Quincy, CA 95971-6025

Susanville Indian Rancheria
Mr. Alan Lowry
Drawer U
Susanville, CA 96130

CA Water Resources
Control Board
Mr. Jim Canaday
1001 "T" Street
Sacramento, CA 95814

U. S. Forest Service
Mr. Mike Taylor
Feather River Ranger District
875 Mitchell Ave.
Oroville, CA 95965-4699

Honey Lake Maidu
Mr. Jeremy Peconom
7597 Elizabeth Road
Vacaville, CA 96130

County of Plumas
Mr. Tom Hunter
1834 East Main
Quincy, CA 95971

U.S. Fish and Wildlife Service
Mr. Steven Schoenberg
2800 Cottage Way, Room W-
2605
Sacramento, CA 95825

Mr. Ron Morales
Honey Lake Maidu
1101 Arnold Street
Susanville, CA 96130

Supervisor Bill Dennison
Plumas County
Room 309
520 West Main Street
Quincy, CA 95971

FERC
Mr. John Mudre
Mail Code PJ-11.7
888 First Street, N.E.
Washington, DC 20426

CA Sportfishing Protection Alliance
Mr. Jerry Mensch
1673 Kendall Street
Roseburg, OR 97470

Magalie R. Salas, Secretary
December 12, 2005
Page 4

Supervisor Robert Meacher
Plumas County
Room 309
520 West Main Street
Quincy, CA 95971

Mr. Takeshi Yamashita
Federal Energy Regulatory
Commission
901 Market Street, Suite 350
San Francisco, CA 94103-1778

Lake Almanor 2105 Committee
P. O. Box 3343
Lake Almanor, CA 96137-3343

Comments of Pacific Gas and Electric Company on
Upper North Fork Feather River Project (FERC No. 2105) Final EIS

Response to Staff's Alternative (Section 2.2.2 and Summary)

Alternative number 4, page 2-12: *Develop a monitoring program to document water quality trends in Lake Almanor under a new license and project operations.*

Response: PG&E believes that the water quality monitoring program proposed in Appendix A, Section 5, of the Settlement Agreement (SA) is appropriate to document water quality trends and to protect Lake Almanor as an important hydrogeneration, scenic, recreational, and economic resource. With the continued rapid increased residential construction in the Lake Almanor Basin and the increased recreational improvements proposed in the new license, the frequency and duration of water quality and bacteriological sampling proposed in the SA was intended to insure Lake Almanor be protected from degradation from all sources, not just Project operations. PG&E believes that the level of water quality monitoring proposed in the SA is appropriate and preferable to that proposed by Staff.

Alternative number 5, page 2-12: *Develop a bacteriological monitoring program for the first 3 years after license issuance, using a methodology appropriate to determine compliance with state water quality standards.*

Response: PG&E believes that the water quality monitoring program proposed in Appendix A, Section 5, of the SA is appropriate to determine compliance with state water quality standards. To demonstrate the level of protection provided for beneficial uses of Project waters and to identify any trends in water quality conditions in items 4 and 5 listed above, the signatories to the SA recommended that water quality monitoring be conducted in Lake Almanor every five years beginning in year three of the new license for the term of the license and that bacteriological monitoring be conducted annually for the first five years after license issuance and every other year for the remaining term of the license. PG&E believes that the level of water quality monitoring proposed in the SA is appropriate and preferable to that proposed by Staff.

Alternative number 7, page 2-12: *Develop a plan to monitor DO concentrations in Lake Almanor and Butt Valley reservoir.*

Response: PG&E believes that the water quality monitoring program proposed in Appendix A, Section 3, Paragraph 3(A) of the SA provides for the development of a DO monitoring plan. Members of the Water Management Group (PG&E, SWRCB, Central Valley Regional Water Quality Control Board, Plumas County, FS, CDFG, Fish and Wildlife Service) and other parties who request involvement will develop a DO monitoring plan within a period of three years from issuance of the license to address DO concentrations in Lake Almanor and Butt Valley reservoir.

Comments of Pacific Gas and Electric Company on
Upper North Fork Feather River Project (FERC No. 2105) Final EIS

Alternative number 10, page 2-13: *Provide a pulse flow of 700 cfs in the Seneca reach and in the Belden reach in March of water years classified as dry.*

Response: PG&E believes that the pulse flow schedule proposed in Appendix A, Section 1, Paragraph 3(A) of the SA (675 cfs in January of Wet and Normal water years, 1,000 cfs in February and March of Normal water years, and 1,200 cfs in February and March of Wet water years for a period of 12 hours, plus ramping time) is a more prudent pulse flow plan than the alternative proposed by Staff. Due to limited gravel deposits in these reaches and the episodic nature of its entering the stream channels, concern was expressed by various members of the 2105 Collaborative that a too aggressive pulse flow schedule might have a negative impact on the spawning gravels, and the ultimate reproductive success of substrate dependant aquatic organisms. The SA also requires a gravel monitoring plan, which states that if "the resource agencies determine that the Pulse Flows appear to have a detrimental impact on the availability and distribution of spawning-sized gravel, or it appears that a Pulse Flow of a different magnitude or duration would be beneficial, the Pulse Flow schedule shall be altered to better achieve the desired results." (See Appendix A, Section 1, Paragraph 3(B)). Although the plan proposed by the SA is slightly more conservative than that proposed by Staff it does allow for a more aggressive, i.e., greater magnitude pulse flows if monitoring warrants it. Because of its adaptive nature, PG&E believes that the SA Pulse Flow plan is the better option.

Alternative number 11, page 2-13: *Develop an aquatic resources monitoring plan for the Seneca and Belden reaches. Periodically monitor fish populations (in a manner consistent with data presented in pre-filing study reports) and benthic macroinvertebrates in the Seneca and Belden reaches, as recommended in the SA. Initiate monitoring during years 4 and 5 of the new license. After this 2-year monitoring period, the frequency of surveys could be reduced to every fifth year to evaluate long-term responses to measure implemented in the new license and any subsequent modifications that are made.*

Response: PG&E believes that the fishery and benthic macroinvertebrate monitoring condition described above is excessive and believes that the plan stipulated in the SA (see Appendix A, Section 1, sub-section 9) is sufficient and appropriate for the types of beneficial improvements expected under Staff's preference for the SA proposed minimum flow schedule. This belief is based on the combination of the incremental benefits in aquatic habitat and resulting fish population changes that the new flow schedule will produce, and the highly variable annual fish population changes that have been documented in the by-pass reaches during relicensing studies.

Based on the PHABSIM study (Vol. 7, Appendix E3.1-10 of the UNFFR License Application (PG&E 2002)), the new proposed instream flow releases (maximum proposed flow release of 125 cfs in a normal water year type) in the Seneca Reach are predicted to result in an increase in maximum WUA for adult rainbow trout from 39% to 77%, a 38% increase over the current releases but with a predicted decrease in juvenile maximum WUA

Comments of Pacific Gas and Electric Company on
Upper North Fork Feather River Project (FERC No. 2105) Final EIS

habitat from 99% to 92%, a decrease of 7%. A similar effect is also expected for the Belden Reach; adult rainbow trout maximum WUA is predicted to increase from 61% to 77% (maximum proposed flow release of 225 cfs in a normal water year type), a 13% increase over the current releases but with a decrease in juvenile maximum WUA habitat from 96% to 86%, a decrease of 10%.

Based on the generally modest incremental increase in adult rainbow trout maximum WUA, the concomitant decrease in juvenile maximum WUA at some flow/water year type scenarios, and highly variable population estimates that would be expected, PG&E believes that it might take up to three or four rainbow trout life cycles rather than Staff's estimation of 4-5 years before real, sustainable population changes could be identified from which to draw any conclusions on which to make meaningful resource decisions. This was also the conclusion of the 2105 Collaborative, which did not propose any sampling for 10-12 years after license issuance.

Alternative number 12, page 2-13: Implement one mid-term geomorphological evaluation in project reaches to assess the response of channel processes to the recommended flow schedule.

Response: PG&E does not believe that this specific condition to develop a "mid-term geomorphological evaluation" is warranted. PG&E believes that Staff may have unrealistic expectations of the changes in these bypass reaches that may result from the proposed base flows and pulse flow schedules. Although proposed base flow releases for each reach are greater than existing flow releases, they and the proposed pulse flows are much less than the historic uncontrolled spring time flows which could exceed 5,000 cfs, or more, several times each year and were definitely of channel forming proportion. As reported in Section E3.1.11.2 of Volume 2 of the UNFFR License Application (PG&E 2002), 1,600 to 3,000 cfs is the approximated minimum discharge needed to mobilize the median bed material from representative sites in both the Belden and Seneca reaches. Also, based on the presence of well established mature vegetation, as well as younger willow, alders, and blackberries, at several of the geomorphology study transect sites that were able to survive the 1997 floods of 2,160 cfs in the Seneca Reach and 3,500 cfs in the Belden Reach, it was concluded that it would take flows of greater magnitudes to alter the mature vegetation on mid-channel bars. The magnitude of flows proposed by both the Fish and Wildlife Service (FWS) and SA, combined with the narrow incised channel morphology of the Belden and Seneca reaches, are not capable of the kinds of changes envisioned by Staff.

A more appropriate level of effort is outlined in the Gravel Monitoring Plan set forth in the SA, Appendix A., Section 1, paragraph 3. This plan calls for the development and implementation of a Gravel Monitoring Plan in consultation with the FS, CDFG, FWS, SWRCB, and other Parties that has been approved by the FS, and filed with the Commission. The emphasis of this program is to monitor the movement of spawning-sized gravel and recruitment of similar-sized material into each of the reaches. Based on the size of material

Comments of Pacific Gas and Electric Company on
Upper North Fork Feather River Project (FERC No. 2105) Final EIS

that the pulse flows will be able to mobilize (gravel to small cobble) PG&E believes that the monitoring plan described in the SA is more appropriate for the types of effects that these flows will achieve.

Alternative number 13, page 2-13: As part of the proposed coarse sediment management plan, develop specific contingency actions for the enhancement of substrate distribution and abundance in bypass reaches.

Response: PG&E believes that a more appropriate level of effort is outlined in the Gravel Monitoring Plan described in the SA, Appendix A, Section 1, subsection 3. This plan calls for the development and implementation of a Gravel Monitoring Plan in consultation with the FS, CDFG, FWS, SWRCB, and other Parties that has been approved by the FS, and filed with the Commission. The emphasis of this program is to monitor the movement of spawning-sized gravel and recruitment of similar-sized material into each of the reaches. Based on the size of material that both the minimum instream release and pulse flows will be able to mobilize (gravel to small cobble), PG&E believes that there will not be significant negative changes to the bypass reaches substrate and that the monitoring plan described in the SA is more appropriate for the types of effects that these flows will achieve.

PG&E also believes that due to the natural sporadic input of gravels from hillslope processes, limited access points in the bypass reaches (especially in the Seneca reach) for gravel placement, and ability to document any loss or reduction of spawning gravels due to high flows until after that years spawning period has either already started or has even already been completed, that no contingency plan could be instituted until the following year. Consequently, because of this enforced time delay, there is limited value to a contingency plan to affect that years spawning success. The SA's proposed monitoring plan is adaptive in nature, and would allow for changes in the following winter period pulse flow number and level to accommodate for this type of situation.

Alternative number 14, page 2-13: Delay implementation of recreational flow releases for a period of 6 years to allow the riverine aquatic biota to respond to a new minimum and pulse flow schedule.

Response: The Department of the Interior 10(j) recommendation to delay recreation flows is inconsistent with current data on the aquatic resources and recreational uses on the Belden Reach. Representatives of the Fish and Wildlife Service (FWS) made this recommendation to the 2105 Collaborative and it was rejected for the following reasons.

1. The development of the Technical Review Group (TRG) and the three-year test period outlined in the SA provide ample time for the FWS and any other interested parties to analyze existing information on Recreation Pulse Flows and make recommendations on studies and the implementation schedule. The SA was

Comments of Pacific Gas and Electric Company on
Upper North Fork Feather River Project (FERC No. 2105) Final EIS

specifically designed to meet the needs of the FWS and any other party that had concerns regarding the implementation of the recreational test flow schedule. Given that most of the parties in the Rock Creek/ Cresta Ecological Resources Committee (ERC) are also part of the SA there will be a seamless transfer of information from the ERC to the TRG.

2. Current information from the Rock Creek-Cresta studies (i.e. final reports through 2004 and white papers on turbidity and benthic macroinvertebrates in 2005) refutes most of the concerns stated in the FEIS. Stranding and displacement studies have not shown any significant impacts to fish, macroinvertebrates or amphibians over three years of study. Large boulders and a heterogeneous bed substrate create an abundance of velocity shelters and low shear stress microhabitats where trout fry can seek protection from the proposed recreation flows. It is also important to note that the numbers of stranded organisms referenced on page 3-127 of the FEIS are extremely low given the total number of organisms present (Salamunovich, 2005). The statement on page 3-128 of the FEIS regarding impacts to the benthic community on the Rock Creek reach is based on preliminary data from the consultants after one year of study and that had not been peer reviewed. Subsequent studies using a control reach on the East Branch Feather River have found a corresponding trend suggesting that seasonal factors are the primary drivers for modest declines and not the pulse flows themselves (Chan, 2005). This is a classic example where correlation does not equate to causation. In addition, a peer review expert has since stated that this pattern is not atypical for Sierra Nevada river reaches (Hauer 2005). Fish population studies for the first three years on the Rock Creek - Cresta reaches showed marked improvement in the numbers and size of fish on these reaches relative to the river restoration goals listed in the project (FERC No. 1962) licence.
3. Impacts to amphibians, specifically Foothill Yellow Legged Frogs (FYLF), will be difficult to analyze due to the fact that thus far no FYLF have been found in the Belden reach and habitat in this reach has been determined to be both limited and of low quality for this species.
4. The Belden reach is a put-and-take stocked fishery. The annual stocking of 5,000 pounds of adult rainbow trout may have a significant effect on the aquatic community of the Belden Reach. Juvenile fish and amphibians both have the potential to be negatively affected to a far greater extent by stocking 5,000 pounds of hatchery fish than by a limited number of recreation pulse flows each summer.
5. The concerns over recreational pulse flows fail to recognize the fact that from the time the Caribou powerhouses were built in 1921 and 1958 for Caribou No. 1 and No. 2, respectively, until the Belden Powerhouse went on line in 1969, the Belden reach fluctuated 1,500-2,000 cfs on a daily basis. During this same period the Belden Reach was reported to have a robust trout fishery (Perland, 1989). It seems unlikely that a relatively modest flow change of 500 cfs compared to the flow changes

Comments of Pacific Gas and Electric Company on
Upper North Fork Feather River Project (FERC No. 2105) Final EIS

described above on a once per month basis will cause substantial impacts to the aquatic community.¹

6. Staff noted that by delaying the implementation of recreational test flows that “the biotic community would have the opportunity to adapt to the revised instream flow schedule”, and the proposed recreational releases would disrupt this process. However, delaying implementation would have an adverse effect on the whitewater recreational use of this reach. The current need for this whitewater resource, as evidenced by the popularity of the Rock Creek - Cresta recreation flows, is due to the shortage of summer class III whitewater in the region. As proposed in the SA, summer time flows will vary between 225 cfs in June, 175 cfs in July, and 140 cfs in August and September. This represents an increase of 85 cfs (61%) in June, 35 cfs (25%) in July, and no increase for August and September compared to the existing condition. And although the other remaining months also have higher base flows compared to the existing condition, there is no information to suggest that dramatic changes in the aquatic community are expected to occur requiring an extended adaptation period. As described in the SA, the new flow schedule and associated releases are part of an integrated plan for a new flow regime that should be evaluated as a complete plan and restores critical elements of the flow regime that will have an overall net positive benefit on biotic communities and recreational users.

PG&E agrees with Staff comments on other licenses where Staff has proposed that flows for whitewater recreation, new instream flow requirements, and studies of impacts to aquatic biota must all occur together.²

PG&E believes the above response to issues raised in Staff’s analysis should minimize concern over potential impacts from recreational pulse flows. Many of these same points were made during the settlement process and the SA represents the outcome of extensive review of the issues and a proposal that is intended to enhance both the aquatic resources and recreational opportunities on this reach. In the interest of compromise all parties to the SA agreed to the three-year test flow period and the TRG review process. The elimination of June recreation pulse flows in order to increase flows in dry and critically dry water years was also agreed to. It was concluded that increasing these flows was critical to protection of the aquatic environment. While it would be difficult for parties not present during settlement negotiations to understand all of the concessions and balancing that took place, the SA represents the best approach to improving aquatic resources and enhancing recreational opportunities, and includes an appropriate mechanism for adaptive management should

¹ In an EA published November 18th, 2005 for P-2630 (20051118-3029), a project where similar concerns over impacts of recreational flows were expressed, FERC staff concluded that there would be “little, if any, adverse effects on aquatic resources” with the implementation of appropriate ramping rates.

² See EA for P-2630

Comments of Pacific Gas and Electric Company on
Upper North Fork Feather River Project (FERC No. 2105) Final EIS

modification be required. For these reasons we respectfully request that the FERC reconsider delaying the implementation of the recreational flow schedule and implement the flow schedule as outlined in the SA.

Alternative number 15, page 2-13: *Develop a woody debris management plan.*

Response: Given the very limited nature of access below Canyon Dam, PG&E does not believe it is either practical or ecologically beneficial to deposit large amounts of LWD in this area. Due to the generally narrow confined channel below Canyon Dam, it is very likely that LWD would not be readily transported downstream, but would form large logjams in this location. This would at the very least defeat the purpose of providing additional LWD to the system or could possibly back water up under a pulse flow event and possibly affect Licensee's flow gage station and/or destabilize the access road to this site.

At Belden Dam, PG&E removes about 4-5 truckloads of LWD annually. Woody material less than 4-inches in diameter can pass through the trash racks at the dam, and is therefore not removed. The woody debris collected on the trashracks, mostly alder, is collected and burned. It was concluded in the LWD study conducted as part of the relicensing effort (Vol. 2 of the UNFFR License Application (PG&E 2002), section E3.1.11.4 Large Woody Debris Function and Recruitment) that this removal of woody material represented only a small local loss of LWD from the Belden Reach. Considering the very limited geomorphic function LWD has in the NFFR, this loss of LWD was not expected to alter the channel geomorphic conditions, as described below.

Much of the Belden and Seneca reaches are characterized by the presence of large boulders. It was observed in Vol. 2 of the UNFFR License Application (PG&E 2002), section E3.1.11.4 Large Woody Debris Function and Recruitment, that most LWD fell or came to rest on top of the boulders, perching the wood above the low-flow channel. It was only infrequently observed that LWD was caught between boulders, near the channel bed, thus limiting the opportunity for interaction between LWD and the streambed during high flows, contributed to LWD instability, and thereby reduced the potential for LWD to influence channel morphology. Throughout the bypass reaches, large substrate and local geology control pool formation more so than LWD. This result is not surprising. One of the few studies investigating the geomorphic role of LWD in six headwater streams of the central Sierra Nevada, northwest of Lake Tahoe, documented that over half of the LWD in the channels was classified as having no geomorphic function (e.g., pool formation, steps, or dammed flow) (Berg et al 1998). Given the relatively small size of the woody debris in the Belden and Seneca reaches (length and diameter), the fast decomposition rate of alders (the primary species found in the study), and the large bed elements in most of the bypass reaches, it is very unlikely that additional recruitment from toe-of-slope areas under higher peak flows would result in a greater influence on channel geomorphology.

Comments of Pacific Gas and Electric Company on
Upper North Fork Feather River Project (FERC No. 2105) Final EIS

The Belden Reach is also a popular recreation area with three FS campgrounds and one private campground located along its length. In addition to being a popular fishing area, many people also swim, raft, and inner-tube in this reach. PG&E is concerned about public safety and that placement of large numbers of LWD into the river may also create an increased risk of pinning and drowning.

Based on the reasons stated above, PG&E does not see the need to develop a woody debris management plan and is opposed to placing any additional LWD into any of the bypass reaches other than what occurs under natural and pulse flow events. PG&E also notes that the 2105 Collaborative specifically considered the Project's potential impact on LWD and the ability of increased minimum stream flows and pulse flows to manage for future LWD introduction into the various bypass reaches, and decided not to introduce any additional LWD into any of the bypass reaches.

Alternative number 16, page 2-13. Develop an adaptive management plan that addresses the results of all monitoring and special studies conducted on water temperature, water quality, flow, macroinvertebrates, gravel, woody debris, fisheries, amphibian populations and habitat, and vegetation.

Response: PG&E does not believe that there is a need for a specific comprehensive "Adaptive Management Condition" as described above. The SA, in Appendix A, Section 1, describes four plans for monitoring of streamflow and potential changes in habitat and species abundances and/or composition, as follows: 1) stream sediments as part of pulse flow monitoring in paragraph 3, part B; 2) streamflow measurement in paragraph 5; 3) assessing habitat quality in lower Butt Creek in paragraph 8 and providing pulse flows, as necessary per paragraph 4; and 4) monitoring fish populations and macroinvertebrate community in the Belden and Seneca reaches in paragraph 9. The FWS, FS, CDFG, and SWRCB are explicitly listed as agencies to be consulted with for all of the items listed above, with the exception of streamflow measurement, which shall be conducted under the requirements of FERC and under the supervision of the United States Geological Survey. Consequently, there is already a built-in link between the appropriate agencies for the identified resource management areas in any decision making process.

Summary page xxii, bullet 2: Recreation flow implementation plan: PG&E proposes and the FS specifies implementing the recreation flow implementation plan, including test flows and monitoring, in the Belden reach, in year 1 of the license; we recommend delaying implementation of the plan until year 6. We recommend this modification because it provides an opportunity for the biotic community to adapt to the revised instream flow schedule without being disrupted by recreational release flows, which would improve the likelihood of enhancing macroinvertebrate and fish populations.

Comments of Pacific Gas and Electric Company on
Upper North Fork Feather River Project (FERC No. 2105) Final EIS

Summary page xxii, bullet 3: *Scheduled recreation flow releases: PG&E proposes and the FS specifies releasing recreation flows in the Belden reach beginning in year 4 of the license, following implementation of the recreation flow implementation plan; we recommend delaying the recreation flow releases in the Belden reach until year 9, also following the implementation of the recreation flow implementation plan.*

Response: The Department of the Interior 10(j) recommendation to delay recreation flows is inconsistent with current data on the aquatic environment and other recreational uses on the Belden Reach. Representatives of the Fish and Wildlife Service (FWS) made this recommendation to the 2105 Collaborative and it was rejected for the reasons described above in response to Alternative number 14, page 2-13. Our SA represents the best approach to improving aquatic resources and enhancing recreational opportunities, and includes an appropriate mechanism for adaptive management should modification be required. For these reasons we respectfully request that the FERC reconsider delaying the implementation of the recreational flow schedule and implement the flow schedule as outlined in the SA.

Summary page xxii, bullet 4: *Lake Almanor water quality monitoring: PG&E proposes monitoring once every 5 years beginning in year 3 from license issuance; we recommend monitoring only in years 1 to 3.*

Response: PG&E believes that the water quality monitoring program proposed in Appendix A, Section 5, of the SA is appropriate and necessary to determine compliance with state water quality standards. To demonstrate the level of protection provided for beneficial uses of Project waters and to identify any trends in water quality conditions, the signatories to the SA recommended that water quality monitoring be conducted in Lake Almanor every five years beginning in year three of the new license for the term of the license. PG&E believes that the level of water quality monitoring proposed in the SA is appropriate and preferable to that proposed by Staff.

Summary page xxii, bullet 5: *Bioaccumulation (methylmercury and PCBs) monitoring in catchable-sized fish: PG&E proposes monitoring once every 5 years beginning in year 1 from license issuance; we recommend monitoring only in years 5, 10, and 15. PG&E also proposes monitoring for bioaccumulation of silver; we do not recommend monitoring for bioaccumulation of silver because previous sampling indicates that silver body burdens are low, silver does not typically biomagnify, and we are not aware of an established action or screening level that represents the risk to human health.*

Response: PG&E believes that the level of fish tissue monitoring proposed in the SA is appropriate and preferable to that proposed by Staff. First, with the exception of smallmouth bass sampling in 2003, all other fish tissue sampling was conducted in 2001 and 2002; consequently, Staff's recommended sampling would not result in the first license required sampling be conducted for up to 10 years after the last fish tissue sampling had been

Comments of Pacific Gas and Electric Company on
Upper North Fork Feather River Project (FERC No. 2105) Final EIS

conducted. PG&E believes that by scheduling the first sampling effort in the first year after license issuance and at five year intervals thereafter allows for a better evaluation of the status of the bioaccumulation of both methylmercury and PCBs in fish in Project waters over the entire license period, and not just during the first half. And second, while PG&E recognizes that silver does not typically biomagnify and the results from the 2002 and 2003 sampling effort were quite low, PG&E also believes that since it conducts a cloud seeding program in the NFFR watershed that it is PG&E's responsibility to monitor for silver under the proposed schedule in the SA.

Summary page xxiii, bullet 1: *Bacteriological monitoring: PG&E proposes monitoring in years 1 to 5 from license issuance, then every other year; we recommend monitoring only in years 1 to 3.*

Response: PG&E believes that the bacterial monitoring program proposed in Appendix A, Section 5, of the SA is appropriate and necessary to determine compliance with state water quality standards. To demonstrate the level of protection provided for beneficial uses of Project waters and to identify any trends in bacterial conditions, the signatories to the SA recommended that bacteriological monitoring be conducted annually for the first five years after license issuance and every other year for the remaining term of the license. PG&E believes that the level of bacterial monitoring proposed in the SA is appropriate and preferable to that proposed by Staff.

**Comments of Pacific Gas and Electric Company on
Upper North Fork Feather River Project (FERC No. 2105) Final EIS**

References

- Berg, N., A. Carlson, and D. Azuma. 1998. Function and dynamics of woody debris in stream reaches in the central Sierra Nevada, California. *Can. J. Fish. Aquat. Sci.*, 55:1807-1820.**
- Chan, Ian, 2005. CEC / UC Davis Pulsed Flow Study 2004. Presentation Pulsed flow workshop July, 2005.**
- Hauer, Richard F. 2005. Rock Creek-Cresta (FERC No. 1962) Recreation and pulse flow biological evaluation: October 2005 Peer Review for Technical and Ecological Services, Pacific Gas and Electric Company, San Ramon, CA.**
- PG&E. 2002. Upper North Fork Feather River Project FERC No. 2105. Application for New License.**
- Penland, Bill 1989. Deep canyon, heavy gold: a collection of true stories about everyday life in the Feather River Canyon and surrounding areas.**
- Salamunovich, T. 2005. Rock Creek-Cresta (FERC No. 1962) Recreation and pulse flow biological evaluation: stranding and displacement studies, year 3 – 2004 July 2004 final report prepared by Thomas R. Payne & Associates for Technical and Ecological Services, Pacific Gas and Electric Company, San Ramon, CA.**