

March 25, 2015

Via Email to Peter.Barnes@waterboards.ca.gov and U.S. Mail

Mr. Peter Barnes, Engineering Geologist
State Water Resources Control Board
Division of Water Rights
P. O. Box 2000
Sacramento, CA 95812-2000

**Re: Upper North Fork Feather River Hydroelectric Project, FERC Project No. 2105
Draft Environmental Impact Report, November 2014**

Dear Mr. Barnes:

Pacific Gas and Electric Company (PG&E) appreciates the opportunity to provide comments on the State Water Resources Control Board's (State Water Board) draft Environmental Impact Report (DEIR) for the Upper North Fork Feather River Hydroelectric Project (UNFFR), November 2014, and Staff Recommendation dated November 26, 2014.

PG&E is concerned that the DEIR and Staff Recommendation are inconsistent with the 2004 Relicensing Settlement Agreement¹ (Settlement Agreement) instream flow schedules for both the Seneca and Belden river reaches. The effects of these flow changes are not well described and are not "water neutral" as indicated in the Staff Recommendation. The Settlement Agreement was developed through an open, collaborative, and transparent process. Multiple state and federal agencies, Plumas County, PG&E, and various interest groups participated in good faith and crafted the agreement which effectively balances the interests of this broad stakeholder group. The State Water Board actively participated in the process, and, the Federal Energy Regulatory Commission (FERC) has adopted the Settlement Agreement flows. Now, if alternative flows of the DEIR are incorporated into a final 401 Certification, they will be in direct conflict with both the Settlement Agreement and the mandatory U.S. Forest Service (USFS) 4(e) conditions. PG&E remains supportive of the Settlement Agreement and urges the State Water Board to adopt the Settlement Agreement flows as well.

PG&E understands the difficulty in the State Water Board's challenge to reasonably protect and balance all competing uses in its decision-making process. In general, it is PG&E's opinion that the DEIR and Staff Recommendation over emphasize the cold freshwater habitat uses in the river reaches and under emphasize the uses in Lake Almanor.

¹ PG&E. 2004. Upper North Fork Feather River Project. FERC Project No. 2105, Project 2105 Relicensing Settlement Agreement. April 2004.

PG&E suggests that the Staff Recommendation be incorporated into the DEIR as a separate Alternative 3 and fully analyzed. This would clarify what is being evaluated and allow for comparison among all alternatives. Alternative 3 should incorporate results from the 250 cfs analysis as modeled in Appendix E-1. In addition, the Settlement Agreement should be clearly identified as the "Proposed Project" at an earlier point within the document.

The DEIR states the State Water Board recommended flow changes (including elimination of pulse flows) to the Settlement Agreement are water neutral for both the Seneca and Belden reaches. PG&E calculations could not confirm the State Water Board's water neutral statement for the Belden Reach. PG&E requests that the State Water Board correct this statement.

PG&E understands the State Water Board recommended high flow (250 cfs) releases at Canyon Dam, mid-June through mid-September, will bring some water temperature reductions to the Seneca, Belden, Rock Creek, Cresta and Poe River reaches. In the text attached, PG&E presents monitoring data indicating that water temperatures in the Seneca and Belden Reaches in June and September already protect coldwater beneficial uses. PG&E does not agree with the State Water Board's recommended high flows and recommends that the Settlement Agreement flows be implemented because doing so retains cold water in Lake Almanor and preserves beneficial uses in Lake Almanor.

The potential impacts to the Lake Almanor fisheries from the recommended high flow (250 cfs) releases at Canyon Dam during critical dry years are uncertain, and the removal of cold water from Lake Almanor will further stress fish and not be beneficial. PG&E does not agree with the State Water Board's recommended high flows during any water year type and recommends that the Settlement Agreement flows be implemented because they preserve beneficial uses in Lake Almanor.

PG&E recommends removing the requirement to monitor fish populations in Lake Almanor as a mitigation measure following critical dry water years. There is no reasonable way to measure thermally related mortality of coldwater fish. Many other factors that are not project related could also affect fish populations, such as food production, competition, long term warming effects, supply of coldwater springs in Lake Almanor, seasonal distribution of fish, fishing pressure, stocking program, disease, and spawning habitat limitations. It would be extremely difficult, or more likely impossible, to establish a defensible investigation that would isolate temperature-related impacts on fish populations. Therefore, the monitoring of fish populations in Lake Almanor to inform actions is infeasible and PG&E recommends removing the requirement.

Finally, PG&E strongly objects to the Staff Recommendation for a State Water Board reservation of authority to require installation of thermal curtains in Lake Almanor and Butt Valley reservoir as a way of decreasing water temperatures in the UNFFR Project reaches. There is no need for the reservation of authority because the Settlement Agreement flows, independent of the curtains, meet the Basin Plan objectives and reasonably protect beneficial uses in the UNFFR Project reaches. Any such significant change should be vetted through an open and transparent public process.

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While a license amendment would certainly be required, the reservation of authority is too open-ended, has too much regulatory uncertainty, provides no public process to enable stakeholders an opportunity for input, does not reasonably protect beneficial uses in Lake Almanor, and has little, to no, public support.

In addition to the above overall comments, please find enclosed PG&E's specific comments on the DEIR.

Sincerely,



Alvin Thoma, Director
Hydro Licensing and Compliance

ALT5/taj3

Enclosure

State Water Board: Executive Summary, Page ES-5, 2nd Paragraph

“The adjustments for the Seneca reach would be water neutral for a given water year type. In other words, on an annual basis, no additional water would be required for these changes; instead, the adjustments would move water from the winter and spring months to the late summer months. For the Belden reach, these adjustments would all require the release of more water, thereby reducing the volume released through the Belden powerhouse. In an effort to mitigate impacts to water supply on an annual basis, the State Water Board excluded the provision in the 2004 Settlement Agreement that would have required pulse flows in normal and wet water years. This adjustment to the 2004 Settlement Agreement flow schedules would be water neutral.”

PG&E Response:

PG&E agrees that the changes will be water neutral in the Seneca Reach only when the 250 cfs flow is excluded. Our analysis, however, demonstrates that the flow adjustments proposed by the State Water Board are not water neutral in the Belden Reach.

State Water Board: Executive Summary, Page ES-6, 3rd Full Paragraph

“While not separately evaluated as an alternative, increased releases from Canyon dam of up to 250 cfs between June 15 and September 15 could be implemented to reduce temperatures in the North Fork Feather River.”

PG&E Response:

To promote transparency in the DEIR, the 250 cfs should be separately evaluated as Alternative 3 in the document to clarify what is being evaluated and to allow for comparison among all alternatives.

State Waterboard, Executive Summary, Page ES-11, Table 6.4

“Impact WR-1: Construction activities associated with the UNFFR Project could require use of water from Lake Almanor or Butt Valley reservoir that is not approved under existing water rights.”

PG&E Response:

PG&E would use its riparian water rights for construction water. PG&E requests that the State Water Board change language to reflect this by modifying the sentence as follows:

“Impact WR-1: Construction activities associated with the UNFFR Project could require use of water which could be covered under PG&E’s riparian water rights.”

State Waterboard: Chapter 1, Section 1.3, Page 1-3, 2nd full paragraph

“The Draft EIS prepared by FERC analyzed the measures in the 2004 Settlement Agreement, but did not include an analysis of water temperature.”

PG&E Response:

This statement needs to be updated to reflect FERC’s Final EIS document which included an analysis of water temperature on pages 26-53, 77-78, and 107-109.

State Water Board: Chapter 2, Section 2.2.2, Page 2-5, Table 2-2, footnote of table

The footnote "2" of the table reads "*Any segments with both COLD and WARM beneficial use designations will be considered COLD water bodies for the application of water quality objectives.*"

PG&E Response:

There is no ecological justification for this statement in footnote 2 of Table 2-2. Consideration should be given as to how colder water would negatively impact the hardhead (listed as a USFS sensitive species and a California Department of Fish and Wildlife Species of Special Concern) and other native warm water species (e.g., Sacramento sucker and Sacramento pikeminnow) in the Seneca and Belden reaches of the North Fork Feather River, in order for the State Water Board to meet its goal, as stated on page 6.5-3, which reads as, "the reasonable protection of designated beneficial uses, and it must consider and balance all competing uses of a body of water in its decision-making." The statement in footnote 2 is outdated, over emphasizes the importance of coldwater habitat, and does not recognize that native non-game fish like the ones listed above have their role in the ecosystem of the riverine system and provide a food source for aquatic and terrestrial species.

State Water Board: Chapter 3, section 3.3.1, Page 3-6, 3rd paragraph

"The third line is a 115-kV transmission circuit extending 38.2 miles from the Caribou powerhouses to the Big Bend substation."

PG&E Response:

The 115 kV line referred to was removed from the FERC Project Boundary per Order granting license amendment issued December 22, 1998. Therefore, this sentence is no longer correct and should be deleted.

State Water Board: Chapter 3, section 3.4.1, Page 3-7, 5th paragraph

"Because of its size (4.8 MW) and its age (pre-1950), the Hamilton Branch Hydroelectric Project is exempt from FERC license requirements."

PG&E Response:

Factors relevant for licensing a project include age, landownership, and navigable waters; size (MW) is not relevant. PG&E requests that the State Water Board correct this text to read:

"Because of its age (pre-1950), location (i.e., landownership) and lack of navigable waters, the Hamilton Branch Hydroelectric Project is exempt from FERC license requirements."

State Water Board: Chapter 3, section 3.4.4, Page 3-8, 3rd full paragraph

“Flow from the Poe powerhouse is returned to the North Fork Feather River several miles upstream of Lake Oroville, a component of DWR’s Oroville Facilities.”

PG&E Response:

PG&E suggests removing “*several miles*” because the distance between Poe Powerhouse and Lake Oroville changes seasonally based upon pool level and can vary between one-half to several miles.

State Water Board: Chapter 4, section 4.4.2, Page 4-6, 3rd paragraph

“PG&E inspections have revealed that Gates 2 and 4 are buried under 20 feet of sediment and have been plugged with concrete, thus are considered unrepairable and permanently inoperable.”

PG&E Response:

PG&E requests modification of the above text to read:

“Gates 2 and 4 are plugged with concrete and are buried under 20 feet of sediment, which makes them permanently inoperable.”

State Water Board: Chapter 4, section 4.4.2, Page 4-6, 3rd paragraph

“Gate 5 was repaired in 2005 and Gate 1 was repaired in 2012 (the gate and gate-stem connection were rehabilitated), and they are currently the only low-level gates that are operable. . .”

PG&E Response:

Gate 3 is an operable gate and should be included in this statement. All low-level gates are operable.

State Water Board: Chapter 4, section 4.4.4, Page 4-10, 2nd full paragraph

“Under the 2004 Settlement Agreement, in certain months of certain water year types, the flows proposed for the Belden reach are lower than the flows required by the existing license. In both of the alternatives evaluated in this EIR, State Water Board staff adjusted the flows to provide higher flows in the summer months when water temperatures generally increase.”

PG&E Response:

While it is true that the Settlement Agreement flows were lower in some months and water year types (June through early September in Critically Dry years and July through early September in Dry years), one of the key components in developing the flow schedule was to provide a more natural hydrograph with the available water resources and to balance interests of the many relicensing participants in an open and public process, including the State Water Board staff. For each project affected river reach and reservoir, Ecosystem and Management Attribute worksheets were developed that identified flows to satisfy competing monthly resource needs. The Belden Reach has significant riparian and topographic shading

(provided by canyon walls). Water temperature modeling and tests² indicated that cooling attributed to shading was lost when increasing flows from Belden Dam above a certain threshold. Increasing flows beyond the threshold did not cool water in the Belden Reach, but actually slightly increased water temperature. The lower than existing flows agreed upon in the Settlement Agreement were based upon these specific results. The relicensing participants, including the State Water Board staff, evaluated all data and resources when they collaboratively developed the flow schedule and the competing demands on these resources. PG&E urges the State Water Board adopt the Settlement Agreement flows.

State Water Board: Chapter 4, section 4.4.2, Page 4-11, Schedule Bullet Points

- *“Installation of the Prattville intake thermal curtain would require approximately two construction seasons and would take place while Lake Almanor is drawn down (between September and April each year).”*
- *“Modifications to the Canyon dam outlet would require approximately 3 months and could take place at any time of year.”*
- *“Installation of the Caribou intakes thermal curtain would require approximately two construction seasons and would take place while Butt Valley reservoir is drawn down (between May and October each year).”*

PG&E Response:

First Bullet Point: There is a pair of osprey that nest on a platform in close proximity to the Prattville intake. The nesting period is typically from mid-March through August. Therefore, potential impacts on osprey will need to be assessed and any construction schedules adjusted accordingly.

Second Bullet Point: For safety, environmental, and feasibility reasons, this work should be performed in late summer or fall, when the reservoir elevation is at its lowest; however, bald eagles will have to also be considered since there have been known bald eagle nests in the area. During the 2014 North Fork Feather River system bald eagle nesting surveys, nests with young were observed at Rocky Point, Rock Lake, Collins Pine South, and Chester Church. The nesting period for bald eagles is typically between January 1st to August 1st.

Third Bullet Point: There are bald eagles that nest within the area of the Butt Valley Reservoir; during the 2014 North Fork Feather River system bald eagle nesting surveys, nests with young were observed at Butt Valley Dam, Cool Springs, and Gravel Island. The indicated period for construction overlaps with the nesting period of bald eagles; this potential impact to bald eagles will need to be considered. Further, Butt Valley Reservoir is not progressively drawn down for a long period like Lake Almanor. The Butt Valley Reservoir water level fluctuates over a range of about 5-10 ft. each week.

² PG&E. 2005. North Fork Feather River Study Data and Informational Report on Water Temperature Monitoring and Additional Reasonable Water Temperature Control Measures, September 2005 [Amended]

Depending on the impacts to nesting birds, it may take more than two construction seasons to construct the thermal curtain.

State Water Board: Chapter 4, section 4.4.2, Page 4-11, 4th bullet point under Ground Disturbance

"All construction activities would occur on lands owned by PG&E."

PG&E Response:

PG&E requests that the State Water Board correct this language to reflect that the construction activities on Canyon Dam would require the use of the boat ramp owned by the USFS.

State Water Board: Chapter 6, section 6.2.1, page 6.2-1, 1st paragraph

"The UNFFR Project area encompasses approximately 30,920 acres, including a 30-mile reach of the North Fork Feather River and four miles of Butt Creek."

PG&E Response:

This reach is approximately 19.6 miles – 10.8 miles for the Seneca Reach, and 8.8 miles for the Belden Reach. PG&E requests that the Board correct this language accordingly.

State Water Board: Chapter 6, section 6.2.1, page 6.2-6, 1st paragraph

"Recreational uses are not as common along this reach as at Lake Almanor, but fishing and whitewater rafting do occur seasonally."

PG&E Response:

There are minimal whitewater rafting opportunities in the Seneca Reach. PG&E recommends changing "*whitewater rafting*" to "*boating/kayaking*" to accurately describe the recreational activities that occur in this reach.

State Water Board: Chapter 6, section 6.2.1 page 6.2-6, 5th paragraph

"Caribou Road, which is unpaved, provides primary access along the Belden Reach."

PG&E Response:

PG&E requests a correction to reflect that Caribou Road is a paved road.

State Water Board: Chapter 6, section 6.2.1, page 6.2-8, 1st paragraph

"No construction impacts would occur as a result of changes in flow releases to the Seneca and Belden reaches."

PG&E Response:

This is not consistent with language on page 6.2-10, which indicates that construction will be required, "*Modifications to the Canyon dam intake structure under Alternative 1 would*

not require any changes to that portion of the structure above the surface. . . Short-term construction activities in the vicinity of the Canyon Dam boat ramp would be consistent with Zones L and Rec-1.” Please change language to reflect that construction modifications of the low-level gates at Canyon Dam intake structure will be needed.

State Water Board: Chapter 6, section 6.2.1, page 6.2-11, 2nd full paragraph

“Higher water levels and flow rates could impair the ability of some miners to access and mine these sites along the reaches.”

PG&E Response:

The fishability study conducted during relicensing³ reported for the 300 cfs test flow that, "In only a few places it appeared possible to cross the river; most of the reach was too swift or deep." Additionally, the single road crossing of the NFFR at Sunny Side Mine was marginally fordable by vehicles at 100 cfs, and became impassable for normal 4-wheel drive vehicles at a release of 300 cfs for several of the PG&E relicensing contractors working during this period. Consequently, releases of up to 250 cfs from mid-June through mid-September would result in less access across the NFFR than indicated in this document either by wading or by vehicle; flows greater than 250 cfs would be even more problematic. Due to increased water depth and velocities, PG&E believes there would be a larger impact to river access and crossing for fisherman and/or other recreationalists than presented here by the State Water Board. Unlike the 250 cfs Staff recommended flows, the Settlement Agreement flows would not impair access for miners, fishermen, and other recreationalists. PG&E urges the State Water Board to adopt the Settlement Agreement flows.

State Water Board: Discussion of Gansner Bar Fish Barrier

There are several references to the impending removal of the Gansner Bar Fish Barrier throughout the DEIR document.

PG&E Response:

The removal of the Gansner Bar Fish Barrier was completed on October 27, 2014. PG&E requests that the State Water Board update the DEIR document to reflect the fact that the Gansner Bar Fish Barrier has been removed.

State Water Board: Chapter 6, section 6.3.2, page 6.3-8, Table 6.3-4

Table 6.3 – 4 footnotes.

PG&E Response:

Some of the footnotes on Table 6.3-4 are incorrect, and PG&E requests that they be corrected to match the source document. The source document is PG&E's 2002 Final Upper

³ PG&E. 2002. Upper North Fork Feather River Project FERC NO. 2105, Application for New License. Appendix E5-R Additional Results from Recreation Fishability Study. April 2002.

North Fork Feather River Project, FERC No. 2105, Application for New License, Volume 7 of 8, Appendix E3.1-12, Geomorphic Study, Table 5-4 on page 5-61.

State Water Board: Chapter 6, section 6.3.2, page 6.3-17, 3rd complete paragraph

“However, given the length of the license and lack of required mitigation, the State Water Board believes that the effects of the UNFFR Project or either alternative on the location and severity of shoreline erosion along Lake Almanor has the potential to be significant without mitigation.”

PG&E Response:

The conclusion “*significant without mitigation*” is not supported by the record and is inconsistent with statements elsewhere in the DEIR. On page 6.3-10, the DEIR states: “Based on the 2007 inspection, shoreline erosion has not changed, which is likely because of PG&E’s consistent operations.” On page 6.3-17, it states: “The magnitude and patterns of erosion would not be different than those currently occurring at the lake; neither the UNFFR Project nor either alternative would modify lake operations in a way that would increase erosion.”

Furthermore, it’s unclear whether the reference to the “length of the license and lack of required mitigation” refers to PG&E’s existing license, which is not pertinent here. The State Water Board’s CEQA analysis must be based on the “baseline” of conditions that existed at the time PG&E’s 401 application was submitted (October 9, 2002), and the State Water Board has acknowledged that erosion will not increase.

For these reasons, PG&E requests that the above statement be deleted and replaced with the following:

“The State Water Board believes that the effects of the UNFFR Project or either alternative on the location and severity of shoreline erosion along Lake Almanor will be less than significant.”

State Water Board: Chapter 6, section 6.4.1, page 6.4-6, 1st paragraph

“PG&E’s permitted water rights authorize the use of water stored in Lake Almanor and Butt Valley reservoir for power production; the water rights do not authorize industrial use.”

PG&E Response:

PG&E owns substantial lands and associated riparian water rights and could exercise these riparian water rights for construction activities. PG&E requests that the State Water Board modify this sentence to include:

“PG&E has riparian water rights which could be used for construction activities.”

State Water Board: Chapter 6, section 6.4.2, page 6.4-7, 6th paragraph

“PG&E would follow safety protocols and properly inform the public of the increased releases prior to making any changes in the releases through Canyon dam.”

PG&E Response:

PG&E diligently follows safety protocols; however, no safety related notification for the public is necessary because flows will be ramped at a rate not to exceed 0.5 foot/hour, as per the Settlement Agreement. A review of the hydraulic data⁴, collected at 39 transects during the instream flow study conducted as part of the relicensing studies for the UNFFR Project for the Seneca Reach, indicates that the maximum monthly flow increase, up to 250 cfs, would result in only an approximate increase in average depth of between 0.3 ft in a wet water year to 0.6 ft in a critically dry water year in any single month. Therefore, this sentence is unnecessary and should be deleted.

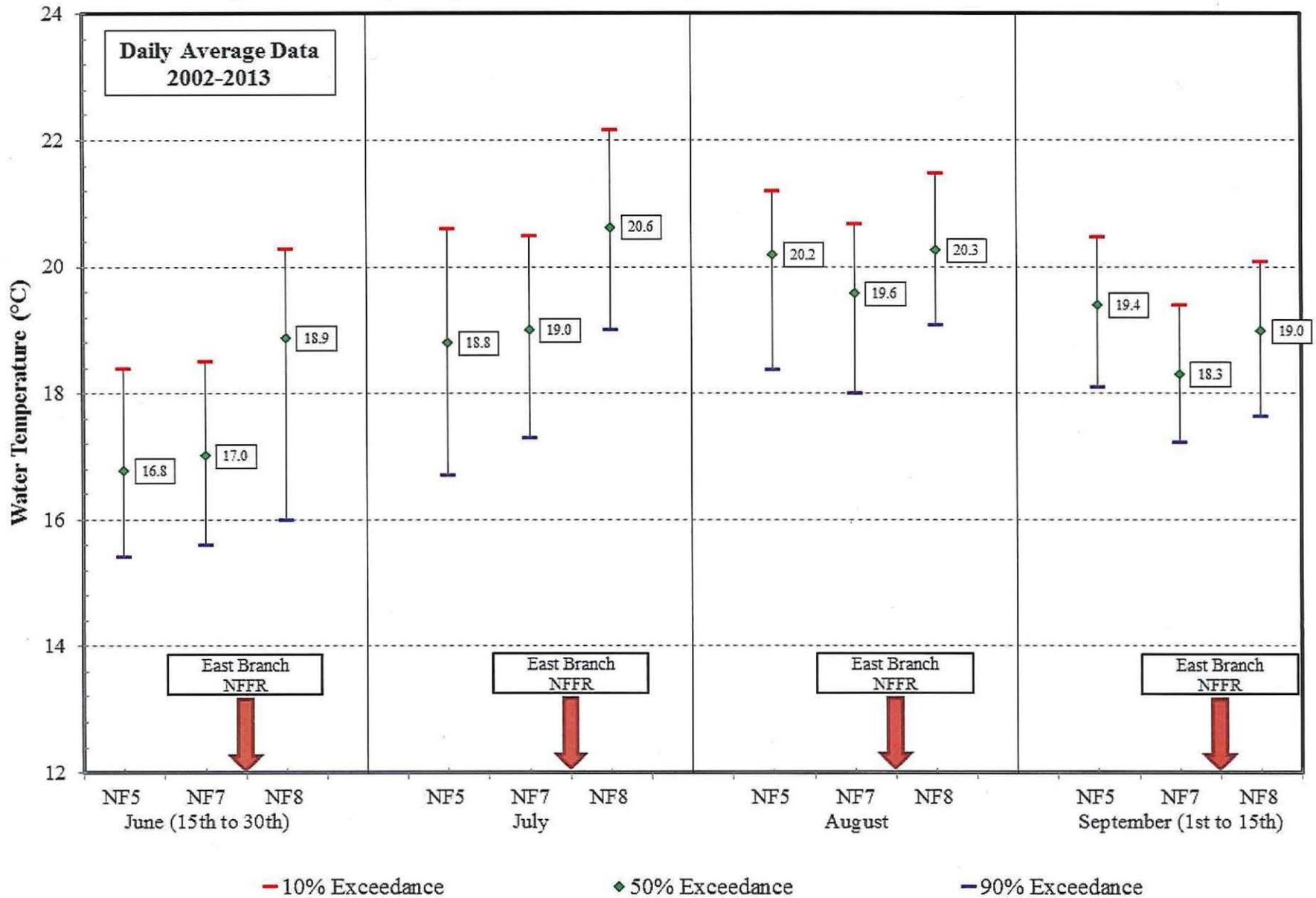
State Water Board: Chapter 6, section 6.4.2, page 6.4-8, Table 6.4.2 Alternative minimum Streamflow Releases from Canyon Dam

PG&E Response:

The current flows, which are lower than the Settlement Agreement flows in June and September, result in water temperatures in the UNFFR Project reaches below the 20° C criteria during these periods. Figure 1 shows summer water temperature monitoring results from 2002-2013 (including a range of all water year types) within the Belden Reach (NF5—below the Belden Dam; NF7—near Gansner Bar; NF8—at Belden Town Bridge below the confluence of the East Branch Feather River). Note that in the later part of June, and the first part of September, median temperatures never exceed 20° C. During these months, there is no water temperature related reason to increase flows beyond the Settlement Agreement flows in the UNFFR Project reaches.

⁴ Salamunovich, Tim, Steve Eggers, Mark Allen, Don Bremm, and Thomas Payne. 2002. North Fork Feather River and Butt Creek Instream Flow, Study Upper North Fork Feather River Project, FERC Project No. 2105. Thomas R. Payne and Associates, Arcata, Ca.

Figure 1: Monthly Comparison of Thermal Regime at Three Stations in the Belden Reach



State Water Board: Chapter 6, section 6.5.1, page 6.5-1, "Nutrients" bullet point

"Neither the Proposed UNFFR Project of the alternatives would cause a detrimental change in the overall concentrations of nutrients that would stimulate algal productivity in Lake Almanor, primarily because seasonal reservoir storage volumes would not be affected."

PG&E Response:

PG&E requests the bolded "of" be changed to "nor" in the above sentence.

State Water Board: Chapter 6, section 6.5, page 6.5-2, 1st paragraph

"The source of these relatively high coliform concentrations is uncertain, but may be connected to discharges from the Chester wastewater treatment plant or inadvertent pollution from leaking septic systems around Lake Almanor (CH2M Hill 2006)."

PG&E Response:

There is no evidence of leaky septic tanks. PG&E requests the removal of speculation that coliform may be a result of leaking septic systems.

State Water Board: Chapter 6, section 6.5.1, page 6.5-5, 1st full paragraph

"The overall water quality of Lake Almanor may be variously influenced by such factors as water depth, season, climatic conditions, and the timing and volume of stream and spring inflows, overland runoff, erosion and sediment influx, and septic system leachate and treated wastewater effluent discharges to the lake (California Department of Water Resources and California Department of Fish and Game 1974, Earthworks Restoration and CH2M Hill 2007)."

PG&E Response:

As in the previous comment, the reference to leaking septic tanks (i.e. septic system leachate) is speculative; PG&E requests the removal of reference to septic system leakage.

State Water Board: Chapter 6, section 6.5.1, page 6.5-8, 3rd paragraph

"Concentrations of PCBs in fish tissues collected from the Belden forebay have also chronically exceeded the OEHHA's fish contaminant goal of 3.6 grams per nanogram of fish flesh, which was established to protect human health (see State Water Resources Control Board 2010)."

PG&E Response:

PG&E requests the following changes:

The units in "3.6 grams per nanogram" is incorrect; the appropriate unit is "nanograms per gram".

The word "chronically" suggests that many samples collected over several years were in exceedance of the State Water Board's goal for PCB's in fish tissue. The data provided in the license application for the UNFFR Project only included a single year of samples from

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Belden forebay and one year of data of tissue samples collected downstream of the forebay. PG&E requests the removal of the word "chronically."

State Water Board: Chapter 6, section 6.5-1, page 6.5-11, 1st paragraph

"As with Belden forebay, the Belden reach has exceeded Basin Plan objectives for water temperature, DO, specific conductance, mercury, and PCB concentrations in fish tissues (Pacific Gas and Electric Company 2002, State Water Resources Control Board 2010)."

PG&E Response:

For the Belden Reach, there is little to no information to support the statement above. With respect to water temperature, Figure 1 (above) shows the results of eleven years of water temperature monitoring in the Belden reach (2002-2013). The median heating in the reach from Belden Forebay to just above the East Branch NFFR is 0.2 ° C in June and July, and actually cools in August and September. At no time is the heating greater than the 5 ° F (2.7 ° C) objective stated in the Basin Plan. Even after the confluence with the East Branch (a typically warm, non-project affected branch of the NFFR) the water temperatures do not exceed the Basin Plan objective for the Belden reach.

Neither the license application nor the FERC EIS identified DO values that exceeded Basin Plan objectives. In fact, Chapter 6 of the DEIR acknowledges that: *"All DO concentrations reported for the Belden reach by PG&E (2002) were greater than 7mg/L. . ." (See page 6.5-11.)* It goes on to state: *"All nine samples had PCB levels lower than the USEPA screening level of 10ppb and well below the FDA action level of 2,000ppb (Pacific Gas and Electric Company 2002)."* (See page 6.5-12.)

Specific conductance above 150 umhos/cm was reported in the FEIS⁵ for several locations in the Belden Reach, but high values are associated with natural geological features or tributary inflows (e.g., East Branch and Mosquito Creek) and not the project.

Supplemental studies conducted by PG&E using trace metal sampling (2002-2003) did not detect any total mercury concentrations above Basin Plan objectives. Nor did the State Water Board Line of Evidence for the 303(d) list detect mercury in fish collected from Belden Forebay (State Water Resources Control Board 2010⁶). FERC EIS⁷ states, "All of the fish or crayfish samples analyzed had total mercury concentrations of less than the U.S. Food and Drug Administration (FDA) action level, California Office of Environmental Health Hazard Assessment (COEHHA) screening value, State Water Board maximum tissue

⁵ Ibid., 3-24

⁶ State Water Resources Control Board. 2010. Staff Report: 2010 Integrated Clean Water Act Sections 303(d) List and 305(b) Report. April 2010. State Water Resources Control Board, Sacramento, California. 25 p. Available at: http://www.waterboards.ca.gov/water_issues/programs/tmdl/2010state_ir_reports/docs/2010ir0419.pdf.

⁷ Federal Energy Regulatory Commission. 2005. Final Environmental Impact Statement for the Upper North Fork Feather River Project, Project No. 2105-089. Federal Energy Regulatory Commission, Office of Energy projects. (Report No. FERC/FEIS-0172D.) November 10.

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residue level, and FWS level to protect bald eagles, suggesting that methylmercury is not at concentrations that cause significant risk to populations of humans and bald eagles."

FERC EIS⁸ also states, "All of the fish or crayfish samples analyzed had total PCB concentrations of less than the 2,000-ug/kg FDA tolerance level and the 20-ug/kg screening values of State Water Board for California lakes and EPA recreational fishers." It was found that many of the fillet samples and the whole-organism samples exceeded the Environmental Protection Agency (EPA) 2.45-ug/kg screening value set to indicate potential risk to subsistence fishers. State Water Board (2010) reports exceedance in fish collected in 2003 near the Poe Powerhouse but that is not within the UNFFR project area. PG&E requests that the State Water Board remove or significantly modify this statement as it is not correct.

State Water Board: Chapter 6, section 6.5-1, page 6.5-11 & 6.5-12

"All DO concentrations reported for the Belden reach by PG&E (2002) were greater than 7mg/L. . .and "All nine samples had PCB levels lower than the USEPA screening level of 10ppb and well below the FDA action level of 2,000ppb (Pacific Gas and Electric Company 2002)."

PG&E Response:

The statements above are true; however, they conflict with the general characterization above in the first paragraph on page 6.5-11, "As with Belden forebay, the Belden reach has exceeded Basin Plan objectives for water temperature, DO, specific conductance, mercury, and PCB concentrations in fish tissues (Pacific Gas and Electric Company 2002, State Water Resources Control Board (2010)." These statements support our previous comment and our request to remove the preceding language.

State Water Board: Chapter 6, section 6.5-1, page 6.5-16, Table 6.5-1

Table 6.5-1, row 3, "*Impact WQ-3: Implementation of the UNFFR Project could affect water temperatures in the North Fork Feather River below Canyon dam and Belden dam.*" Alternative 1, "No impact (Beneficial)"

PG&E Response:

PG&E disagrees with the conclusion of Alternative 1 of "No impact (Beneficial)." The release of 250 cfs of colder water in Alternative 1 will not result in optimal habitat for rainbow trout in the Seneca Reach. As described on page 6.6-23 of the DEIR, water temperatures are expected to decrease by up to 2.5° C in the Seneca Reach, and would result in "somewhat slower growth rates for rainbow trout in this reach." Also, on the same page, the DEIR states, "but decreases it [suitable habitat] for juvenile trout by 17 to 23 percent from that provided by the minimum flows under the 2004 Settlement Agreement." Although not referenced in the DEIR, there would likely also be negative effects on juvenile lifestages of other fish species and the benthic macroinvertebrate community of this reach. Also, the negative impacts of the 250 cfs on hardhead need to be fully considered for the

⁸ Ibid., 3-45

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Belden reach and reaches downstream of the NFFR Project. For these reasons, PG&E does not agree with the conclusion that the release of 250 cfs for the period described will have "No impact (Beneficial)" on the coldwater resources of the Seneca Reach. PG&E considers this to be an impact and "Not Beneficial." The information provided above further supports Settlement Agreement and PG&E urges the State Water Board to adopt the Settlement Agreement flows.

State Water Board: Chapter 6, section 6.5-1, page 6.5-19, 2nd paragraph

"Without thermal curtains, the effect of increased Canyon dam releases of up to 250 cfs on Lake Almanor water temperature would be similar to that of the Proposed UNFFR Project. This conclusion is based on the Level 3 Report, which analyzed the effect of increased Canyon dam releases up to 600 cfs on Lake Almanor water temperature and found an effect similar to the Proposed UNFFR Project."

PG&E Response:

The above statement is incorrect. Appendix E (Table 3-3b) shows that high releases from Canyon Dam (Alternative 4c) would reduce coldwater habitat significantly (44% of baseline on Aug. 17th with <21° C water temperature) compared to the Proposed UNFFR Project, (Settlement Agreement) which is only 13%. These percentages are based on reduction of coldwater habitat from the baseline level (23,260 acre-ft), not the total lake volume (642,460 acre-ft.; volume in a critically dry year). Calculating the percent change using total lake volume significantly understates the change in habitat resulting from these various alternatives. Using the baseline coldwater habitat is the appropriate metric to make relative statements of effect.

State Water Board: Chapter 6, section 6.5-1, page 6.5-19, 2nd bullet point

- *"a decrease in the lakewide percentage of suitable coldwater habitat by a small amount, from 5 percent to 4 percent of the total lake volume from the current condition during mid-August in normal water years (Appendix E1–Table 9 and Figure 11)",*

PG&E Response:

As noted above, it is more appropriate to quantify changes in suitable coldwater habitat by comparing it with baseline conditions rather than the total lake volume. Not all of the lake provides suitable habitat, and using total lake volume will underestimate the magnitude of the changes. Evaluating change relative to baseline conditions will place the percentage decrease in the relevant context. This change should occur throughout the document where this statement has been made (i.e., on pages 6.6-17, 6.6-18, 6.6-19, and 6.6-20).

State Water Board: Chapter 6, section 6.5-1, page 6.5-20, 2nd paragraph

"Mitigation Measure WQ-1 (Alternatives 1 and 2): Implement Temperature Monitoring and Operations Coordination and Augment Stocking of Coldwater Fishery following Critically Dry

Water Years” and “. . . coldwater refugial habitat to less than 4 percent of the total lake volume and increased thermally related mortality of coldwater fish during the summer, PG&E will coordinate with and provide funding to CDFW and others as appropriate . . . “

PG&E Response:

PG&E opposes the language above for the following reasons:

- 1) Releasing 250 cfs from Canyon Dam during critically dry years will significantly reduce Lake Almanor's coldwater habitat and negatively affect an already stressed coldwater fish population. PG&E urges the State Water Board to adopt the Settlement Agreement flows.
- 2) Accurately measuring thermally induced mortality in the Lake Almanor coldwater fish population is not feasible. Other factors that are not project related would also need to be taken into consideration to achieve credible results. Some of these factors include food production, competition, changing supply of coldwater springs or other refugia in Lake Almanor, seasonal distribution of fish, fishing pressure, stocking programs, and disease. Finally, any population level decline would have to be compared with population dynamics when thermally stressful conditions are absent to provide adequate controls for drawing statistically and scientifically valid conclusions. Given the lack of baseline information on population dynamics, it would be difficult, or more likely impossible, to establish a defensible investigation that would isolate temperature as the cause of any population changes. Monitoring fish populations in Lake Almanor will not provide any reliable data to make fish stocking decisions. PG&E recommends removing the requirement to monitor the fish population in Lake Almanor in critically dry water years.
- 3) As noted earlier, it is more appropriate to express any change in suitable coldwater habitat by comparing it with the baseline levels rather than total lake volume. The total lake volume is not all suitable habitat for the entire year. Looking at the change of coldwater habitat relative to baseline will place the change in its proper context.

State Water Board: Chapter 6, section 6.5-1, page 6.5-22, 2nd full paragraph

“Mean daily temperatures and MWAT in the middle of the Seneca reach, which already remain well below 20 °C under the baseline condition, would be reduced by up to 2.5 °C in the Seneca reach, when flows of 250 cfs are released (Appendix E1-Figures 1-4). The lower temperatures during the summer would remain within a suitable temperature range in the Seneca reach to protect the cold freshwater habitat use and is, therefore, considered to be beneficial and to have no impact.”

PG&E Response:

As stated on page 6.5-10 of this chapter, "Average daily water temperatures in the Seneca Reach during the summer months (June-September) from 1999-2004 ranged from 9.8° C to 14.1° C near Canyon dam and 11.8° C to 16.8° C upstream of the Caribou powerhouses..." Assuming a linear relationship, mid-reach average water temperatures would range from

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10.8° C to 15.5° C at the baseline release of 35 cfs. Consequently, a 2.5° C decrease with a release of 250 cfs would result in water temperatures of about 8.3° C to 13° C in the mid-reach of this section in this example. Moyle (1977)² states that, "Optimum temperatures for growth and for completion of most stages of their life history [for rainbow trout] seem to be 13 to 21° C."; Behnke (1992)¹⁰ is more restrictive and states, "...that most salmonid fishes have an optimum feeding temperature (at which growth and assimilation of food are best) of 13-16° C." A release of 250 cfs would result in water temperatures of up to only 13° C in at least the upper half of the reach, and potentially further, which is below the temperature optimal for growth.

Releasing up to 250 cfs of cold epilimnion water into this reach will most likely result in slower growth rates for trout, other fish species, and potentially other aquatic organisms (e.g., benthic macroinvertebrates) during the three-month summer period proposed and would have a negative effect on this reach. This results in negative impacts to this reach that are not beneficial. For the above reasons, PG&E urges the State Water Board to adopt the Settlement Agreement flows.

State Water Board: Chapter 6, section 6.5.1, page 6-22, 3rd full paragraph

"A 0.7-mile segment of the North Fork Feather River between the confluence of the East Branch of the North Fork Feather River and the Belden powerhouse . . ."

PG&E Response:

As stated at the top of page 6.5-11, the length of the Belden Reach from Belden powerhouse the confluence with the East Branch Feather River should be listed as about "1.7" miles, not "0.7" miles.

State Water Board Chapter 6, section 6.5.2, page 6.5-32, 1st full bullet point

"All imported riprap, rocks, and gravels used for construction shall be pre-washed."

PG&E Response:

PG&E requests the State Water Board to clarify this condition to read:

"All imported riprap, rocks, and gravels used for construction within a water course shall be pre-washed."

² Moyle, Peter B. 2002. *Inland Fishes of California*. University of California Press, Berkeley, Los Angeles, London. 2002.

¹⁰ Behnke, Robert J. 1992. *Native Trout of Western North America*. American Fisheries Society Monograph 6. American Fisheries Society, Bethesda, Maryland.

State Water Board: Chapter 6, section 6.6.1, page 6.6-5, 1st paragraph

“At normal maximum pool— about 4,500 feet (PG&E datum) above mean sea level—Lake Almanor stores approximately 1,142,000 acre-feet (AF) of water, with an average depth of about 40 feet and a maximum surface area of 26,275 acres (California Department of Water Resources 1974, Jones and Stokes 2004, Stetson Engineers 2009).”

PG&E Response:

PG&E requests that “*about 4,500 feet (PG&E datum)*” be replaced with “*4,494 feet (PG&E datum)*” since this is the correct elevation in PG&E datum.

State Water Board: Chapter 6, section 6.6.1, page 6.6-11, 4th full paragraph

“Hardhead was documented in the tailrace of the Belden powerhouse during an entrainment study conducted on behalf of PG&E (ECORP Consulting Inc. 2003) and may occur in the lower portion of the Belden reach up to the Gansner Bar fish barrier (Pacific Gas and Electric Company 2002).”

PG&E Response:

During fish rescues that occurred upstream of the Gansner Bar Fish Barrier prior to the removal of the barrier, 12 hardhead were rescued on September 26, 2014, and 96 hardhead were rescued on October 6, 2014. PG&E requests that the word “*may*” be removed from this sentence since they do occur in this reach.

State Water Board: Chapter 6, section 6.6.2, page 6.6-12, 3rd paragraph

“The study focused on changes in the frequency and duration of exceedances of critical chronic and acute upper temperature tolerances and requirements of non-spawning adult and juvenile rainbow trout during the period of maximum summer water temperatures.”

PG&E Response:

While upper water temperatures during the summer months are generally higher for most of the lower river reaches of the NFFR, the Seneca Reach typically is much lower than 20° C, and has water temperatures that are often at the lower end of what is considered optimal for the growth of juvenile and non-spawning adult rainbow trout. The analysis of potential impacts from water temperature reductions should take into account this negative impact.

State Water Board: Chapter 6, section, 6.6.2, page 6.6-13, row four, column Alternative 1
Table 6.6-3, Impact FS-4 (fourth row), Alternative 1

PG&E Response:

The impact is listed as “Less than significant (beneficial)” for Alternative 1. While this may be true for the Belden Reach, this conclusion is not supported for the Seneca Reach for the months of mid-June through mid-September, when this alternative proposes to release up to 250 cfs. PG&E recommends that the State Water Board separate the analysis of

impacts/benefits to the Seneca and Belden River reaches individually, similar to the collaborative process used in the Settlement Agreement which was done in an open and public process.

State Water Board: Chapter 6, section 6.6.2, page 6.6-16, 3rd full paragraph

“PG&E will maintain the minimum instream flow requirement of 35 cfs in the Seneca reach below Canyon dam during construction of modifications to the low level outlet.”

PG&E Response:

PG&E requests that the State Water Board confirm that if construction is performed at a future date after implementation of higher flows, 35 cfs will still apply because it would be more difficult to release the higher flows during construction.

State Water Board: Chapter 6, section 6.6.2, page 6.6-22, 3rd full paragraph

*“The amount of usable habitat for all life stages of rainbow trout would be similar to existing conditions. . .Habitat for rainbow trout would continue to be limited by temperature during summer months. When compared to baseline conditions, the impact of the Proposed UNFFR Project on cold freshwater habitat in the Upper North Fork Feather River would be considered **less than significant**.”*

PG&E Response:

The proposed flows of the “Proposed Project” (i.e., Settlement Agreement), provides substantially more habitat in the Seneca Reach than the existing habitat available at 35 cfs flow release (baseline conditions). According to the rationale document for the Settlement Agreement, in the Seneca Reach, rainbow trout spawning habitat increases from approximately 40% to 96-99% and adult habitat increases from approximately 39% to between 57-74%, while available juvenile habitat decreases from approximately 99% to between 86-98%. The increase in both spawning and adult habitats would be expected to compensate for the minimal loss of available juvenile habitat (from 1% to 13%).

Belden Reach is virtually unchanged for both rainbow trout spawning (99% vs. 96-99%) and juvenile habitats (96% vs. 86-98%), but adult habitat does increase for most months from 61% to 74% of available habitat. While it is true that the changes in the Belden Reach are neutral to positive, the overall proposed flow of the Settlement Agreement releases in the Seneca Reach should be considered as beneficial. PG&E requests that the DEIR conclusion be changed from “*less than significant*” to “*beneficial*” and urges the State Water Board to adopt the Settlement Agreement flows.

Chapter 6, section 6.6.2, page 6.6-23, 1st full paragraph

“The lower temperatures during the summer would result in somewhat slower growth rates for rainbow trout in this reach, but the change in growth rates is likely to be minor because the existing temperature regime is already relatively cold in most years. Since no evidence was provided in the FERC EIS record that either juvenile trout habitat area or growth rates are considered to be

currently limiting trout populations in the Seneca reach, this effect is considered to be less than significant."

PG&E Response:

PG&E would like the State Water Board to note the following:

- 1) Although FERC EIS does not make a statement relative to a limiting factor, the existing condition may in fact limit growth of juvenile trout in at least some sections of this reach during certain months or water year types. Consequently, the record does not support the DEIR conclusion that the release flow of up to 250 cfs during mid-June through mid-September will not negatively affect the growth rates of trout, other fish species, and other aquatic organisms in the Seneca Reach. Achieving downstream (Belden reach and downstream of the UNFFR Project) temperature reductions will require the release of water that is too cold and habitat-degrading for the Seneca Reach.
- 2) Additionally, a goal of the Settlement Agreement flow schedule was to mimic the natural hydrograph, within the constraints of this reach. Fish and other aquatic organisms (i.e., benthic macroinvertebrates) have annual life cycles that respond to predictable natural seasonal changes in flow and water temperatures to trigger basic behaviors, such as moving upstream to spawn and emigrating downstream as flows decline over the summer and fall periods. The State Water Board proposed flow releases of 250 cfs during these months deviates from this goal and may provide false triggers to resident aquatic resources in the Seneca Reach. The State Water Board proposal may result in a less beneficial condition than the Settlement Agreement flow schedule. Therefore, PG&E urges the State Water Board to adopt the Settlement Agreement flows.

State Water Board: Chapter 6, section 6.6.1, page 6.6-23, last full paragraph

*"Growth, disease resistance, and ecological interactions contributing to coldwater fish survival would be expected to significantly improve compared to current conditions. As a result, the effects of the increased Canyon dam releases and the thermal curtains on the North Fork Feather River would be **less than significant** and would, in fact, be beneficial overall for trout and other coldwater-dependent aquatic species."*

PG&E Response:

With the relatively minimal reduction in water temperatures of 1-2° C for most of the reaches discussed, and without quantifiable data, it is inappropriate to characterize the reduction as "significantly" improved. The DEIR acknowledges that water temperatures in the Seneca reach would be reduced to less than optimal growth for trout and other coldwater dependent aquatic species. Consequently, it brings into question the conclusion that the effects would be "less than significant and would, in fact, be beneficial overall for trout."

PG&E believes that releasing up to 250 cfs of cold epilimnion water into the Seneca Reach in mid-June through mid-September will most likely result in slower growth rates for trout, other fish species, and potentially other aquatic organisms (e.g., benthic macroinvertebrates) and should therefore be considered a negative effect on this reach for this period.

State Water Board: Chapter 6, section 6.6.1, page 6.6-24, 1st full paragraph

“The reduced water temperatures in the North Fork Feather River below Belden powerhouse would slightly reduce the length of river with temperatures preferred by hardhead, which is found primarily downstream of Rock Creek dam, based on the thermal preferences of hardhead (>20°C for growth, 24°C to 28°C for optimal physiological performance) reported by Moyle (2002).”

PG&E Response:

In addition to being present downstream of the Rock Creek dam, hardhead are also present in the Belden Reach. As part of fish rescue efforts, 104 hardhead were removed during a fish rescue above the Gansner Bar Fish Barrier, located approximately 0.2 miles above the confluence of the East Branch of the NFFR and the NFFR, before its removal (12 hardhead on September 26, 2014 and 92 hardhead on October 6, 2014). This USFS sensitive species and California Department of Fish and Wildlife Species of Special Concern is more abundant than currently discussed in the DEIR and needs to be incorporated into the State Water Board's assessment of the impacts to warm water habitats and the species that utilize them.

State Water Board: Chapter 6, section 6.6.1, page 6.6-24, 1st full paragraph

“Additionally, each of the downstream hydroelectric projects provides deep, slow-current habitat and thermally diverse pools preferred by hardhead at their diversion dams. Hardhead would be expected to continue to move seasonally, as they do under current conditions, to preferred physical and thermal habitats within the various hydropower project reaches during the summer months (Moyle et al. 1983, Moyle 2002). Effects on hardhead in the North Fork Feather River would, therefore, be less than significant.”

PG&E Response:

No evidence is presented of thermally diverse pools. Generally, in riverine environments, pools are well mixed and isothermal (except if they contain cold water springs). Thermally diverse habitats usually are associated with side channels, not pools. PG&E urges the State Water Board to consider more rigorously analyzing the impacts to native species (i.e., hardhead, Sacramento sucker, and Sacramento pikeminnow).

Chapter 6, section 6.6.1, page 6.6-24, 2nd full paragraph

“Without thermal curtains, the effect of increased Canyon Dam releases of up to 250 cfs on North Fork Feather River coldwater habitat would be an improvement to the Proposed UNFFR Project and would be less than significant.”

PG&E Response:

As previously discussed, the effect of coldwater below that required for optimal growth of rainbow trout during June-September cannot be considered as less than significant. PG&E recommends that this section reflect both potential negative impacts and benefits by the release of 250 cfs into this reach during the summer months.

State Water Board: Chapter 6, section 6.6.1, page 6.6-26, 2nd full paragraph

“It is probable that wakasagi have established self-sustaining populations in Butt Valley reservoir and any reduction in wakasagi entrainment at the Prattville intake as a result of the thermal curtain is not expected to have a significant effect on the presence of a suitable forage fish in the reservoir. This impact would therefore be less than significant.”

PG&E Response:

While wakasagi have become established in Butt Valley reservoir, the primary impact of the reduction in entrained number of individuals at Prattville would be on the tailrace fishery below the Butt Valley Powerhouse. It is well known among the local fisherman that fishing success decreases substantially when the powerhouse is offline and flows with entrained wakasagi are not available. With the installation of the curtains, it has been predicted that the number of entrained wakasagi will decrease by 30 percent in June and September, and between 95 to 99 percent in normal years in July and August (Gast 2004)¹¹. This should be considered a significant effect to the sport fishery in Butt Valley reservoir.

State Water Board: Chapter 6, section 6.7.1, page 6.7-6, 3rd full paragraph

“The biological study area supports a wide range of special-status species and other sensitive biological resources, including deer herds regulated by the California Department of Fish and Wildlife . . .”

PG&E Response:

Deer are not a special-status species or sensitive biological resources, thus their presence should not affect any monitoring or mitigation requirements. PG&E suggests changing title “Sensitive Biological Resources” to “Sensitive and Managed Biological Resources”.

¹¹ Gast, Tom. 2004. Prattville Intake Modification and Potential Impacts to Lake Almanor Fishery Study, Interim Report. Thomas R. Payne and Associates, Arcata, California. June 20, 2004

State Water Board: Chapter 6, section 6.7.2, page 6.7-27, first bulleted item.

"Limit any import or export of fill to materials that are known to be weed free."

PG&E Response:

Since there are no current standards for "certifying" material to be weed free, it is not possible to ensure compliance with this requirement, and PG&E requests that this sentence be deleted.

State Water Board: Chapter 6, section 6.8.1, page 6.8-1, 3rd paragraph

"The UNFFR Project encompasses approximately 30,920 acres, including three reservoirs, a 30-mile reach of the North Fork Feather River, and four miles of Butt Creek, in Plumas County, California."

PG&E Response:

PG&E suggests that the State Water Board correct the river length to "approximately a 20-mile reach".

State Water Board: Chapter 6, section 6.8.1, page 6.8-2, 3rd paragraph

"Most of the reservoir is accessible for day use recreation, such as boating, fishing, and wildlife viewing; however, boats are excluded from the southern end of the reservoir where the Caribou intakes are located because of numerous tree stumps in the water."

PG&E Response:

Boats are only excluded from southern-most end of the reservoir and only during the winter period. The existing log boom is configured during the rest of the year so that boats can access the area near the Caribou 1 intake and dam face. There are few, if any, snags in the area between the log boom and the intakes. Most of the snags in the reservoir are between the boat launch and the log boom. PG&E requests that this statement be updated to reflect this information.

State Water Board: Chapter 6, section 6.8.1, page 6.8-2, 5th paragraph

"The Seneca reach of the North Fork Feather River provides diverse recreational activities, including whitewater rafting, fishing, hiking, wildlife viewing, picnicking, swimming, canoeing, backpacking, equestrian use, sightseeing, and camping."

PG&E Response:

PG&E requests replacing "whitewater rafting" with "boating/kayaking". The current 35 cfs release does not provide any "whitewater rafting" in this reach.

State Water Board: Chapter 6, section 6.8.1, page 6.8-4, 6th paragraph

“Recreational uses in the vicinity of the Caribou intakes activity area are limited to boating on the northern portion of Butt Valley reservoir, day use activities on the eastern shore, and wildlife and scenery viewing and photography.”

PG&E Response:

The language above should be corrected to reflect that boating access in Butt Valley Reservoir is limited only during the winter months and only in the southern-most end near the Caribou 1 and Caribou 2 intakes.

Text in the following locations should also be changed to reflect the current boating access in Butt Valley reservoir:

- Chapter 6, section 6.8.1, page 6.8-7, 2nd full paragraph, in the following sentence
“Construction activities would not affect boat use in Butt Valley reservoir because boats are excluded from the southern end of the reservoir where the intakes are located and where construction activities would take place.”
- Chapter 6, section 6.8.1, page 6.8-8, last paragraph, *“Installation of a thermal curtain at the Caribou intakes would not affect boat use in Butt Valley reservoir because boats are excluded from the southern end of the reservoir where the Caribou intakes are located.”*
- Chapter 6, section 6.9.2, page 6.9-9, first partial paragraph, *“Current boating restrictions may negate a requirement for lights.”*

State Water Board: Chapter 6, section 6.8.2, page 6.8-8, 1st full paragraph

*“Long-term recreational impacts have the potential to be **significant without mitigation.**”*

PG&E Response:

PG&E recommends that the conclusion be changed to read as follows:

“Due to the closure of the popular Marvin Alexander day use area, long-term recreational impacts have the potential to be significant without mitigation.”

State Water Board: Chapter 6, section 6.8.2, pages 6.8-9 to 6.8-10

“Flows released into the Seneca and Belden reaches would be modified under the Proposed UNFFR Project and both alternatives. The river would experience an initial increase in flows as the minimum flow through Canyon and Belden dams is increased, but the flow would become fairly steady, with increases or decreases as outlined in Tables 3-1, 3-2, 4-1, and 4-2. Flows would follow a pattern similar to current conditions. Because of the timing of the proposed increases in flows, specifically the increased flows through Canyon dam under Alternative 1 in

July and August, some fishing spots in the Seneca reach and, to a lesser extent, the Belden reach could be adversely affected under Alternative 1.

PG&E Response:

First, flows under the Proposed UNFFR Project and both alternatives will not follow the current conditions. Current conditions are a steady release of 35 cfs year round in the Seneca Reach, and two different flows in the Belden reach of 60 cfs, from Labor Day to the fourth Saturday in April and then a flow of 140 cfs until Labor Day. The Proposed UNFFR Project and alternatives call for a flow schedule that, for most cases, tries to mimic the natural hydrograph, with the exception of the 250 cfs releases between mid-June through mid-September for Alternative 1 and the State Water Board Staff proposal with flows changing multiple times each year, from 4-10 times, depending upon reach and water year type. Thus, PG&E believes that the statement, "*Flows would follow a pattern similar to current conditions.*" is incorrect.

Second, the text ". . .*specifically the increased flows through Canyon dam under Alternative 1 in July and August. . .*" is inconsistent with mid-June through mid-September time period presented in other sections of the DEIR.

State Water Board: Chapter 6, section 6.8.2, page 6.8-10

*"Survey participants indicated a preference for an average flow ranging from 100 cubic feet per second (cfs) to 250 cfs along the Seneca Reach and 150 cfs to 300 cfs along the Belden Reach. Angler preferences varied depending on the type of angling, with fly anglers preferring lower flows than bait/spin anglers. With the flow modifications, some fishing spots may experience greater flows that would reduce the quality of fishing for some fisherman. However, other locations along the river would continue to provide excellent fishing opportunities. Therefore, the flow modifications under the Proposed UNFFR Project and either alternative would not substantially affect fishing opportunities. The flow modifications would result in a small percentage of increased flows that could affect fishing conditions, but the increased flows would occur for short periods, and fishing opportunities would be similar to current conditions for most of the fishing season. Impacts on fishing opportunities would be **less than significant.**"*

PG&E Response:

The record does not support the conclusion that these impacts would be "**less than significant.**" The fishability study¹² regarding flows in the Seneca Reach states that, "Fly anglers prefer lower flows, estimating that flows between 70 and 230 cfs would be acceptable, but that optimum levels would be in the range of 90 to 175 cfs." Bait/spin anglers suggested that, "spin angling would be acceptable as low as 100 cfs and at as high

¹² PG&E License Application (2002), Appendix E, page E5-1077-1078

as 250 cfs; the best flows are between 100 and 175 cfs." The DEIR understates the potential impact of a flow release of 250 cfs for three months during the peak recreation season and overstates the potential for other spots in the river to provide "excellent fishing opportunities." Also, a release of 250 cfs is beyond the upper end of the "acceptable" range of flows, almost 75 cfs above the upper end of the optimum levels reported in the fishability study. As our previous comments note, the 250 cfs or higher release will be too cold thereby reducing fish growth rates and may produce fewer fish which will have negative impacts on fishing opportunities.

State Water Board: Chapter 6, section 6.9.2, after page 6.9-10, Figure 6.9-1
Figure 6.9-1, Photo View Point Locations

PG&E Response:

Canyon Dam intake area is mislabeled as Belden Forebay.

State Water Board: Chapter 6, section 6.11.1, page 6.11-3, 2nd full paragraph

"Butt Valley reservoir, Belden forebay, and the Seneca and Belden reaches are subject to dramatic and often sudden (hourly and daily) fluctuations in surface elevations as discharge rates from powerhouses change to accommodate power generation demand. PG&E uses a combination of visual and audio warning systems around its facilities to warn the public of sudden changes in water levels."

PG&E Response:

PG&E requests that State Water Board correct these two statements based on the following details:

- Butt Valley Reservoir is not subject to rapid changes on an hourly basis as it may change in elevation at most of up to 1-2 ft per day.
- Belden Reservoir can change by up to 10 ft per day, but due to its large daily fluctuations, boating is currently not allowed per Plumas County Ordinance. Anglers that hike down to the reservoir can only access the side nearest to the road. Water elevation does not fluctuate so quickly as to create a life threatening hazard.
- Flows in both the Seneca and Belden Reaches do not change as a result of power demand; all generation flow is contained either within a reservoir or in a penstock. Changes in both Seneca and Belden Reaches are carefully managed to meet instream flow requirements. Occasionally, due to either extreme weather conditions resulting in emergency conditions or to accommodate operational needs, high flows are released into either the Seneca Reach from Canyon Dam or into the upper Belden Reach from Belden dam. In such instances, PG&E personnel drive along the river to warn recreationalist of these rare high flow events.

State Water Board: Chapter 6, section 6.12.1, page 6.12-4, Table 6.12-1

"Early 1950s Lake Almanor storage capacity increased to 47 square miles"

PG&E Response:

PG&E requests the State Water Board replace "storage capacity" with "surface area."

State Water Board: Chapter 6, section 6.16, page 6.16-1, 4th paragraph

"Since the total water required for minimum instream flow releases will not change under either Alternative 1 or Alternative 2, it can be assumed that the total power loss will be very similar."

PG&E Response:

This statement is incorrect. Alternative 1 has a 250 cfs release resulting in reduced generation when compared to Alternative 2. PG&E request that this statement be corrected.

State Water Board: Chapter 6, section 6.16, page 6.16-2, Table 6-16-1

See Table 6-16-1.

PG&E Response:

PG&E notes the following:

- 1) In examining this table, Alternative 1, which includes 250 cfs, only includes July and August, which is inconsistent with June 15-September 15 high flow dates that the State Water Board has proposed.
- 2) In the first entry under Alternative 1, it appears that 250 cfs is double accounted for in the 85.87 GWh/YR value and the 37.89 GWh/YR value.

State Water Board: Chapter 6, section 6.16.2, page 6.16-8, 4th paragraph

"The GHG effects of using other sources would vary, depending on future conditions and the specific resources used (Table 6.16-2)."

PG&E Response:

It appears that the table reference is an error since the above sentence has no connection to the referenced table.

State Water Board: Chapter 6, section 6.16.2, page 6.16-9, Table 6.16-4

Table 6.16-4 Comparison of Average Flows in the 2004 Settlement Agreement with the Average Flows under Alternative 1 and Alternative 2.

PG&E Response:

PG&E requests that this table be modified to include the 250 cfs release under Alternative 1 and the Staff Recommendation.