



United States Department of the Interior



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FEDERAL ENERGY
REGULATORY COMMISSION

Subject: Upper North Fork Feather River Project, FERC #2105-089, Plumas
County, California; Response to Federal Energy Regulatory
Commission's Section 10(j) Preliminary Determination of Inconsistency

Dear Ms. Salas:

This correspondence replies to the Federal Energy Regulatory Commission's (Commission) September 15, 2004, Section 10(j) Preliminary Determination of Inconsistency letter to the Department of the Interior (Department) regarding recommendations to protect, mitigate, and enhance fish and wildlife resources and associated habitats affected by the Upper North Fork Feather River Project, FERC #2105-089, (Project). The Department has requested that the Fish and Wildlife Service (Service) respond to the Section 10(j) Preliminary Determination of Inconsistency directly to the Commission. The Commission has established a November 1, 2004, due date for filing of comments on the Preliminary Determination of Inconsistency.

The Project is currently operated by the Pacific Gas and Electric Company (Licensee), which is applying for a new license. The Department's preliminary recommendations for the new license, pursuant to sections 18, 10(j), and 10(a) of the Federal Power Act (FPA), were submitted to the Commission in a December 1, 2003 response letter to the Commission's notice that the application was ready for environmental analysis. The Licensee filed comments in reply to the Department's recommendations in a letter to the Commission dated January 15, 2004 (reply). The Commission considered the Department's Section 10(j) recommendations in their September 2004 Draft Environmental Impact Statement (DEIS). The DEIS includes a final Settlement Agreement (SA), previously filed by the Licensee on April 30, 2004.

In the DEIS, the Commission's Recommended Alternative is defined as a "staff alternative" consisting of the SA with additional measures developed by Commission staff. The Commission states that its decisions are based on independent analysis and evaluation of comments, including those of the Department.



The September 15, 2004 Section 10(j) Preliminary Determination of Inconsistency letter informed the Department that the Commission did not recommend adoption of 11 of its recommendations, that the explanation of its decisions were included in the DEIS, and requested the Department to respond to the following questions:

- 1.) "Are our alternative recommendations on these issues, as described in the draft EIS, acceptable to you?"
- 2.) "If not, are there any other measures that you would agree to that would accomplish the objective of your original recommendations?"
- 3.) "Is there any additional evidence to support your recommendations or to demonstrate why they are consistent with the FPA?"

The Service's comments are arranged as follows: (1) General Comments; (2) Comments on Recommendations not Adopted; (3) Comments on Adopted Recommendations; and (4) Additional 10(j) Recommendation.

GENERAL COMMENTS

Section 10(j) requires that licenses for hydroelectric projects must include conditions to protect, mitigate damages to, and enhance fish and wildlife resources, including related spawning grounds and habitat. These conditions are to be based upon recommendations received from Federal and state resource agencies. The Commission must include these recommendations in the license unless it finds that they are inconsistent with Part 1 of the FPA or other applicable law, and that alternative conditions will adequately address fish and wildlife issues. As part of the Inter-Agency Task Force Report (ITF) on Agency Recommendations, Conditions, and Prescriptions under Part 1 of the FPA, the Commission committed to explain the basis for a preliminary determination of inconsistency by explaining specific inconsistencies with respect to the substantial evidence standard (section 313(b) of the FPA) and the comprehensive development/public interest standard of sections 10(a)(1) and 4(e) of the FPA. For several important recommendations which were not adopted, the Commission has restated the measures provided in the SA, followed by a statement that each of the 10(j) recommendations may be inconsistent with the substantial evidence standard of the comprehensive planning standard and the equal consideration standard.

The Service is pleased to find that the Commission's staff alternative does adopt in part or whole, a number of the our recommendations, including: additional monitoring of fish, macroinvertebrates, and amphibians (including special study of salmonids and wakasagi if the Prattville intake is modified), a woody debris management plan, an adaptive management plan which allows for volume-neutral flow adjustment, and other protective measures. However, some recommendations were not adopted by the Commission or not fully adopted to the Service's

satisfaction (see Comments on Recommendations Not Adopted and Comments on Adopted Recommendations sections of this letter). Also, the Commission has adopted a measure from the SA involving recreational flows for whitewater boating, which the Licensee did not originally propose in its October 2002 Final Application (FA). In response to the decision of the Commission to include these recreational flows, the Service has provided an additional 10(j) recommendation (#22) under section 10(j) of the FPA, to ensure that the enhancement and protection of resources provided by other license measures is not compromised by recreational flows.

COMMENTS ON RECOMMENDATIONS NOT ADOPTED

Minimum Flows (Interior 10(j) recommendation #1 - Implement variable releases ranging from 60-170 cubic feet per second (cfs) into the Seneca Reach from Canyon dam, and variable releases ranging from 100-250 cubic feet per second (cfs) into the Belden Reach from Belden dam):

Commission Staff's Finding: The Commission has adopted the SA measure, which provides for variable releases ranging from 60-150 cfs into the Seneca Reach from Canyon dam, and variable releases ranging from 75-235 cfs into the Belden Reach from Belden dam.

Departmental Response:

1.) "Are our alternative recommendations on these issues, as described in the draft EIS, acceptable to you?"

The Service does not agree that the SA minimum flow measure would adequately protect, mitigate, and enhance fish and wildlife resources in the project area. In order to adequately protect and enhance aquatic resources, the Service believes an increased share of water allocation, to the level recommended in the Department's 10(j) recommendation #1, is warranted by the relationship of flow to physical habitat availability (weighted usable area, or WUA, as determined by the Instream Flow Incremental Methodology (IFIM), FA Appendix E3.1-10), and to invertebrate production and reproductive cues for a variety of fish and wildlife. The Department's 10(j) flow recommendation #1 more closely mimics the historical seasonal flow patterns of the natural unimpaired hydrograph, including variation by water year type of the lowest flows in late summer, the peak flows in spring, and the average annual flow.

The Service contends that modest supplements to the SA flows, as recommended in our original 10(j) recommendation #1, would provide a substantial incremental increase in benefit to the trout fishery in particular and to other species which rely on seasonality and variation in flow for maintaining populations.

2.) "If not, are there any other measures that you would agree to that would accomplish the objective of your original recommendations?"

The Service believes the minimum flow schedules submitted in the Department's December 1, 2003 filing are appropriate and encourages the Commission to consider the following measures alone or in combination: (a) an increment of water allocation above that specified in the SA, intermediate between the SA and 10(j) schedules, (b) an increment of water allocation above that specified in the SA, to meet summer-fall recommendation #1 flows for the Seneca Reach in normal and wet years and the Belden Reach in critical dry years, and (c) recognition of the potential to exchange pulse and instream flows, where deemed appropriate based on adaptive management and consideration by resource agencies.

3.) "Is there any additional evidence to support your recommendations or to demonstrate why they are consistent with the FPA?"

As shown in the IFIM study, physical habitat for adult trout increases rapidly with increasing flow up to about 75% (~240 cfs) and 86% (~170 cfs) of maximum WUA in the Belden and Seneca reaches, respectively (DEIS p.101, lines 9-10). Because the seasonal flow minima for both the Department's flow schedule and Commission's Recommended Alternative are within this range of rapid change, the increment of increased flow in the Department flow schedule would provide a significant habitat benefit for adult rainbow trout and Sacramento suckers.

Using the long term occurrence of water year types (70 year record), we calculate the SA minimum flow schedule would provide an overall mean annual flow of 149 cfs and 90 cfs for the Belden and Seneca reaches, respectively. The Department's minimum flow schedules would provide an overall mean annual flow of 154 cfs and 100 cfs for these same reaches, a difference of 5-10 cfs. Both schedules are a significant improvement over the existing license, which provides 35 cfs in the Seneca Reach, and 140 cfs (May-August) or 60 cfs (rest of year) in the Belden Reach. Nevertheless, the SA flows fall significantly farther below habitat optima than do the Department flows, particularly for adult trout and suckers during the summer-early fall seasonal flow minima.

To better illustrate this conclusion, we compared the change, relative to the existing license, in adult trout physical habitat during the late summer-early fall minimum flow period for the SA and Department's proposed flow schedules. Both the SA and Department flow schedules are an improvement over baseline conditions, but the Department flows are significantly more protective of aquatic resources. In the Seneca Reach, where existing license flows of 35 cfs correspond to 39% of maximum WUA for adult trout, the SA seasonal minimum flow of 60 cfs (beginning in August) across all year types would yield about 54% of maximum WUA - an absolute difference in WUA of 15%, or a relative difference of 38% over the existing condition (i.e., 54/39). The additional 25 cfs in the Department schedule in wet years would result in 65% of maximum WUA

- increasing the benefit in WUA, when compared to the existing condition, by 26% in absolute terms, or a relative difference of 67% over existing conditions (i.e., 65/39). Therefore, the minimum physical habitat for adult trout, expressed as the % of optimum WUA modeled by IFIM, would be significantly improved under the Department flow schedule.

In the Belden Reach, the existing license condition is a "reverse" hydrograph, with higher flows in summer and lower in winter, primarily in support of the current put-and-take trout fishery. Both SA and Department propose flow schedules which would replace the existing schedule with a schedule which mimics the natural unimpaired hydrograph pattern of higher spring and lower summer flows. The flows in both the SA and Department schedules are lower than the existing license summer flow of 140 cfs (58% of adult trout maximum WUA). In critical dry summers under the SA schedule, minimum flows of 75 cfs yield only 45% of maximum WUA. The Department's schedule specifies a minimum flow of at least 100 cfs (52% of maximum WUA), an absolute increase of 7% and a relative increase of 15% (52/45) over that provided in the SA schedule.

In addition, the Department schedule provides for a modest increase in flow maxima in the spring of wet years, with a significantly increased range of flow (e.g., March critical dry-wet range for the Belden Reach is 170-180 cfs for the SA, and 150-225 cfs for the Department schedules, respectively). Also, the maximum spring flow of 250 cfs of the Department schedule more closely approaches the bankful stage of some portions of the Belden Reach than does the 235 cfs of the SA schedule (e.g., Figure 5B-1c, FA Appendix E3.1-12), and is closer to the 300 cfs test flows in which partial inundation of flood benches was noted in the Geomorphic Study. Inundation of flood benches provides for riparian plant survival and seed germination, moist soil habitats and reproductive cueing for amphibians, entrainment and deposition of wood, sediment, and leaf litter used by stream invertebrates, and other ecological functions. In summary, when compared to the SA schedule, the Department's proposed flow schedule not only provides justifiable increases in habitat quantity, but a better match to the seasonal and water year type variation of the natural unimpaired hydrograph.

In addition to adult trout physical habitat, the Service believes the increased flows could provide a water quality benefit to trout in the form of better-oxygenated riffle and pocket water habitat. In its reply, the Licensee concludes that the SA flows are protective "...during the most stressful time of year," referring to winter base flows. However, the Service believes that significant stress may also occur in the preceding late summer and early fall, when flows and associated physical habitat are lowest and/or temperatures could approach stressful limits. These mesohabitats are likely to be of critical importance to trout survival under elevated temperatures that the Licensee's model results indicate could occur in critical dry years in the Belden Reach. The increased 10-25 cfs in summer as provided by the Department's schedule may contribute to the long term sustainability of the naturally-reproducing element of the trout fishery, during these periods of thermal stress.

Pulse Flows (Department 10(j) recommendation #2 - One release per month in January, February, and March, of 1,200 (normal years) or 1,500 cfs (wet years), and one release in March of 700 cfs (dry years, only if no other pulse was released in January or February)

Commission Staff's Finding: Relative to pulse flows, Commission staff have adopted the SA alternative, which is substantially the same as the Department alternative but has no pulse flows in dry years.

Departmental Response:

1.) "Are our alternative recommendations on these issues, as described in the draft EIS, acceptable to you?"

The Service does not agree with the Commission's finding because the frequency of pulse flows is inadequate and is likely to result, over the license term, in several periods of consecutive years without any pulse flow.

2.) "If not, are there any other measures that you would agree to that would accomplish the objective of your original recommendations?"

Because many drier years are also warmer and may result in early trout spawning, the Commission's evaluation of cost should assume, as with the SA pulse flows, that our recommended additional dry year pulse flows be subject to the temperature criterion described in the SA (that no pulse flow would be done if water temperature exceeded 10°C for two consecutive days in March). This exception is intended to protect recently-constructed rainbow trout redds from scour by the pulse flows. It is not clear if this criterion was considered in the Commission's DEIS analysis of the Department's recommendation, however, the Service would accept this as a modification of our original 10(j) recommendation, to reduce the cost of our recommended measure.

3.) "Is there any additional evidence to support your recommendations or to demonstrate why they are consistent with the FPA?"

The DEIS narrowly evaluates the benefits of pulse flows based solely on their effect on spawning gravel in the streambed, referring to the "primary objective of flushing fines..." (DEIS p. 114, line 34). Other benefits such as the inundation of flood plain benches, entrainment of debris and gravel, channel maintenance functions (limitation of vegetation encroachment, maintenance of edgewater habitat), and associated environmental cues and benefits to other species such as amphibians and riparian plants, are not acknowledged in the DEIS analysis.

In adopting the SA pulse flow provision, the Recommended Alternative would not provide any pulse flows in dry or critically dry years, which together constitute 35% of the 70 years of record in this basin. Such year-types may occur consecutively, which would mean over the long-term, periods of 2-5 years without any pulse flow under the Recommended Alternative. This contrasts to the historical (unimpaired flow) occurrence of pulse flows every year, including critical dry years (FA Appendix E2-D, IHA analysis). Under the SA, the following ancillary benefits of pulse flows would be interrupted for consecutive years: inundation of overbanking benches and associated wet meadow and moist soil production; seed distribution, germination and hence regeneration of riparian plants; maintenance of edgewater habitat (and limitation of vegetation encroachment); entrainment of litter and woody debris; distribution of sediment and channel bed material (including those gravels used by spawning trout). These benefits act together to maintain habitat and biotic diversity, as well as reproductive cues for numerous other species of fish, plants, and wildlife. We believe the SA pulse flows are insufficient to maintain a minimum standard of ecosystem functioning. In addition, when comparing the allocation of water among beneficial uses, we find that adoption of the SA would result in greater consistency of large, out of season flows, for summer recreation (four boating "days," each consisting of a 3-hour period in critical dry years, and four to eight "days" in dry years), than it does for pulse flows needed to support resource objectives (no spring pulse flows in dry or critical dry years).

In addition to pulse flows in wet and normal years, Department recommendation #2 proposes an occasional pulse flow in dry years *only if no other flow pulse were provided in January and February of that year*. The DEIS evaluation of that recommendation (DEIS p.114, lines 36-39) is based solely on benefits associated with spawning gravel. The numerous geomorphic, and biological benefits identified above are measurably increased at 700 cfs. Contrary to the DEIS statement (DEIS p. 114, lines 36-39) that gravels only up to 15 mm in diameter would move, the FA geomorphic study (FA Attachment E3.1-12, Table 5-5, p. 5-63) and incipient motion analysis (FA Attachment E2-A, Exhibits 1-2) predicts that larger particles will move, and did move during Licensee's 700 cfs test releases.

Lower Butt Creek Pulse Flow Plan (Department 10(j) recommendation #3 - Develop a pulse flow plan for lower Butt Creek, which includes a test pulse flow and associated monitoring)

Commission Staff's Finding: Commission Staff have adopted the SA provision, which provides for monitoring, with pulse flow implementation based on the Licensee's conclusion, in consultation with resource agencies, that it is warranted.

Departmental Response:

1.) "Are our alternative recommendations on these issues, as described in the draft EIS, acceptable to you?"

We believe a test flow of appropriate magnitude and duration, with pre- and post-flow assessments as in Recommendation #3, is appropriate. Butt Creek exhibits a higher than optimal width/depth ratio, proportion of fines, large wood, and excess riparian encroachment, as well as a reduced competence in transportation of fines (FA Attachment E3.1-12, Geomorphic Study). The reduced competency may, in part, be responsible for the relatively shallow observed depth of most pools. There are no current or proposed instream or pulse flows in this bypass reach.

2.) "If not, are there any other measures that you would agree to that would accomplish the objective of your original recommendations?"

As an alternative recommendation, the Commission should include several changes to the 3-5 year monitoring plan as proposed in the SA. First, the criterion that determines the need for pulse flows should be based on the expectation that such a flow would result in a benefit (rather than based on a showing of degradation from existing conditions). Second, under the circumstance in which there is lack of consent between a resource agency and the Licensee as to this showing for a need for pulse flows in Butt Creek, the Commission shall be forwarded both the Licensee's conclusion and any dissenting opinions, for final decision (rather than based on the Licensee's conclusion alone after consultation with resource agencies).

3.) "Is there any additional evidence to support your recommendations or to demonstrate why they are consistent with the FPA?"

The DEIS (p. 116-117) incorrectly concludes that pulse flows have no potential environmental benefit. As previously noted in our December 1, 2003 filing, Butt Creek does exhibit higher than optimal width/depth ratio, fines, large wood, and riparian encroachment, and, contrary to the DEIS assertion, reduced competence in transporting of fines. The reduced competence may, in part, be responsible for the relatively shallow observed depth of most pools. The Geomorphic Study concluded that, given the Rosgen type A2a stream classification, the fine sediment was in a larger than anticipated proportion in the first mile downstream of Butt Valley Reservoir. Fining of sediments has also occurred in the lower, Rosgen type B-classified section. A test flow, of appropriate magnitude and duration, with pre- and post-flow assessments as recommended in our filing, is justified.

Water Temperature Management Plan (Department 10(j) recommendation #5 - Develop temperature criteria for Project reaches, and examine feasibility of structural modifications to meet temperature objectives and avoid unintended sublethal impacts)

Commission staff finding: Commission staff contend that components of this recommendation are addressed in an existing, Commission-approved license (Rock Creek-Cresta, FERC #1962).

Departmental Response:

1.) "Are our alternative recommendations on these issues, as described in the draft EIS, acceptable to you?"

The Service does not believe that implementation of the temperature monitoring plan for the Rock-Creek Cresta project, would result in adequate management and assessment of thermal conditions in other reservoirs and bypass reaches of the Feather River. As stated in our previous December 1, 2003 filing, additional consideration of thermal effects and temperature criteria for the Belden and Seneca reaches is necessary to evaluate the temperature impact (or benefit) of any measure employed to meet requirements in the Rock Creek-Cresta SA.

The Licensee indicated in its reply that it intends to complete a water temperature assessment whose "information shall include but not be limited to those analyses requested by FWS" (i.e., in reply to our December 1, 2003 filing). Since the Licensee has indicated its willingness to evaluate the Service's concerns, and there is no explicit requirement in the Rock Creek-Cresta SA to conduct such analyses, we recommend the Commission include a Water Temperature Management Plan as a measure in the Recommended Alternative.

2.) "If not, are there any other measures that you would agree to that would accomplish the objective of your original recommendations?"

As an alternative recommendation, the Commission should include a measure which requires each feasibility study of the measures required by the Rock Creek-Cresta SA to include an evaluation of the potential effect on cold water fisheries in the Seneca and Belden reaches, through modeling prior to implementation and through monitoring during implementation. If the Commission decides not to include a specific measure focused on temperature management, we request that the Commission direct the Licensee to consider temperature effects, and the need for management criteria, within the context of our Adaptive Management recommendation #13, which the Commission has already adopted.

3.) "Is there any additional evidence to support your recommendations or to demonstrate why they are consistent with the FPA?"

The Rock Creek-Cresta SA requires monitoring and may result in the implementation of temperature control measure(s) based on a finding that such measure(s) would be effective in maintaining a mean daily temperature of 20°C in those reaches only. We have already described, in our December 1, 2003 filing, that there are potential beneficial (or adverse) effects of particular temperature control measures in the upstream Belden and Seneca reaches, as well as in Lake Almanor. These temperature effects occur in the range below 20°C, and could result from actions such as release of warmer surface water, depletion of cold water reserves, and/or rapid changes in

temperature. The intent of our original recommendation was simply to evaluate these effects within the project reaches, and establish appropriate criteria for maximum temperatures, as well as for temperature change. The thermal effects of measures resulting from the Rock Creek-Cresta SA, on the Belden and Seneca reaches, or Lake Almanor, may not be fully appreciated because the Rock Creek-Cresta SA is based on a single specified temperature, and because all of the Seneca (and most of the time, Belden) reaches would meet the 20°C standard. Although the data required by the Rock Creek-Cresta SA may be sufficient for such an assessment, establishment of temperature criteria (or targets) would assist in adaptive management of flows (or release levels).

Geomorphological Monitoring Plan (Department 10(j) recommendation #6 - Conduct standard monitoring such as longitudinal profiling, mesohabitat measurements, and associated benchmarking)

Commission Staff finding: Not adopted. Commission staff note that gravel monitoring, as specified in the SA, is more appropriate.

Departmental Response:

1.) "Are our alternative recommendations on these issues, as described in the draft EIS, acceptable to you?"

The Service does not agree with the Commission's decision not to adopt this recommendation. The Commission's analysis focuses primarily on spawning gravels for trout, and neglects many other aspects of geomorphology which may affect aquatic habitat diversity and quality. The DEIS (p. 115) cites observation of mature vegetation at several mid-channel bars being unaffected by the 1997 flood spills, as the sole evidence that large scale effects would not occur, and as justification for not performing any further level of geomorphic monitoring over the license term. The Service notes that relevant geomorphic changes do not necessarily require these large flows, citing as evidence geomorphic changes as a result of reduction in flows due to project operation.

2.) "If not, are there any other measures that you would agree to that would accomplish the objective of your original recommendations?"

As an alternative measure, we suggest in addition to spawning gravel monitoring as specified in the SA, that longitudinal profiling and mesohabitat mapping be done once, mid-term of the license between license issuance, and studies for the next license (i.e., after 12 years).

3.) "Is there any additional evidence to support your recommendations or to demonstrate why they are consistent with the FPA?"

We disagree that the only relevant geomorphic effects involve very large spill flows. As evidence, we reference the Licensee's Geomorphic Study (FA Attachment E3.1-12), which indicates that project operation has had significant, cumulative effects such as coarsening of substrate downstream of dams, localized incision, and demobilization of bar and bank sediments through vegetation of formerly active surfaces. There is no basis to assume that these effects have ceased or are specifically related to very large spill flows. Moreover, the new license may have different effects (both beneficial or adverse) on geomorphology through the modified instream base and pulse flows.

A longitudinal profile, mesohabitat dimensions and distribution, and other details as discussed in our December 1, 2003 filing, would be important in monitoring the geomorphological responses to different base and pulse flow schedules in the new license compared to the existing license. These flows, over the license term, result in important changes in geomorphic features that would assist adaptive management decisions.

Coarse Sediment Management Plan (Department 10(j) recommendation #8 - monitor gravels and conduct enhancement and contingency actions including pulse flow adjustment, and other measures such as addition of gravel and/or vegetation management to activate bar deposits)

Commission Staff Finding: The Commission adopts the SA provision to monitor gravels in association with pulse flows, and adjust pulse flows as necessary.

1.) "Are our alternative recommendations on these issues, as described in the draft EIS, acceptable to you?"

We believe that aquatic resources in the section downstream of Belden Forebay Dam could be significantly enhanced, or unforeseen consequences of the proposed pulse flow regime throughout the bypass reaches mitigated, by contingency actions other than adjustment pulse flows (e.g., localized gravel supplementation and/or removal of excess vegetation on formerly active bar surfaces).

2.) "If not, are there any other measures that you would agree to that would accomplish the objective of your original recommendations?"

The Service recommends the Commission develop an alternative proposal for such contingency actions in conjunction with our modified alternatives for monitoring of geomorphology (*see above*, response to inconsistency determination for recommendation #6).

3.) "Is there any additional evidence to support your recommendations or to demonstrate why they are consistent with the FPA?"

The DEIS proposes to adopt the SA plan based on its conclusion that the prescribed pulse flows and monitoring would achieve the “primary objective” of moving substrate and recruiting new substrate from adjacent areas (DEIS p.115, lines 37-38). The DEIS does acknowledge that it is “especially important” to monitor gravels, at least in the Seneca Reach. The SA plan, however, is focused solely on pulse flow effects, limits contingencies to modification of these pulses, and would not achieve the desired level of monitoring, nor provide the desired degree of resource protection through other contingency actions. Moreover, as mentioned in our December 1, 2003 filing, gravel quantity/quality may change in a gradual, cumulative manner over the license term due to the effect of the revised base and pulse flows, recreational flows or natural events such as debris slides, or flood flows. Potential deficiencies may currently exist as noted in our December 1, 2003 filing, such as immediately downstream of the various dams, and could be enhanced by non-flow means such as placement of gravel below dams or using mechanical disruption to increase the potential for entrainment of gravel from portions of bar deposits that are heavily encroached by vegetation. Accordingly, some level of long-term monitoring, and means for enhancement and/or adaptive action in addition to modifying the pulse flow schedule, is recommended.

Fish and Macroinvertebrate Monitoring Plans (Department 10(j) recommendations #10 and #11 - conduct relatively intensive monitoring early in the license, years 2-3, 8-10, 15, 20, and 25 for fish, and years 1, and 5 year interval thereafter for macroinvertebrates).

Commission Staff Finding: Conduct monitoring in years 4-5, and 5 year interval thereafter for both fish, and macroinvertebrates.

Departmental Response:

1.) “Are our alternative recommendations on these issues, as described in the draft EIS, acceptable to you?”

Although the DEIS states that it has not adopted our recommendation, we note that the Commission’s Recommended Alternative specifies monitoring for 2 years beginning 4 years after license issuance, and every 5 years thereafter. This recommendation is more similar to the sampling interval suggested in our December 1, 2003 filing, than it is to the sampling schedule in the SA. Moreover, staff’s additional measure #13 (DEIS p. 343) fulfills the intent of our recommended special study of effects of any modifications to the Prattville Intake on trout in Butt Valley Reservoir. The Service finds that the Commission’s alternative schedule and additional measure substantially meet our needs and together constitute an acceptable alternative to our recommendation.

Erosion Control Plan (Department 10(j) recommendation #19 - Develop a plan to monitor and remediate all erosion issues related to project facilities, roads, reservoirs, and bypass reaches)

Commission Staff Finding: Commission staff reference an existing road maintenance agreement with Forest Service, adds a spoil disposal plan measure, and a measure to finalize the Recreational Resource Management Plan (RRMP) after consultation with the Department, Plumas County, Forest Service, and California Department of Fish and Game, as being sufficient.

Departmental Response:

1.) "Are our alternative recommendations on these issues, as described in the draft EIS, acceptable to you?"

The Department's recommendation for an overall erosion control plan, as stated in our filing, is justified by the potential for impacts due to the variety of project and recreational facilities, and associated roadways. Although the Commission states that it did not adopt our recommendation, the DEIS (p. 243) references, and the Licensee's January 15, 2004 reply to our December 1, 2003 filing includes, a road maintenance agreement with the Forest Service. Furthermore, the Commission's Recommended Alternative includes the SA measures to finalize the draft RRMP, and an additional measure for a soil disposal plan. Key indicators in the draft RRMP include measures that would detect recreational use damage to habitat. The Service has reviewed these documents and has determined that the road maintenance agreement, finalization of the RRMP, the SA measure to meet annually on land management issues, required consultation with the Department under Commission's Recommended Alternative measure #28 (SA p. 53 does not identify the Department specifically), and additional spoil disposal measure, constitute an acceptable alternative to our recommendation.

Ramping Rates (Department 10(j) recommendation #20 - Develop a ramping rate plan to minimize impacts to aquatic resources)

Commission Staff Finding: Adopts basic ramping rates proposed in the SA of 0.5 foot per hour.

Departmental Response:

1.) "Are our alternative recommendations on these issues, as described in the draft EIS, acceptable to you?"

The Service finds the provisions in the final SA which the Commission adopted to be an acceptable alternative to the Department's ramping rate recommendation.

Wildlife Management Plan (Department 10(j) recommendation #21 - recommends monitoring of wildlife that may be affected by operational changes in flow, lake level, or other recommended measures such as vegetation management)

Commission Staff Finding: In the DEIS, Commission staff recommends components of vegetation management and wildlife enhancement, amphibian monitoring, and monitoring of special status species.

Departmental Response:

1.) "Are our alternative recommendations on these issues, as described in the draft EIS, acceptable to you?"

The Service does not believe that the measures referenced by Commission staff constitute an acceptable alternative. The DEIS states that the Department has not sufficiently identified which populations of wildlife should be monitored, or why. However, our December 1, 2003 filing does identify by example the potential for modified operations to affect lake levels, and hence the extent of habitat that supports wildlife populations (emergent marsh, mudflat, shallow open water) in the causeway area of the lake.

2.) "If not, are there any other measures that you would agree to that would accomplish the objective of your original recommendations?"

The Service has reviewed the FS4(e) condition #37 referenced in the DEIS, which prescribes measures on Licensee-owned lands, and the requirement in that condition for consultation with the Service, periodic review, and maintenance. Although we acknowledge the clear benefit of this measure, it does not appear to involve any required monitoring. The Service proposes as an alternative measure, monitoring focusing on changes in habitat types and avian surveys for Licensee-owned lands specified in FS4(e) condition #37. This would assist an understanding of the effects of these project operations, as well as the responses to enhancement measures or other adaptive management actions.

COMMENTS ON ADOPTED RECOMMENDATIONS

Reservoir Operations (Department 10(j) recommendation #4): The DEIS states that the Commission has adopted the Department's recommendation. However, in our December 1, 2003 filing, the Department did not include the multiple dry year provision of the Recommended Alternative. Nevertheless, the Service accepts this provision as stated in the Recommended Alternative. The Commission did not comment on the additional provision in our recommendation to reduce flow fluctuations during the trout spawning season, which was discussed in the Licensee's reply. The Commission should therefore explain its decision regarding this element of our recommendation, as well as determine whether it is provided in part or whole under FS4(e) condition #30.

Vegetation Management Plan (Department 10(j) recommendation #7): The Department's December 1, 2003 filing provided for a plan which would achieve objectives of monitoring long term changes, enhancing channel process through manipulation, and minimizing maintenance impacts. Much of our justification is based on the uncertainty that the pulse and flow regime alone would achieve the desired extent of control of noxious vegetation and vegetation encroachment within the active channel and floodplain of the project reaches. This encroachment has virtually eliminated active bar surfaces that formerly constituted a local source of gravel replenishment, as well as an element of habitat diversity. Reduced peak flows from project operation are directly responsible for this condition.

The Commission does acknowledge the merits of long term riparian monitoring in detecting responses to the flow regime, as we advise in our recommendation (DEIS p. 155, lines 17-30), and has included such monitoring under its measure #25 (DEIS p. 328). We note that the Commission accepts the FS4(e) condition #35 as fulfilling the need to control undesirable vegetation, but is silent on the Department's measure specifically focused on encroached vegetation near or in the active channel, and emphasis on pilot level testing of control methods. The Commission includes the bramble control measures already proposed in the FA and SA (measure #26, DEIS p. 328). This bramble control measure is intended for human access and would likely be done in different locations and with different methods than if it were intended for enhancement of channel function. Thus, while the Commission did not issue an inconsistency determination, and states that it has adopted our recommendation as part of the vegetation management plan, the pilot test for control of encroached vegetation was not specifically adopted. We recommend an additional test measure to control excess encroached vegetation for the purpose of enhancing riparian and riverine habitat.

Woody Debris Management Plan (Department 10(j) recommendation #9): The Commission has adopted the Department's recommendation and we expect its implementation to result in a significant increment of benefit to both terrestrial and aquatic resources beyond that in the SA. Particular benefits include aquatic and terrestrial habitat diversity and structural cover, nitrogen fixation, and support of additional wildlife species associated with wood. We agree with Commission's emphasis on the Belden Reach. Large woody debris management is a frequently-applied means of habitat enhancement in many restoration and mitigation projects, and should not be excluded from this project.

Amphibian Monitoring Plan (Department 10(j) recommendations #12): The Commission's Recommended Alternative meets the intent of the Department's recommendation #12, providing for more intensive sampling than we had initially recommended, and requiring specification in its plan of the consultation process with the FWS, should presence of California red-legged frog be confirmed during monitoring.

Adaptive Management (Department 10(j) recommendation #13): The Commission has adopted this recommendation in its entirety. We expect its implementation to provide the needed flexibility, beyond that in the SA measures, to adjust environmental measures including, as indicated in our December 1, 2003 filing and in the DEIS, volume neutral flow schedule or minimum lake storage levels.

Recreational Activities Monitoring Plan (Department 10(j) recommendation #14): The DEIS (p. 357) states that Commission staff recommend adoption of this measure, analyzed earlier (DEIS p. 154), referencing section 3.3.5 (Recreational Resources) for further discussion. We have reviewed the draft RRMP indicators (Table 2 in Appendix E5-T of the FA) and agree with the Commission that its finalization, after consultation with the Department, would be sufficient to fulfill this recommendation. We note that the Commission's Recommended Alternative (DEIS p. 329, measure #28), but not the SA as written (SA p. 41), provides for this consultation.

ADDITIONAL (NEW) SECTION 10(j) RECOMMENDATION

Pursuant to Section 10(j) of the FPA (16 U.S.C, 791 *et seq.*) and to carry out the purposes of the Fish and Wildlife Coordination Act (16 U.S.C, 661 *et seq.*), the Service recommends the following additional condition to protect, mitigate damages to, and enhance fish and wildlife resources, be included in the new project license:

Test River Recreational Flows (Department 10(j) recommendation #22)

Condition: We recommend that test river recreation flows not be initiated until 6 years after license issuance. The Technical Review Group (TRG) would make a recommendation as to whether tests flows should proceed, formulate the schedule for the test flows, and determine whether flows should be continued. We further recommend that recreational flows be specified at this time by flow volume by year type, equivalent to that provided by the SA, but that the actual schedule (duration, frequency, and magnitude) be determined by the TRG.

Justification: The justification for this provision, as detailed below in our comments on the DEIS, is to allow for response of the biotic community to the new instream flow regime, and initial monitoring in years 4 and 5, without the added effect of recreational boating flows. Flexibility in scheduling would provide a means to avoid and/or better evaluate impacts to resources and other recreational uses.

The primary rationale for revised instream minimum flows and pulse flows in the new license is to better mimic the natural seasonal and year type variation in hydrology, and thereby enhance overall biological diversity and productivity through flow-related physical habitat, cues, and other fluvial processes. Summer recreational flows of the magnitude proposed in the SA (at least 650 cfs) do not reflect the natural hydrograph pattern and are 4 to 9 times larger than the SA-proposed

minimum instream flows. Out-of-season flow fluctuation could have adverse effects on extant species, as well as the establishment of other potential species that are very rare or not currently present, but which could benefit from the revised flow schedules. Such flows could result in displacement of aquatic or terrestrial organisms, mortality, substrate movement, depletion of cold water, physiological effects, effects on reproductive cues, as well as conflict with other recreational uses such as camping and fishing.

Among the elements very diminished from the Belden Reach due to project operation, for example, are native amphibians. The new license flows may result in re-establishment of amphibian species, or improved natural production by important evaluation species, such as rainbow trout. We agree with the Commission's analysis (DEIS p. 123) that the aquatic community would be in a state of flux in the first few years after implementation of the new flow regimes, and that at least 5 years would be needed to establish a new baseline and collect initial monitoring data.

The Service also agrees with Commission staff's decision in the DEIS to modify the monitoring program to reflect this expected response by conducting two years of monitoring in years 4 and 5, but the potential for recreational boating flows to occur as early as 1 year post-license, as potentially permitted under the final SA, would not allow for a determination of the effect of the instream flows alone. It would not be possible to separate the beneficial (or adverse) effects of the new flow regime from the effects of the recreational flows if these were instituted concurrently. The DEIS discusses some of the short term effects of recreational flows documented in monitoring of another licensed project (Rock Creek-Cresta, FERC #1962); however, these types of studies can only discern instantaneous effects and not the potential effect of recreational boating flows on enhancement/re-establishment of species in very low abundance or absent. For the Belden and Seneca reaches, the Commission states its expectation that the proposed SA would be "adequate" to maintain and improve habitat for listed amphibians, but (DEIS p. 157, lines 31-33) "...it may take at least 5 years for populations to become established to the point where they are likely to be detected by monitoring."

The SA does not require a period of adjustment prior to initiating test river recreational flows. Although the SA specifies consultation with agencies, and submittal to and approval by the Commission, there is no required period of adjustment to the new instream/pulse flow regime. Recreational flows could be instituted as early as 1 year after the new license is issued.

The language in the SA does not make clear the discretion of the TRG to modify test flow schedules from those specified in SA Table B, p. 27. The preceding paragraph (SA p. 25, lines 28-30) states that the TRG "shall not recommend any flow schedule that exceeds the frequency, magnitude or duration of flows prescribed for any given month...in Table B (underline added for emphasis)." This reduces the ability of the TRG to modify the schedule to limit impacts to resources and balance recreational needs. For example, a reduction in frequency must either be

offset by increased magnitude or duration. Otherwise, the allocation of flow to recreational boating would simply be reduced. In addition, neither the SA nor DEIS calculates and discloses the actual water volume which may be released as recreational flow in a given year type. If recreational flows are established, we recommend that flexibility in scheduling be maximized such as by specification of a maximum water volume by year-type, and allocation to be determined by the TRG.

The Service cautions the Commission against using the Rock Creek-Cresta studies alone, to justify (or exclude) recreational flows in the Upper North Fork Feather River license. Important distinctions of the Belden Reach are its potential for enhanced trout spawning and rearing, small dimension substrates that would likely be moved at much lower flows than the large substrates in the Rock Creek-Cresta reaches, and lack (or extreme rarity) of native amphibians that are present in the Rock Creek-Cresta reaches.

The Service recommends the Commission modify the Recommended Alternative so that test river recreational flows in the Belden Reach are deferred until at least 6 years after the new license is issued (a difference of 5 years beyond that currently proposed). With such a provision, the initial monitoring (which the Commission proposes to commence in years 4 and 5) could then assess the new baseline conditions resulting from the new license flow schedule. Subsequent monitoring of recreational test flows can then assess the effect on any new or enhanced organisms, or habitat elements, that may have established as a result of the new instream flows. This would permit the TRG to take advantage of this information and make a much more informed decision on whether such test flows should proceed in this reach.

SUMMARY


The Service found that the Commission's staff alternative measures to our recommendations #10 (Fish Monitoring Plan), #11 (Macroinvertebrate Monitoring Plan), (Erosion Control Plan), and #20 (Ramping Rate Plan) to be acceptable to the FWS, and recommend they be retained in the Final EIS and license. Of the remainder which the Commission did not adopt, namely, 10(j) recommendations #1 (instream flows), #2 (Seneca and Belden Reach pulse flows), #3 (Butt Creek Pulse flows), #5 (Water Temperature Plan), #6 (Geomorphological Monitoring Plan), and #8 (Coarse Sediment Plan), we either restated the original section 10(j) recommendations in our December 1, 2003 filing or identified alternative acceptable measures where appropriate, and provided substantial additional evidence in support of these measures. Although the Commission states it has adopted our recommendation #7 (Vegetation Management Plan), we note that the described measures do not completely fulfill our objectives, and have therefore recommended an additional measure involving a pilot program for testing control of excessive encroached riparian vegetation. We have also added a new section 10(j) recommendation #22 (Test River

Recreational Flows) in response to the need to allow for adaptation of the ecological community to the revised instream minimum and pulse flow regime, before recreational boating flows are considered.

The Service does not object to issuance of a new license for the Upper North Fork Feather River Project, provided its recommendations to protect, mitigate, and enhance fish and wildlife resources and section 18 prescription for fishways, are incorporated into the license. The Service considers its recommendations, terms and conditions, and prescriptions in this letter to be modified preliminary recommendations, subject to amendment, if warranted, based on results of new information and conclusions developed in the Commission's Final Environmental Impact Statement (FEIS). The opportunity to amend, modify, or add to these recommendations and prescriptions is also reserved if resource conditions change, project plans are altered, or other new information is developed.

The Service requests the Commission contact the Service's Sacramento Fish and Wildlife Office, to arrange a meeting, telephone or video conference, or other additional procedure to resolve the preliminary determination of inconsistency. The staff contact for this project is Mike Hoover at (916) 414-6704.

Sincerely,


David L. Harlow
Acting Field Supervisor

cc:
Commission Service List

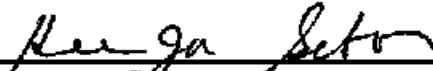
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Project No. 2105

FEDERAL ENERGY
REGULATORY COMMISSION
UPPER NORTH FORK FEATHER RIVER PROJECT, FERC NO. 2105

I hereby certify that I have this day served by regular mail, the foregoing letter, Subject: Upper North Fork Feather River Project, FERC #2105-089, Plumas County, California; Response to Federal Energy Regulatory Commission's Section 10(j) Preliminary Determination of Inconsistency to each person designated on the official FERC Service list.

Dated at Sacramento Fish and Wildlife Office, Sacramento, CA this 29th of October, 2004.



Hee Ja Seto
Office Assistant