

128 FERC ¶ 61,035
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Jon Wellinghoff, Chairman;
Suedeen G. Kelly, Marc Spitzer,
and Philip D. Moeller.

Turlock Irrigation District and Modesto Irrigation
District

Project Nos. 2299-065
2299-053

ORDER ON REHEARING, AMENDING LICENSE, DENYING LATE
INTERVENTION, DENYING PETITION, AND DIRECTING APPOINTMENT OF A
PRESIDING JUDGE FOR A PROCEEDING ON INTERIM CONDITIONS

(Issued July 16, 2009)

1. Pending before us are several requests for rehearing, filed by the National Marine Fisheries Service (NMFS), U.S. Fish and Wildlife Service (FWS), California Department of Fish and Game (California DFG), and Conservation Groups,¹ of Commission staff's April 3, 2008 order² accepting the licensees' Ten Year Summary Report on fishery resources and requiring additional studies for the Don Pedro Project No. 2299. Also pending are two motions for late intervention filed with Conservation Groups' rehearing request, as well as a petition filed by NMFS to amend the project license to modify minimum flow requirements and to initiate formal consultation pursuant to section 7(a)(2) of the Endangered Species Act (ESA) concerning the effects of the project on California Central Valley steelhead, a threatened species.³ For the reasons discussed below, we deny late intervention, deny the petition, grant in part and deny in part the requests for rehearing, amend the license to require an instream flow study and to add

¹ Conservation Groups are the California Rivers Restoration Fund, Tuolumne River Preservation Trust, California Trout, and Friends of the River.

² *Turlock and Modesto Irrigation Districts*, 123 FERC ¶ 62,012 (2008) (April 3, 2008 Order).

³ As discussed below, the Commission earlier deferred action on the petition pending completion of informal consultation and ongoing fisheries studies. *See Turlock and Modesto Irrigation Districts*, 105 FERC ¶ 61,332 (2003).

NMFS as an agency to be consulted in connection with certain license articles, and direct the appointment of a presiding judge for a proceeding on interim measures to protect fishery resources pending relicensing.

Background

2. The Commission issued an original license to the Turlock and Modesto Irrigation Districts (Districts) for the 161-megawatt New Don Pedro Project in 1964.⁴ The project submerged and replaced the original Don Pedro Project, which was constructed in 1924. Project facilities consist of a 580-foot-high dam, a powerhouse, and a reservoir with an active storage capacity of 1,721,000 acre feet. The project is located on the main stem of the Tuolumne River in Tuolumne County, in the Central Valley of California, about 115 miles east of San Francisco. It began commercial operation in 1971, and is operated to provide irrigation storage, hydroelectric power, flood control storage, recreational benefits, fish and wildlife conservation, and municipal water supply. The current license expires in 2016, and the process for relicensing would begin in 2011.

3. The project is hydrologically linked with the City and County of San Francisco's upstream Hetch Hetchy System, a series of reservoirs, diversion conduits, and powerhouses located on the Upper Tuolumne River.⁵ The Hetch Hetchy system regulates inflows to the New Don Pedro Project. San Francisco agreed to help finance construction of the New Don Pedro Project in return for storage rights in the project reservoir, from which it could provide the Districts with the irrigation water to which their senior water rights entitle them. This allows San Francisco to use a greater portion of its upstream storage reservoirs for municipal water supply.

⁴ *Turlock and Modesto Irrigation Districts*, 31 FPC at 510 (1964), *aff'd sub nom. California v. FPC*, 345 F.2d 917 (9th Cir. 1965). The original Don Pedro Project had operated under a minor-part license as Project No. 1086. *See* 31 FPC at 523, 535. On February 1, 1972, the Districts filed a request to delete the word "New" from the New Don Pedro Project name. The Commission approved the request in an unpublished order on February 22, 1973. However, the Commission and others have, at various times, continued to refer to the project as the New Don Pedro Project.

⁵ The Hetch Hetchy System is not a part of the licensed project. The System is owned and operated by San Francisco pursuant to authority conferred in the Raker Act, 38 Stat. 242 (1913). The Raker Act requires the Hetch Hetchy System to release a specified amount of water to the Districts. Section 29 of the Federal Power Act, 16 U.S.C. § 823 (2006), prohibits the Commission from modifying or repealing any provisions of the Raker Act.

4. The Districts also own La Grange Dam, a non-project diversion dam built in 1893 and located on the Tuolumne River 2.3 miles downstream of Don Pedro Dam. It is 130 feet high and impounds about 500 acre feet. The Districts use it to divert water into their canal systems for consumptive purposes upstream of La Grange Dam. The license for the Don Pedro Project requires the Districts to maintain minimum flow releases from the Don Pedro Project to the Tuolumne River, as measured downstream of La Grange Dam.

5. Article 37 of the Don Pedro Project license established minimum flow releases for the first 20 years of operation (1971-1991) and reserved the Commission's authority to revise the minimum flow requirements after 20 years. Article 39 of the license required the Districts, in cooperation with the California DFG, to study the Tuolumne River fishery and how it could feasibly be sustained.⁶ The Districts subsequently commenced 18 years of fishery studies.

6. In 1985, the Districts applied to amend their license to add a fourth generating unit. While the amendment proceeding was underway, the Districts, California DFG, and FWS entered into an agreement to amend the approved fish study plan provided for in Article 39 of the license. Among other things, the agreement contemplated extending the existing study and maintaining the existing flows until 1998. In 1987, the Commission granted the license amendment and included the revised study plan in the license.⁷ The Commission added Article 58 to the license, making the Districts' amended fish study plan a condition of the license and requiring the Districts to file a report on the results, with recommendations for changes in the existing flow releases and ramping rates for the project.⁸ In doing so, however, the Commission found that it was beyond the scope of

⁶ *Turlock and Modesto Irrigation Districts*, 31 FPC at 527.

⁷ *Turlock and Modesto Irrigation Districts*, 38 FERC ¶ 61,097 (1987).

⁸ 38 FERC ¶ 61,097 at 61,253 (license Article 58). At that time, Article 58 provided:

The Licensees' amended fish study plan, filed on November 11, 1986, which provides the basis for determining if modifications to project operation are necessary for protection of the fish resources, is approved and made a condition of this license. The licensees shall conduct the studies as approved by the Commission, and by June 30, 1998, or two years after completion of the Smolt Survival Index Study, whichever is later, the Licensees shall file for Commission approval, a report on the results of the studies, with recommendations for changes in the existing flow releases and

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the amendment request to extend the ongoing study or minimum flows beyond the initial 20-year period provided for in the existing license. The Commission therefore cautioned that the studies ordered under the amended study plan in Article 58 were in addition to the existing terms of the license in Articles 37 and 39. As a result, the requirement to revisit the project's minimum flows after 20 years, and to provide the results of the ongoing fish study, remained intact.

7. In 1992, the Districts filed a request to amend the license to implement proposed changes in minimum flows under Article 37. San Francisco and the San Francisco Bay Area Water Users Association opposed the application. The Commission therefore instituted a proceeding to determine what changes in flow, if any, would be necessary to protect the fishery resources of the Tuolumne River. In 1993, Commission staff determined that it would be necessary to prepare an environmental impact statement (EIS) in light of potentially significant adverse impacts to municipal water supplies that would be triggered by San Francisco's obligation to provide, from its storage allocation in the Don Pedro reservoir, approximately half of any increase in required minimum flows. In 1996, after mediated settlement negotiations resulted in a settlement agreement supported by all parties, the Commission amended Articles 37 and 58 of the license to implement the minimum flows and fishery monitoring studies portions of the settlement agreement.⁹ Before approving the license amendment, the Commission completed formal consultation with FWS pursuant to Section 7 of the ESA on two listed fish species, the Delta Smelt and Sacramento Splittail. The Commission also prepared an EIS that examined the effects of various alternative flow regimes.

8. As amended in 1996, Article 37 requires a revised minimum flow regime to benefit fishery resources in the Tuolumne River. It also allows changes to the minimum

ramping rates from the project. Documentation of agency consultation on the report and recommendations shall be included in the filing. The Commission reserves the right to set new flow releases, and ramping rates after notice and opportunity for hearing.

⁹ *Turlock and Modesto Irrigation Districts*, 76 FERC ¶ 61,117 (1996). The settlement agreement, which was filed as an attachment to the license amendment application, was not filed for Commission approval. *Id.* at n.1. As noted in the order amending license, the Districts and San Francisco also agreed that the Districts will provide from their storage allocation all fishery flows required by the license, with San Francisco making annual payments to the District under an earlier cost allocation agreement. *Id.* n.14.

flows by agreement among the Districts, California DFG, and FWS.¹⁰ Article 58 requires the Districts, after consulting with the California DFG and FWS, to implement a monitoring plan to identify benefits to the Chinook salmon fishery resulting from improved environmental conditions, and to file the results of fisheries monitoring studies with the Commission by April 1, 2005, with intervening annual reports.¹¹ Ordering

¹⁰ Article 37 provides, in pertinent part:

The Licensees shall maintain minimum streamflows in the Tuolumne River at La Grange Bridge (river mile 50.5) for fish purposes in accordance with the table and schedules set forth below or with such schedules as may be agreed to among the Licensees, the California Department of Fish and Game (Cal Fish & Game), and the U.S. Fish and Wildlife Service (FWS). Any such schedules shall be available for public review at the licensee's offices. These flows may be temporarily modified if required by operating emergencies beyond the control of the Licensees. . . .

Turlock and Modesto Irrigation District, 76 FERC ¶ 61,117, at 61,611 (1996). The remainder of the Article sets forth a table of water year classifications with explanations and a flow schedule.

¹¹ Article 58 provides:

The Licensees, after consulting with the California Department of Fish and Game and the U.S. Fish and Wildlife Service, shall implement a program to monitor chinook salmon populations and habitat in the Tuolumne River. The monitoring program shall conform to the monitoring schedule set forth below and shall include: (1) Spawning Escapement Estimates; (2) Quality and Condition of Spawning Habitat; (3) Relative Fry Density/Female Spawners; (4) Fry Distribution and Survival; (5) Juvenile Distribution and Temperature Relationships; and (6) Smolt Survival.

The monitoring frequencies and methods shall be agreeable among the Licensees and the consulted agencies. Any disagreements regarding the conduct of these studies, not resolved among the Licensees and consulted entities, shall be filed with the Commission for determination.

The above monitoring information is to be documented in annual reports which will be filed with the Commission by April 1 of each year and be available for public review. The results of any fishery studies, already completed and not yet filed with the Commission, shall be filed by the

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Paragraph G of the order requires the Districts to include in their report the results of fishery studies, monitoring studies, and non-flow mitigation measures, and states that, based on the information provided in the study results, “the Commission will determine whether to require further monitoring studies and changes in project structures and operations to protect fishery resources in the Tuolumne River, after notice and opportunity for hearing.”¹² This amendment of Article 58 resulted in the Summary Report.

9. In 1998, NMFS listed the Central Valley evolutionarily significant unit (ESU) of steelhead as threatened under the ESA.¹³ In letters dated June 9, 2002, and November 19, 2002, NMFS requested that the Commission initiate formal consultation to consider the effects of the Don Pedro Project on Central Valley steelhead. On March 6, 2003, the Commission asked the Districts to act as its non-federal representative for purposes of informal ESA consultation. The Districts agreed by letter dated March 31, 2003. Shortly thereafter, on May 2, 2003, NMFS filed its petition to amend the license and initiate formal consultation.

10. On December 22, 2003, the Commission issued an order deferring action on the petition pending completion of informal consultation and ongoing fisheries studies.¹⁴ Among other things, the Commission noted that the parties were consulting informally concerning the possible need for changes in minimum flows, and the Districts had agreed to include in their consultation and ongoing studies consideration of possible project effects on steelhead.

Licensees by April 1, 2005.

76 FERC ¶ 61,117 at 61,614.

¹² *Id.*

¹³ 63 Fed. Reg. 13347 (Mar. 19, 1998). On July 10, 2000, NMFS issued protective regulations under section 4(d) of the ESA, which prohibit taking of listed steelhead without authorization. 65 Fed. Reg. 42475. On September 2, 2005, NMFS designated critical habitat for the California Central Valley steelhead ESU, including stream reaches in the Tuolumne River. On January 5, 2006, after the initial listing was declared invalid, NMFS issued a final rule reaffirming the listing for the California Central Valley distinct population segment (DPS) of steelhead and determining that no revision was necessary for the critical habitat designation. 71 Fed. Reg. 834. *See Modesto Irrigation District v. Gutierrez*, 2006 U.S. Dist. LEXIS 31165 (E. Dist. Cal. 2006).

¹⁴ *Turlock and Modesto Irrigation Districts*, 105 FERC ¶ 61,332 (2003).

11. On February 27, 2004, FWS filed a letter in support of NMFS's request for formal consultation. FWS also requested that Article 37 of the license be amended to include NMFS as a party to be consulted prior to making any flow adjustments, to ensure that any developed flow regime adequately considers steelhead as well as Chinook salmon. By letter dated April 24, 2004, NMFS reiterated its concerns regarding project impacts to listed steelhead, and requested that certain studies be undertaken in connection with the Summary Report to determine project effects on Central Valley steelhead. The Districts responded on May 21, 2004, stating that on May 12, 2004, the U.S. District Court for the Eastern District of California ruled that the listing of Central Valley steelhead was legally flawed, and enjoined NMFS from prosecuting its request for modification of the Don Pedro license, pending reconsideration of the listing (which was required by June 2005).¹⁵ The Districts indicated that they would nevertheless continue consulting with NMFS regarding additional monitoring and information needs. They also disputed the existence of Central Valley steelhead in the Tuolumne River, asserting that no party had provided any scientific evidence that confirmed that the fish were Central Valley steelhead and not resident rainbow trout.

12. The Districts filed the Summary Report on March 25, 2005. In it, the Districts provided information on fishery studies, river-wide monitoring, and non-flow mitigation measures conducted since 1996, and included their recommendations for continuing some fish management and monitoring measures and implementing some additional non-flow measures through relicensing.

13. The Commission issued notice of the filing on June 24, 2005, and established a deadline for comments and motions to intervene by July 25, 2005, with reply comments by August 24, 2005.¹⁶ Among other things, the Commission specifically requested comments on consideration of issues involving Central Valley steelhead that were deferred pending completion of ongoing studies and informal consultation. The following entities filed comments on the Summary Report: FWS, NMFS (except as noted below), California DFG, California-Nevada Chapter of the American Fisheries Society, Stanislaus Fly Fishermen, the City and County of San Francisco, San Francisco Bay Area Water Users Association, and Conservation Groups (comprising California

¹⁵ See *Modesto Irrigation District v. Evans*, Civ-F-02-6553 (E. Dist. Cal. May 12, 2004), Memorandum Decision and Order on Plaintiffs' Motion for Summary Judgment (attached to the District's letter of May 21, 2004, to Magalie Salas, FERC).

¹⁶ By notice issued on September 20, 2005, the Commission later extended the deadline for comments to November 22, 2005, and for reply comments to December 22, 2005.

Rivers Restoration Fund, Tuolumne River Preservation Trust, California Trout, Inc., and Friends of the River). The following entities filed timely motions to intervene, and thus became parties to the proceeding: U.S. Department of the Interior (Interior), NMFS, California DFG, City and County of San Francisco, San Francisco Bay Area Water Users

Association, Stanislaus Flyfishermen, Friends of the Tuolumne, Inc., and Conservation Groups.¹⁷ Several of these parties also filed recommendations for terms and conditions regarding the Don Pedro License and the 1995 Settlement Agreement.

14. On May 4, 2005, Conservation Groups filed a motion to establish procedures and a schedule for a hearing. On May 19, 2005, the Districts filed a response, arguing that the request for a hearing was premature and recommending that the motion be denied. On July 11, 2005, after the Commission issued its June 24, 2005 notice of the Summary Report, Conservation Groups filed comments clarifying their motion. They indicated their support for the notice, stating that, by issuing it, the Commission had signaled its intent to undertake a structured process to consider comments on the Summary Report.

15. With its comments filed on July 25, 2005, NMFS included a request for a stay of the proceeding on its petition to reopen the license. NMFS explained that it was precluded by court order in *Modesto Irrigation District v. Gutierrez*¹⁸ from commenting further on the ESA issues involving Central Valley steelhead that are the subject of NMFS' petition.

16. On January 5, 2006, NMFS issued its decision on reconsideration of steelhead, listing the distinct population segment of Central Valley steelhead as threatened under the ESA.¹⁹ At that time, NMFS also determined that there was no need to revise its September 2, 2005 designation of critical habitat for Central Valley steelhead, which included the Tuolumne River from its confluence with the San Joaquin River upstream to La Grange Dam.

¹⁷ Some of these entities stated that they believed they were already parties, based on motions to intervene filed in the earlier licensing or amendment proceedings. This is not the case. Commission proceedings terminate after issuance of a final order and any order on rehearing, and the party status of any intervenors in that proceeding also terminates at that point. A proceeding on a post-license filing is a separate proceeding and requires a new motion to intervene, if intervention in that matter is otherwise allowed. See *Kings River Conservation District*, 36 FERC ¶ 61,365 (1986).

¹⁸ See note 13, *supra*.

¹⁹ 71 Fed. Reg. 834 (Jan. 5, 2006).

17. By letter dated June 20, 2006, and filed July 24, 2006, NMFS informed the Commission that a stay of the proceeding regarding its petition was no longer necessary, because the court proceeding had been completed and a new listing for Central Valley steelhead was in effect. NMFS also stated, without elaboration, that the Commission must initiate formal consultation concerning project effects on two other recently-listed threatened fish species, the Central Valley spring-run Chinook salmon ESU (listed as threatened on June 28, 2005),²⁰ and the Southern DPS of North American green sturgeon (listed as threatened on April 7, 2006).²¹ NMFS asserted that the Commission must initiate consultation on the annual project operating plans and the Commission's reserved discretion under Articles 37, 58, and Standard Article 10 of the license. NMFS further requested to be added to Articles 37 and 58 as a party to be consulted on any flow adjustments and monitoring studies provided for in those articles.

18. On July 25, 2006, Commission staff held a public meeting in Sacramento, California to discuss the Summary Report. At that meeting, staff presented its preliminary analysis of the report, and participants were given an opportunity to raise questions, make comments, and provide new information. Following the meeting, staff established a deadline of September 25, 2006, for filing any additional information or comments about the results of the Summary Report or any new information presented at the meeting.

19. On September 21, 2006, California DFG informed the Commission that the parties had convened a second technical meeting on August 15, 2006, at which the parties discussed extending the comment date to allow further collaborative scientific analysis and discussion. As a result of that meeting, California DFG requested that the comment deadline be extended as needed to allow for a collaborative science development process, that Commission staff participate in a series of collaborative meetings, and that the Commission accept and endorse the collaborative process and allow it to continue toward agreement on a program of acceptable science, with written minutes or summary progress reports on a schedule to be developed by the participants. The letter included a signature page indicating the Districts' concurrence, but no other participants subsequently concurred with the proposal.²²

²⁰ 70 Fed. Reg. 37160 (June 28, 2005).

²¹ 71 Fed. Reg. 17757 (April 7, 2006).

²² Because no other participants agreed, the Commission never took action on this proposal.

20. On December 20, 2006, Commission staff issued a letter restating its general conclusions regarding the Summary Report, as presented at the July 25, 2006 meeting. Staff stated that, for most of the required monitoring, the data were insufficient to reach any valid conclusions about the effects of the modified streamflow releases and restoration efforts on the fisheries resources of the Tuolumne River. Staff added that some of the monitoring efforts were improperly designed or executed and could not therefore produce data that would allow valid conclusions. Similarly, staff found that some of the mitigation measures had not had sufficient time for the monitoring efforts to show any change, or the response was not great enough to detect. Staff therefore found that, under Article 58 of the license, further monitoring studies were needed and directed the Districts to prepare and file, within 90 days, a study plan and schedule for the additional monitoring. Staff directed the Districts to prepare the plan in consultation with interested agencies and other participants, and to include documentation of consultation and their response to comments and recommendations on the plan.

21. The Districts filed their fisheries study plan on March 20, 2007. Participants filed comments both before and after the Districts filed the plan. Many comments were critical of various aspects of the plan, including a joint letter of March 5, 2007, from FWS, NMFS, and California DFG. The City and County of San Francisco supported the plan in their letter of April 4, 2007.

22. Commission staff issued its preliminary analysis of the study plan on June 15, 2007. Staff found that, for the most part, the plan addressed the issues presented but would require some revision. The Districts filed a revised study plan on July 16, 2007. That same day, Conservation Groups filed comments in response to staff's preliminary analysis. FWS and California DFG also filed comments. On August 8, 2007, staff held a second public meeting in Sacramento to discuss the fisheries study plan with participants.

23. On April 3, 2008, Commission staff issued its order on the Summary Report. Staff found that the Summary Report, as supplemented with annual reports filed on March 26, 2006, and March 27, 2007, complies with the requirements of Article 58.²³ Staff found that the information presented to date did not indicate that the flow requirement of Article 37 of the license were responsible for the decline of Chinook salmon in the Tuolumne River. Staff therefore concluded that the recommended increases in flow requirements were not warranted and the current flow requirements should be maintained.

²³ April 3, 2008 Order, 123 FERC ¶ 62,012 at 64,034.

24. Staff further concluded that studies needed to support an application for relicensing the project should be determined during the relicensing process, and the Districts' proposed studies should not be extended into the relicensing process that would begin in 2011. Staff required the Districts to file reports on the results of specific monitoring for Chinook salmon and steelhead, and to provide the Commission with an annual report on Chinook salmon, with the first report due by April 1, 2009. Staff found that monitoring efforts to date have been inconclusive in determining the presence or absence of steelhead populations in the Tuolumne River, and therefore required the Districts to initiate a monitoring effort to determine if the Tuolumne River currently supports steelhead, the anadromous form of rainbow trout. Finally, staff found no basis for requiring additional instream flow studies until after monitoring to determine if steelhead are present in the Tuolumne River, with a report due by January 15, 2010. Staff further noted that, based on the monitoring results, the Commission reserved its authority to require changes in project structures and operations to protect fishery resources in the Tuolumne River, after notice and opportunity for a hearing.

25. FWS, NMFS, California DFG, and Conservation Groups filed timely requests for rehearing of the April 3, 2008 Order. Conservation Groups' request for rehearing, filed on May 5, 2008, was joined by two non-parties: California Sportfishing Protection Alliance (California Sportfishing), and Golden West Women Flyfishers (Golden West), and included a motion for late intervention on behalf of these entities.²⁴

26. On June 17, 2009, Conservation Groups filed a motion for decision regarding their request for rehearing and motion for late intervention, arguing that a decision has been unreasonably delayed. They request that the Commission issue a final decision not later than July 16, 2009, and that the Commission consider and enter into the record new

²⁴ Friends of the Tuolumne (on May 2, 2008) and the Steelhead Committee of the Northern California/Nevada Federation of Fly Fishers (on April 30, 2008) filed comments criticizing the order. Included in the body of their comments, but not otherwise indicated in the filing, was a statement that these entities were requesting rehearing. Both filings were deficient, because they did not include a heading describing the filing as a request for rehearing, as required by Rule 2002(d), and did not include a statement of issues, as required by Rule 713(c)(2). *See* 18 C.F.R. §§ 385.2002(d) and 385.713(c)(2) (2008), respectively. Because these filings were not clearly identified as rehearing requests, we dismiss them for failure to comply with our rules. Moreover, the Steelhead Committee may not seek rehearing under Rule 713(b) because it is not a party to the proceeding. *See* 18 C.F.R. § 385.713(b) (2008). We therefore reject its request, to the extent that it may have been intended as a request for rehearing. We consider both filings as comments in this proceeding.

evidence submitted with the motion. The new information consists of a recent report by the Pacific Fishery Management Council on fall-run Chinook salmon, a draft report by California DFG with fall run Chinook salmon escapement estimates for 2008, and an excerpt from the NMFS biological opinion on the effects of the Central Valley Project on Central Valley steelhead.

27. Our issuance of this decision renders the motion moot. We discuss the significance of this new information later in this order.

Discussion

A. Preliminary Matters

1. Motions for Late Intervention

28. As noted, California Sportfishing and Golden West joined in Conservation Groups' rehearing request and filed motions for late intervention for the purpose of requesting rehearing. In support of their request, they argue that "the change in circumstances, namely the collapse of the salmon population, constitutes good cause" for their failure to intervene within the time prescribed.²⁵ They maintain that, when interventions were called for in June 2005, the salmon fishery on the Tuolumne River did not appear to require "emergency action," but since then "circumstances have not only changed, they have changed catastrophically."²⁶

29. As a signatory to the 1995 settlement agreement, California Sportfishing is obviously familiar with the matters at issue. As described in its motion for late intervention, Golden West has also been involved for a number of years with fisheries issues in California. Both entities could have intervened earlier, but failed to do so.

30. Persons seeking to participate in Commission proceedings may not wait until issuance of an order on the merits to determine whether they agree with the decision or wish to challenge it. Rather, they must intervene in a timely manner to ensure that their views are considered. Rule 214 requires a movant to make a showing of good cause for

²⁵ Conservation Groups' request for rehearing and motion for late intervention at 49.

²⁶ *Id.* at 50.

the failure to file on time.²⁷ When late intervention is sought after issuance of a dispositive order, the movant bears a high burden to justify its request.²⁸

31. In light of the extensive history of the fisheries issues involving this project, and the fact that it has been clear from the beginning that this proceeding is concerned with the health of the salmon fishery, an assertion that circumstances have changed does not constitute good cause for the late filing. Moreover, because California Sportfishing and Golden West each seek the same relief as Conservation Groups, their interests can be represented by those parties, and the issues they seek to raise will be fully considered without the need to admit additional parties at this late stage of the proceeding. We therefore deny their motions for late intervention.

2. Motion to Clarify the Record

32. In connection with their rehearing requests, FWS, NMFS, and California DFG filed copies of a number of recent technical reports and studies concerning salmon and steelhead in central California. These agencies, as well as Conservation Groups, referenced or relied on these supplemental materials in their rehearing requests. In response, on July 7, 2008, the Districts filed a motion to clarify the record, stating that they were filing the motion “to ensure that the record . . . accurately reflects the results of – and the conclusions that can reasonably be drawn from – the recent studies.”²⁹ The Districts attached a technical memorandum reviewing the supplemental materials, and asked that the Commission consider it in acting on the rehearing requests.

33. Conservation Groups (on July 17, 2008), NMFS (on July 21, 2008), and FWS (on July 22, 2008) filed answers in opposition to the Districts’ motion, arguing that the Commission should reject it as an impermissible answer to a rehearing request. FWS attached its own technical memorandum reviewing and answering the Districts’ memorandum, and requests that the Commission consider it if the Commission allows the filing of the District’s motion. NMFS also provided a substantive response to some of

²⁷ See *Alaska Power & Telephone Co.*, 98 FERC ¶ 61,092, at 61,277 (2002).

²⁸ See, e.g., *FPL Energy Maine Hydro, LLC*, 124 FERC ¶ 61,037, at P 15 (2008). See also *Covelo Indian Community v. FERC*, 895 F.2d 581, 586-87 (Commission did not abuse its discretion in denying Tribe’s motion for late intervention filed twelve years late, while settlement negotiations were underway).

²⁹ Districts’ motion to clarify the record at 1 (filed July 7, 2008).

the Districts' assertions. Conservation Groups request that, if the Commission considers the Districts' response to the rehearing requests, it do so in a manner that permits briefing by all parties.

34. Under our rules, answers to requests for rehearing are not permitted unless otherwise ordered.³⁰ The materials included with the agencies' rehearing requests are, for the most part, scientific and technical reports and studies concerning the fisheries issues. The parties rely on these materials in support of their rehearing requests. Some of these materials are new, and had not been made available prior to the April 3, 2008 Order on the Summary Report. As a result, the Districts did not have an opportunity to review and comment on them. In the interest of ensuring a complete record, we grant the Districts' motion and consider its comments on the recent studies. We also consider the responsive comments of FWS and NMFS. Because all parties have now had an opportunity to address these studies, there is no need to grant Conservation Groups' request for further briefing.

B. Petition to Initiate Formal Consultation

35. As noted, the Commission deferred action on NMFS's petition to initiate formal consultation to allow time to complete informal consultation, ongoing studies, and the Summary Report. The April 3, 2008 Order noted that the petition is pending and would be addressed in a future order. In deferring action on the petition, the Commission anticipated that the parties would consult informally and perhaps agree on whether any changes in project operations might be necessary to protect Central Valley steelhead. The Commission also anticipated that the results of ongoing studies and the Summary Report might assist the parties in determining what action might be required to protect both Chinook salmon and steelhead. If the parties agreed on a proposal to amend the license, the Commission could then initiate formal consultation on that proposed action.

36. As is evident from the April 3, 2008 Order, the parties did not reach agreement, and the petition remains pending. On rehearing, NMFS, FWS, and Conservation Groups argue that the Commission now must initiate formal consultation with NMFS under section 7(a)(2) of the ESA to consider the effects of project operation on Central Valley steelhead, which NMFS has listed as threatened.³¹ They maintain that, by issuing the

³⁰ See 18 C.F.R. §§ 385.713(d)(1) and 385.213(a)(2) (2008).

³¹ NMFS also notes that, although its petition and request for rehearing concern Central Valley steelhead, the Commission must determine whether its action may affect the Central Valley spring-run Chinook ESU and the Southern DPS of North American green sturgeon "in all areas to be affected directly or indirectly by its action and not

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order on the Summary Report, determining that no change is necessary to existing flow requirements and that certain monitoring studies will or will not be required, the Commission is taking action that will adversely affect listed Central Valley steelhead and that, therefore, formal consultation is required regarding the impacts of project facilities and operation on the listed fish.

37. We disagree. In our view, the parties' arguments on rehearing are based on a mischaracterization of the nature of the April 3, 2008 Order. In that order, Commission staff determined that no change is required and that, as a result, there is no need to reopen and amend the existing license. Staff also determined that some of the Districts' proposed monitoring studies were not needed. Instead of taking action, staff determined that no action was needed. A decision not to act is fundamentally different from a decision to reopen and amend an existing license in order to require necessary changes. There is currently no federal action that the Commission is proposing to take that would trigger the requirement to initiate formal consultation.

38. This case falls squarely within the holding of *California Sportfishing*.³² In that case, the court found that the ESA mandates consultation only before an agency takes some affirmative action, such as issuing or amending a license. Petitioners in that case were seeking consultation on whether the licensee should change the manner in which the project is operated. The court found that the triggering mechanism for consultation under the ESA must be an affirmative agency action, not the listing of a species or designation of critical habitat.³³ The court further found that ongoing operation of a licensed hydroelectric project is private, not federal agency action, and cannot trigger ESA

merely in the immediate area, such as the Tuolumne River, involved in the action.” NMFS request for rehearing at 12 n. 2. For the reasons discussed below, we find that there is currently no Commission action that would trigger the consultation requirement. Similarly, there is no action for which we would be required to make a determination of effect regarding these two listed species. Moreover, as noted in the April 3, 2008 Order, Commission staff found that neither species is present in the Tuolumne River, the green sturgeon may never have utilized the river, and NMFS did not designate critical habitat in the Tuolumne River for either species. April 3, 2008 Order, 123 FERC ¶ 62,012 at 64,025 n.7.

³² *California Sportfishing Alliance v. FERC*, 472 F.3d 593, 595 (9th Cir. 2006) (*California Sportfishing*).

³³ *Id.* at 597.

consultation even if the project may affect listed species.³⁴ Moreover, the existence of a reopener provision, without more, does not constitute discretionary federal involvement or control that can be used as a basis to mandate consultation.³⁵ The Commission must affirmatively exercise its discretion to order changes in project operation in order to trigger the consultation requirement.³⁶ In short, as the court explained, “section 7(a)(2) consultation stems only from ‘affirmative actions’ of an agency.”³⁷ An order determining that a license need not be amended because no change is required is not an affirmative agency action.

39. FWS, NMFS, and Conservation Groups seek to distinguish *California Sportfishing* on the basis that, in this case, the Commission included a specific reopener provision to address fishery issues, and instituted what they termed a “reopener proceeding” to determine whether to amend the license to benefit the fishery. They maintain that, as a result, the Commission’s order on the Summary Report is a final agency action on these issues that may affect listed species and is sufficient to trigger the consultation requirement.

40. We disagree. As discussed above, staff’s order on the Summary Report was a determination that action was not needed, rather than an affirmative action to change the license. While Commission staff did conduct a notice-and-comment proceeding on that report, it was not a reopener proceeding in that it did not reopen and amend the license, after notice and opportunity for a hearing. The contrary view that FWS, NMFS, and Conservation Groups seek to advance would require consultation not on a proposed agency action (a decision to reopen and amend the license), but rather on an agency decision not to act (a decision not to reopen and amend the license). If we were to adopt their view and initiate formal consultation on a decision not to amend the license, the Commission would have no proposed action to analyze in a biological assessment, and NMFS would have no proposed action to review in a biological opinion. The only “action” to analyze would be the effect on ongoing operation of the project on Central Valley steelhead, which, as the court in *California Sportfishing* held, is private rather than agency action. Such consultation on ongoing private action under the license would place NMFS in the position of determining whether changes in the license are needed, and would allow NMFS to dictate what changes should be required, through conditions in

³⁴ *Id.* at 598.

³⁵ *Id.* at 599.

³⁶ *Id.*

³⁷ *Id.* at 598.

its biological opinion. These are matters which are confined to the Commission's discretion under the terms of the reopener provision and the FPA. It would also be inconsistent with the ESA, which requires consultation on federal agency, not private, action.

41. As NMFS, FWS, and Conservation Groups point out, the April 3, 2008 Order states that it constitutes "final agency action." From this, they argue that the order is sufficient to trigger the consultation requirement. Again, we disagree. That phrase simply indicates that the order is final for purposes of seeking rehearing with the Commission. It says nothing about whether the order constitutes the type of agency action that would trigger the ESA consultation requirement. While parties might seek to challenge the Commission's determination that no changes are needed, we do not believe that they can use the Commission's negative determination in this case as a basis to mandate consultation regarding ongoing operation of the Don Pedro Project. If a decision not to reopen a license could trigger consultation, parties could overcome the ESA requirement for a federal agency action simply by filing a request that the Commission reopen a license, and then insisting that the Commission must consult on any decision to deny that request. That outcome would controvert the court's decision and reasoning in *California Sportfishing* that consultation stems only from affirmative agency actions.³⁸

42. NMFS, FWS, and Conservation Groups argue that the Commission's retained discretion over minimum flows for fishery resources, as reflected in Articles 37 and 58 of the license, is sufficient to trigger consultation on a Commission decision pursuant to those articles. This is nothing more than a variation on the argument that a decision not to reopen a license is an action that can require consultation. While retained discretion is a necessary component, it is not sufficient to require consultation.³⁹ The Commission also must actually exercise its discretion to reopen and amend a license (take affirmative

³⁸ Nor do we consider staff's decision to approve some of the Districts' proposals for continued studies to be affirmative agency action. The studies at issue involve monitoring for changes in fisheries and habitat. Thus, they are not affirmative agency actions that would require consultation.

³⁹ See 50 C.F.R. § 402.03 (2008), which provides that the requirements of ESA section 7 apply to all actions in which there is "discretionary Federal involvement or control." As the court found in *California Sportfishing*, although reopener provisions give the Commission discretionary authority to require changes in project operation, they do not in and of themselves mandate consultation; there must be an affirmative agency action to trigger the consultation requirement. 472 F.3d at 599.

agency action). Formal consultation under the ESA is triggered by federal agency action, not by the type of discretion, general or specific, that the Commission may have retained.

43. Conservation Groups argue that the 1964 license required that the license be reopened and a determination be made regarding flows for fish purposes after 20 years of study, and the 1996 amendment order carried over this requirement. They therefore maintain that the agency action of granting a license is not complete, and the Commission has retained discretionary involvement or control over the minimum flow schedule for the project. This is not correct. The action of granting the license was completed in 1964. Article 37 of the 1964 license established minimum flows for the first 20 years of project operation, and included provisions that would allow the Commission to prescribe changes to those flows after notice and opportunity for a hearing. The action to amend the minimum flow schedule under that article was completed in 1996. The 1996 amendment proceeding that added article 58 to the license provided a second opportunity to consider whether to reopen and amend the minimum flow schedule, after completion of additional studies and the Summary Report. While the Commission has retained discretion to reopen and amend the license to require changes in minimum flows, this does not mean that either the license or the minimum flow schedule can be considered continuing agency action.

44. Conservation Groups also argue that a federal agency must reinitiate consultation “if a new species is listed or critical habitat designated that may be affected by the identified action.”⁴⁰ They maintain that, because the Commission consulted previously with FWS on changes to the minimum flow schedule in connection with the 1996 amendment, the Commission must now reinitiate consultation on the 1998 listing of Central Valley steelhead and the 2005 designation of critical habitat.

45. Cases involving the reinitiation requirement focus on whether a federal agency has retained sufficient discretionary involvement or control over the action for which consultation was completed to make changes to benefit newly-listed species or designated critical habitat.⁴¹ Although the regulations do not expressly so state,

⁴⁰ 50 C.F.R. § 402.16(d) (2008).

⁴¹ See, e.g., *Environmental Protection Information Center v. Simpson*, 255 F.3d 1073, 1081 (9th Cir. 2001) (reinitiation not required where incidental take permit for northern spotted owl did not give FWS discretion to impose measures for marbled murrelet or coho salmon); *NRDC v. Houston*, 146 F.3d 1118, 1130 (9th Cir. 1998) (Bureau of Reclamation’s discretionary delivery of water under a non-final contract required reinitiation to consider newly-listed species); *Sierra Club v. Marsh*, 816 F.2d 1376, 1388 (9th Cir. 1987) (Corps of Engineers was required to reinitiate consultation

(continued...)

presumably, the federal action for which reinitiation might be required is the already-completed action that was the basis of the earlier consultation. In this case, the Commission consulted previously with FWS regarding the 1996 amendment to the minimum flow schedule. Because NMFS was not involved, any consultation with NMFS would be a new consultation, not a reinitiation of the previously-completed consultation. Moreover, as discussed above, the only possible retained discretion with regard to the 1996 amendment is a provision that would allow the Commission to reopen and amend the license, after notice and opportunity for a hearing. As the court found in *California Sportfishing*, such a reopener provision is “not sufficient to constitute any discretionary agency ‘involvement or control’ that might mandate consultation.”⁴² We therefore find no duty to reinitiate consultation in this case.

46. Conservation Groups argue, without elaboration, that the April 3, 2008 Order on the Summary Report fails to comply with the Commission’s obligation under ESA section 7(a)(1) to carry out programs for the conservation of threatened steelhead.⁴³ That section requires federal agencies to “utilize their authorities in furtherance of the purposes of [the ESA] by carrying out programs for the conservation of endangered and threatened species listed pursuant to [section 4 of the ESA].”⁴⁴ It does not expand the authority conferred on an agency by its enabling act, or provide any independent grounds for agency action not otherwise authorized or required.⁴⁵ Therefore, ESA section 7(a)(1)

before proceeding with construction project that would destroy habitat because required mitigation lands had not been acquired). *See also National Association of Home Builders v. Defenders of Wildlife*, 551 U.S. 644 (2007) (ESA’s requirements apply only when an action results from the exercise of agency discretion); *Western Watersheds Project v. Matejko*, 468 F.3d 1099, 1107 (9th Cir. 2006) (federal agency’s failure to exercise discretion is not an “action” for purposes of consultation requirement).

⁴² 472 F.3d at 599.

⁴³ In support, they cite *Carlson-Truckee Water Conservancy Dist. v. Clark*, 741 F.2d 257, 262 (9th Cir. 1984) (upholding the Secretary of the Interior’s decision to operate a dam in a way that gave priority to conserving two species of fish protected under the ESA).

⁴⁴ 16 U.S.C. § 1536(a)(1) (2006).

⁴⁵ *See Platte River Whooping Crane Critical Habitat Maintenance Trust v. FERC*, 962 F.2d 27, 34, *reh’g denied*, 972 F.2d 1362 (D.C. Cir. 1992); *Sierra Club v. Babbitt*, 65 F.3d 1502, 1510 (9th Cir. 1995).

would not provide a basis for requiring us to take an action that is not otherwise required by the FPA or ESA section 7(a)(2).

47. For all the foregoing reasons, we find that there is currently no Commission action that would trigger the requirement to consult with NMFS regarding the effects of the Don Pedro Project on Central Valley steelhead or designated critical habitat. In the event that the Commission proposes to take some action with respect to the project that may affect the species or critical habitat, we will initiate consultation. We therefore deny the petition.

C. Compliance with FPA Section 10(a)(1)

48. Conservation Groups argue that, by concluding that no changes are needed in the fishery flow schedule to protect Chinook salmon and steelhead, the April 3, 2008 Order violates the comprehensive development standard of section 10(a)(1) of the FPA. They maintain that, in issuing the 1964 license, the Commission found that fishery flows were needed to ensure that the project would be operated “so as to utilize the available water in the best interest of all parties and provide the best plan for comprehensive development for all public uses.”⁴⁶ They assert that the Commission included provisions in the 1964 license and the 1996 amendment to require reexamination of the flow schedule because the Commission was unable to establish fishery flows that would meet this standard for the entire license term. They conclude that, because the April 3, 2008 Order did not make a finding that the Article 37 flows are sufficient to protect salmon or steelhead, the license is no longer best adapted to a comprehensive plan for development of the Tuolumne River, and the order’s failure to consider alternatives or make affirmative findings violates the Commission’s obligation under FPA section 10(a)(1).

49. FPA section 10(a)(1) requires the Commission to balance a full range of both developmental and environmental factors in the public interest. Conservation Groups appear to believe that only an order that fully protects fish could meet that standard. However, other factors, such as power generation and availability of water for irrigation and municipal use, must also be taken into account, and must be balanced with the need to protect fishery resources.

50. The Commission set fish flows for only the first 20 years of project operation under the 1964 license, because it anticipated that once San Francisco’s upstream water diversions reached 295 million gallons per day (which was expected to occur in 1985), the dependable capacity of the New Don Pedro Project would drop to zero if California DFG’s recommended fish releases were continued. The Commission therefore provided

⁴⁶ 31 FPC at 515.

for a period of study and negotiation, followed by the setting of a new release schedule after notice and opportunity for a hearing, to consider anew how best to balance the competing interests involved. Among other things, the Commission anticipated that additional sources of water might become available, economic conditions might change, or other means of preserving fish, such as hatcheries, might prove feasible. The Commission also noted the possibility that the fishery might be destroyed by changes in the flow of the river downstream from La Grange by natural or other causes wholly beyond the Districts' control. In light of these considerations, the Commission included a specific reservation of authority to revisit the minimum flow schedule.

51. The 1996 amendment proceeding allowed the Commission to strike a new balance of competing factors, based on the settlement agreement, by providing for increased minimum flows, review of any non-flow-related measures, and additional monitoring and study. The April 3, 2008 Order determined that the information gathered as a result of those studies was insufficient to warrant changing the Article 37 flow schedule. Thus, it preserved the FPA section 10(a)(1) balance that the Commission struck in 1996. That balance remains in effect, unless and until the Commission determines that a change is required and the license must be reopened and amended. In these circumstances, we find no basis for concluding that the April 3, 2008 Order violates the comprehensive development standard of section 10(a)(1) of the FPA.

52. As discussed in more detail below, however, we have reexamined some of the findings in the April 3, 2008 Order, based not only on existing information, but also on the new information included with the parties' rehearing requests. We have concluded that interim measures may be needed to protect fishery resources pending relicensing, and that additional procedures will be necessary to assist us in determining what measures should be required. This does not mean, however, that the current license fails to meet FPA section 10(a)(1).

D. Compliance with NEPA

53. Conservation Groups argue that the order is a major federal action for which the Commission must prepare an environmental impact statement (EIS) pursuant to the National Environmental Policy Act (NEPA).⁴⁷ They note that the Commission prepared an EIS for the previous reopener proceeding, and maintain that the action in this case, "a proceeding to 'determine whether to require further monitoring studies and changes in project structures and operations to protect fishery resources in the Tuolumne River, after

⁴⁷ NEPA section 102(2)(c), 42 U.S.C. § 4332(c) (2006).

notice and opportunity for hearing,’ constitutes an action for purposes of NEPA.”⁴⁸ They further assert that the April 3, 2008 Order is a “discretionary approval of a plan of operation for the New Don Pedro Project pursuant to the reopener provided in the 1996 Order.”⁴⁹ They add that the order meets many of the standards for significance of impact set by regulations of the Council on Environmental Quality (CEQ), including that it is highly controversial and may adversely affect ESA-listed fish species.⁵⁰ At the very least, they maintain, the Commission should have prepared an environmental assessment (EA) to demonstrate that the order would not have a significant impact on the environment.

54. Conservation Groups mischaracterize the nature and effect of the April 3, 2008 Order. The NEPA requirement to prepare an EIS is triggered by a “major federal action significantly affecting the quality of the human environment.”⁵¹ An agency that proposes to take such an action must first prepare an analysis of the environmental impacts of the action and any reasonable alternatives to it. The order at issue here was not a proposed agency action, but rather a determination that no action is warranted. No action in this case means no change in the existing environment; in other words, any environmental effects of project operation under the existing license will continue to occur. Those effects are attributable to the action taken in the 1996 amendment proceeding, for which the Commission prepared an EIS before taking action to amend the license. In this case, the Commission has not proposed to take any action to change the existing license, so there is no proposed federal agency action for which an EIS could be required. We therefore conclude that the Commission was not required to prepare either an EA or an EIS before issuing the April 3, 2008 Order. If the Commission proposes to amend the license in the future, an EA or an EIS may then be required.

E. Presence of Central Valley Steelhead

55. As noted earlier, NMFS has listed California Central Valley distinct population segment (DPS) of steelhead (*Oncorhynchus mykiss* or *O. mykiss*) as threatened under the ESA, and has designated critical habitat for this DPS that includes reaches of the Tuolumne River. Steelhead is the anadromous form of *O. mykiss*; the resident form of *O.*

⁴⁸ Conservation Groups’ request for rehearing at 27.

⁴⁹ *Id.*

⁵⁰ *See* 40 C.F.R. § 1508.27(b) (2008).

⁵¹ 42 U.S.C. § 4332(c) (2006).

mykiss is commonly known as rainbow trout. The ESA listing includes only the anadromous form of the species.

56. In the April 3, 2008 Order on the Summary Report, Commission staff found that no *O. mykiss* anadromy (migration from salt water to fresh water for spawn) has been identified in the Tuolumne River and that monitoring efforts to date have been inconclusive in determining the presence or absence of steelhead in the Tuolumne River. Staff further found that the origin and nature of rainbow trout downstream of La Grange Dam are unclear, and it is unclear whether steelhead occur in the Tuolumne River downstream of La Grange Dam. Staff therefore determined that the Districts should initiate a monitoring effort to determine if the Tuolumne River currently supports anadromous forms of rainbow trout. Staff found no basis for requiring additional instream flow studies for steelhead, because monitoring for *O. mykiss* should first be completed in order to determine whether steelhead are present.⁵²

57. NMFS, FWS, and Conservation Groups argue that Central Valley steelhead are present in the Tuolumne River and that the April 3, 2008 Order did not adequately consider effects of the Don Pedro Project on the fish or their designated critical habitat. They rely on a March 6, 2008 unpublished study by Zimmerman and others which analyzed the microchemistry of fish captured on several Central Valley rivers, including the Tuolumne River, to determine their migratory history.⁵³ They note that, although this study was released before the order was issued, Commission staff did not consider it, and apparently relied on preliminary results of the study, which have been superseded.

58. As described in the study, California DFG collected 146 wild *O. mykiss* from the Tuolumne River between 2001 and 2007 for otolith microchemistry analysis.⁵⁴ Using this method, eleven of the 146 fish sampled were steelhead, in that they were identified as having anadromous (steelhead) maternal origin, and one of these eleven fish displayed an anadromous migratory history. NMFS, FWS, and Conservation Groups argue that the Commission should consider this new information on rehearing. NMFS and FWS add that this study provides not only substantial evidence, but conclusive evidence that

⁵² April 3, 2008 Order, 123 FERC ¶ 62,012 at 64,033.

⁵³ Zimmerman et al., “Maternal Origin and Migratory History of *Oncorhynchus mykiss* captured in rivers of the Central Valley, California” (March 6, 2008) (Attachment C to NMFS rehearing request; Item 9 included with FWS rehearing request).

⁵⁴ Otoliths, commonly known as “earstones,” are hard calcium carbonate structures located directly behind the brain in bony fishes. They are used in age and growth studies and also provide a record of the chemistry of the water inhabited by fish.

steelhead migrate to the Tuolumne River and successfully spawn there, and are present in the Tuolumne River.⁵⁵

59. The Districts argue that “the low numbers of anadromous *O. mykiss* found in samples from the San Joaquin tributaries indicate little evidence of a successful ocean-type life history strategy, particularly south of the Stanislaus River.”⁵⁶ They add that it is “unclear whether anadromous *O. mykiss* found in the Tuolumne River arrive from a self-sustaining population within the Central Valley Steelhead [DPS] or are from strays from nearby rivers such as the Mokelumne River, where the steelhead hatchery was stocked with fish from the Eel River in the Northern California steelhead DPS.”⁵⁷ They therefore urge the Commission not to rely on the study without critical review of the data and analyses on which it is based, or to impose “unsupported and unsupported changes to Project operations” that could adversely affect the fishery resources.⁵⁸

60. We do not regard the Districts’ arguments that few fish were found, or that the population might not be self-sustaining, as providing a basis to disregard this study. Their remaining argument amounts to nothing more than a suggestion that the fish might possibly be from the Northern California Steelhead DPS, rather than the Central Valley Steelhead DPS, and that genetic testing would be required to make this determination. Again, this possibility would not cause us to reject the study.

61. We have reconsidered staff’s findings based on the new information provided in this study. We agree that this information is sufficient to support the conclusion that steelhead are present in the Tuolumne River.⁵⁹

⁵⁵ As NMFS and FWS correctly point out, Commission decisions must be supported by substantial evidence. *See* 16 U.S.C. § 8251(b) (2006). They take issue with the statement in the April 3, 2008 Order that monitoring efforts have been inconclusive, arguing that Commission staff incorrectly determined that conclusive evidence was required. 123 FERC ¶ 62,012 at 64,033. Substantial evidence must be sufficient to support a finding or conclusion. We regard staff’s statement as expressing the view that the monitoring efforts were insufficient to support the finding that steelhead were present. As discussed above, we have reconsidered that conclusion based on additional evidence.

⁵⁶ Districts’ motion for clarification at 4 (filed July 7, 2008).

⁵⁷ *Id.* at 4-5.

⁵⁸ *Id.* at 5.

⁵⁹ In light of this, we need not consider the parties’ arguments that the

62. NMFS, FWS, and Conservation Groups assert that we should initiate formal consultation with NMFS based on this finding. We disagree. Our finding that steelhead are present in the Tuolumne River does not change our decision, as discussed above, that there is currently no proposed action that could trigger the requirement to consult formally with NMFS concerning project effects on steelhead. However, this finding does require us to reconsider whether additional measures may be needed to benefit steelhead.

63. NMFS argues that the April 3, 2008 Order did not address project impacts to critical habitat for steelhead in the Tuolumne River. NMFS adds that the agencies' Limiting Factor Analysis showed that current habitat and flow conditions do not support the primary constituent elements for steelhead habitat at a functioning level, and the order offers no evidence to the contrary.

64. Such an analysis would be appropriate in connection with a proposed action that may affect steelhead or its critical habitat, and would be done as part of a NEPA analysis or a biological assessment. As explained above, there is currently no proposed action that would require such an analysis or that could trigger the requirement to consult formally with NMFS under section 7(a)(2) of the ESA. Therefore, staff was not required to address critical habitat in the April 3, 2008 Order. We are requiring the Districts to develop a water temperature model for steelhead. Until that model is developed, it would be premature to assume the accuracy of the Limiting Factor Analysis related to habitat functionality. Once the model is developed and the instream flow study is completed, spawning and rearing habitat can be assessed. If amendments to the license are proposed, the Commission will consider whether ESA consultation is required before they can be implemented.

65. Conservation Groups argue that the April 3, 2008 Order does not address NMFS's request for an instream flow schedule that will protect *O. mykiss* from project impacts related to river temperature, citing NMFS's 2003 petition and comments in 2004 and 2006 to the effect that summer flow releases from La Grange Dam should be sufficient to assure that water temperatures from the dam to a bridge at river mile 40 do not exceed 65 degrees Fahrenheit (F), and should at no time be less than 150 cfs.⁶⁰ As discussed below, we agree that flows and water temperatures are key controlling factors for Central

April 3, 2008 Order improperly failed to consider other evidence in the record to support a finding that steelhead are present.

⁶⁰ See Conservation Groups' request for rehearing at 39-40.

Valley steelhead, and are requiring the Districts to develop a temperature model and conduct an instream flow study.⁶¹

66. In light of our finding that steelhead are present, we have determined that several actions are required to assist in determining whether interim measures are needed pending relicensing. Because these actions will also benefit Chinook salmon, we include them in these measures as well. First, we require the Districts, in consultation with FWS and NMFS, to develop and implement a water temperature model and instream flow study to assist in determining what flows and habitat measures will benefit steelhead and Chinook salmon. Second, we amend Articles 37 and 58 to ensure that NMFS is included in any consultation with the Districts regarding decisions under the existing license that may affect steelhead and Chinook salmon. Third, we direct the appointment of a settlement judge to assist the parties in determining whether interim measures are needed to benefit these fish, and, if so, what measures can feasibly be required pending the ultimate resolution of these matters at relicensing. We discuss these measures later in this order, after considering the parties' arguments concerning fall-run Chinook salmon.

F. Fall-Run Chinook Salmon

67. In the April 3, 2008 Order, Commission staff reviewed information concerning the decline of fall-run Chinook salmon in the Tuolumne River since 2000. Staff focused on Chinook salmon escapement; that is, the number of fish that escape harvest in the commercial and recreational fishery and return to the river to reproduce. Staff found that

⁶¹ We understand the importance of maintaining optimum water temperatures, especially during the critical summertime period for fry and juvenile steelhead rearing. However, a 65 degree F upper threshold is conservative, considering that many larger river systems in less arid regions experience summertime water temperatures well in excess of 65 degrees F. For example, Columbia River water temperatures in Oregon and Washington often exceed 70 degrees during July and August. We note that the Environmental Protection Agency (EPA), in consultation with NMFS and FWS, has established a criterion for approval of state water quality standards in the region of 68 degrees F (plus cold water refugia protection for salmon and trout migration) as the maximum summer temperature to protect salmon and trout. *See* EPA's Region 10 Guidance for Pacific Northwest State and Tribal Temperature Water Quality Standards, April 2003, available at: <http://www.djc.com/news/en/11135663.html>. *See also* letter from Robert Lohn, NMFS Regional Administrator, to John Iani, EPA Regional Administrator (April 23, 2003); and letter from David Wesley, FWS Regional Administrator, to John Iani, EPA Regional Administrator (April 21, 2003); both available at: <http://www.djc.com/news/en/11135663.html>.

Chinook salmon escapement initially increased in the Tuolumne River under the increased Article 37 flows, from 4,400 fish in 1996 to 17,900 fish in 2000, and then declined to 1,900 fish in 2004. The Districts' subsequent annual reports showed escapements of 700 fish in 2005 and 600 fish in 2006. Staff observed that the years 2001 through 2004 were classified as below normal or dry water years, so minimum flows were decreased in accordance with the flow schedule because of decreased availability of water in the river basin. Staff further found, based on information from NMFS and the Pacific Fisheries Management Council (Fisheries Council), that conditions in the marine environment were having adverse impacts on Chinook salmon populations along the entire West Coast. Staff concluded that the information presented to date did not indicate that the flow requirements of Article 37 were responsible for the decline of Chinook salmon in the Tuolumne River and that therefore, the recommended increases were not warranted and the existing flow requirements should be maintained.⁶²

68. NMFS, FWS, California DFG, and Conservation Groups argue that the Commission should reconsider these findings, based on further analysis of existing information and consideration of new information provided with or referenced in their rehearing requests. They maintain that, while out-of-tributary factors, such as ocean conditions, have contributed to the decline of these fish, poor instream conditions as a result of insufficient flow releases are a major contributor and cannot be disregarded. They urge the Commission to adopt the agencies' recommended flow schedule on an interim basis pending relicensing, to protect fishery resources and mitigate these deleterious project effects.

69. NMFS, FWS, California DFG, and Conservation Groups argue that the April 3, 2008 Order is based on a misunderstanding of information on ocean conditions. NMFS acknowledges that recent findings by it and the Fisheries Council indicate that warmer waters in the Pacific Ocean during 2005 caused a decline in marine food production, thus contributing to the marked decline in returning Chinook and coho salmon populations along the entire West Coast in 2007 and 2008. NMFS points out, however, that these findings concern only one part of the life cycle of these fish, and do not provide grounds for dismissing other causes, such as poor instream conditions, affecting the essential freshwater phase of their life cycle. NMFS adds that in their Limiting Factors Analysis, the agencies (NMFS, FWS, and California DFG) provided analyses and evidence of deleterious effects to Chinook salmon from the flow release schedule for the Don Pedro Project, and the order improperly failed to address this evidence.⁶³ This analysis indicates that a wide range of factors limit Chinook salmon and

⁶² April 3, 2008 Order, 123 FERC ¶ 62,012 at 64,030-32.

⁶³ See letter to the Commission from FWS, California DFG, and NMFS, "Limiting

O. mykiss populations in the Tuolumne River, including the relationship of instream flow releases to adult Chinook recruitment, evidence that winter flows affect the number of fry that survive to a smolt size in the river, and evidence that spring flow affects the number of smolts that survive their migration through the Tuolumne River and the Delta. NMFS argues that the order focused primarily on ocean conditions but ignored this evidence of deleterious project effects without providing adequate explanation.

70. The Limiting Factor Analysis identifies Tuolumne River flows as having the greatest impact on juvenile Chinook salmon survival. The authors analyze critical flow periods and suggest a relationship between flow and survival. They outline a detailed adaptive management approach to establish the importance of flows. We note, however, that they do not include any studies to ascertain the influence of other possible limiting factors, such as pumping at the state and federal water projects in the San Francisco Bay Delta, ocean conditions, and unscreened diversions in the Tuolumne River and in the Delta. In response to these concerns, we find that it may be inappropriate to focus on flow-related studies to the exclusion of other, possibly significant, limiting factors.

71. The authors state that, depending on their magnitude and when they occur, winter flows provide many benefits to juvenile salmon rearing, and that flows in February and March may have an important effect on the number of juvenile Tuolumne River Chinook salmon that survive to smolt size (greater than 70 mm in fork length, which is the length from the fork in the tail fin to the nose). We note that most of the data on which they rely comes from studies on the Stanislaus River, and the authors admit that their conclusion is preliminary.

72. The authors further state that as Chinook salmon smolts migrate through the Tuolumne River and the South Delta (the southern portion of the Bay Delta) from April through mid-June, their survival is highly dependent on spring flow. We find that, in light of the questions posed for study, it appears that the optimal timing and magnitude of these flows to aid the migration of these fish from the river to the ocean, as well as the interaction of these flows with other factors, are not fully understood.

73. The authors state that there are numerous gaps in the information associated with their conceptual limiting factors model. They describe testable hypotheses, study methods, and metrics that could be used to address these information gaps, and list them in order of priority of importance. They also propose experimental flow release schedules for the Tuolumne River that they believe would be adequate to test their

Factor Analysis and Recommended Studies for Fall-Run Chinook Salmon and Rainbow Trout in the Tuolumne River,” (filed March 5, 2007).

hypotheses. They anticipate that a ten-year study would be required to address the management questions raised by their analysis. They recommend that these studies be conducted within an adaptive management framework.

74. Our review of the Limiting Factor Analysis does not suggest that the recent collapse of the Tuolumne River fall-run Chinook salmon can be attributed to the Article 37 flow regime. Rather, the analysis simply shows that, up to a point, higher flows produce more fish. This is not surprising. However, no significant increase in run size could occur if conditions outside the river system are unfavorable. Because fall-run Chinook salmon failed in the entire Sacramento and San Joaquin River system, it seems likely that one or more factors common to all of these runs may have caused the collapse.⁶⁴ Further, we note that in recent Congressional testimony, NMFS agreed with this conclusion, stating that “the cause of the decline is likely a survival factor common to salmon runs from different rivers and consistent with the poor ocean conditions hypothesis being the major causative factor.”⁶⁵

75. The Limiting Factor Analysis states that Tuolumne River spring flows in excess of 3,000 cfs are necessary to ensure successful Chinook returns. However, the fallacy of focusing entirely on flows is illustrated by the fact that the average spring flow in 2006 and 2007 (from February 1 through May 31) exceeded 3,500 cfs, yet the returns of both jack and adult fall-run Chinook salmon in 2008 and 2009 were extremely low.

76. The Limiting Factor Analysis reports that as of 1997, over 98.5 percent of the 3,356 water diversions in the Central Valley were unscreened or poorly screened, and were responsible for entraining and killing juvenile salmonids. However, the authors discount the effect of these diversions. They also do not consider the impacts of the massive pumps at the California State Water Project and the Federal Central Valley Project to be a critical factor affecting juvenile salmon survival.

⁶⁴ NMFS argues that there was a relative decrease in salmon escapement in the Tuolumne River as compared to the Stanislaus and Merced Rivers in the San Joaquin River Basin. As reviewed in the April 3, 2008 Order, escapement numbers for all three rivers declined at a comparable rate. 123 FERC ¶ 62,012 at 64,027.

⁶⁵ Written testimony of Rodney R. McInnis, Southwest Regional Administrator, NMFS, National Oceanic and Atmospheric Administration, U.S. Dept. of Commerce, Hearing Before the Subcomm. On Fisheries, Wildlife, and Oceans, of the H. Comm. on Natural Resources, at 2 (May 15, 2008), *available at*: http://republicans.resourcescommittee.house.gov/pdf/Testimony_5-15-08_McInnis.pdf.

77. The mean yearly export of these two water projects, which pump water from the San Francisco Bay Delta for delivery to water users in the central and southern portions of the state, has increased from about 2,100 cfs in 1992 to about 4,200 cfs in 2004.⁶⁶ The water diversion dams and pumps can trap out-migrating juvenile salmon in the delta, where they are killed before they can reach the sea. Recent biological opinions prepared by NMFS (in 2009) and FWS (in 2008) for the continued operation of these two water projects concluded that significant losses would occur to the ESA-listed winter-run Chinook salmon and the Delta smelt, respectively.⁶⁷ Operation of these projects cannot be discounted as a contributing factor to the decline of the Tuolumne River fall-run Chinook salmon.⁶⁸

⁶⁶ Draft Summary of Delta Hydrology Data, Water Years 1985-2004, available at: <http://baydeltaoffice.water.ca.gov/ndelta/summaryreport/documents>.

⁶⁷ NMFS, Biological Opinion on the Long-Term Operations of the Central Valley Project and State Water Project (June 4, 2009), *available at*: <http://swr.nmfs.noaa.gov/ocap.htm>; FWS, Biological Opinion on the Proposed Coordinated Operations of the Central Valley Project and the State Water Project (December 15, 2008), *available at*: http://www.fws.gov/sacramento/es/documents/SWP-CVP_OPs_BO_12-15_final_OCR.pdf.

⁶⁸ Conservation Groups take issue with staff's review of information in the April 3, 2008 Order indicating that the total flow in the Tuolumne River before and after project construction has not changed significantly (756,000 acre-feet between 1955 and 1970, or 40 percent of the unimpaired runoff of 1,876,000 acre feet; and 773,000 acre feet between 1971 and 2005, or 39 percent of the unimpaired runoff of 1,992,000 acre feet). Conservation Groups request for rehearing at 36, *citing* 123 FERC ¶ 62,012 at 64,031. They maintain that this contradicts evidence submitted by NMFS in its study plan comments indicating that the hydrology of the Tuolumne River watershed is highly impaired, suggesting that the pre-project average annual unimpaired watershed yield was 1,497,500 acre feet, and the post-project hydrograph (1971-1994) was only 318,971 acre feet, which NMFS states is roughly a 78.9 percent impairment of the unimpaired flows. Conservation Groups add that the order does not try to reconcile this competing evidence, or explain why it found the information submitted by the Districts more reliable.

The 318,017 acre-feet figure, which NMFS attributes to the Bay Institute of San Francisco, represents the median yearly flow in the lower Tuolumne River between 1971 and 1994, and cannot be directly compared to the average flow data presented by the Districts in the Summary Report. The two time periods in that report, 1955 to 1971 and 1971 to 2005, include the years before and after New Don Pedro Project was built. They

(continued...)

78. The Limiting Factor Analysis also discounts the effects of ocean conditions on the Tuolumne River stock. A report by the National Oceanic and Atmospheric Administration in 2006⁶⁹ and a recent report prepared for the Pacific Fishery Management Council in 2009⁷⁰ document that poor ocean conditions in 2005 and 2006 were the primary cause for the collapse of the Sacramento River Basin fall-run Chinook salmon.

79. With their June 16, 2009 motion for decision and request to include new evidence, Conservation Groups filed a copy of the latter report. It examines the cause of the collapse of the Sacramento River fall-run Chinook salmon fishery that led to its complete closure in 2008 (and continuing in 2009). The Tuolumne River is a tributary of the San Joaquin River, which flows into the Sacramento River, and is thus part of the Sacramento River Basin. The report finds that ocean conditions in 2005 and 2006 were the proximate cause of the poor performance of the 2004 and 2005 broods of Sacramento River fall Chinook.⁷¹ It also finds that fishery management played a role in the low escapement of 2007, and that the escapement goal could have been met in 2007 with a more accurate pre-season forecast and constraints on fishing opportunities.⁷² It recognizes, however, that “the rapid and likely temporary deterioration in ocean conditions is action on top of a

compare flows in the Tuolumne River under the new project with those of the earlier (and smaller) Don Pedro Project, which was constructed in 1924. They were not intended to compare the unimpaired runoff of the entire Tuolumne River watershed with the flows released from the Don Pedro Project. Staff cited them to show that the project had not significantly altered flows in the lower Tuolumne River in the recent past. In the excerpt that Conservation Groups cite, NMFS appears to attribute all flow reductions in the lower Tuolumne River to operation of the Don Pedro Project. This does not take into account that, in the Tuolumne River watershed, in addition to the Districts and the City and County of San Francisco, there are over 300 other entities with rights to divert water from the Tuolumne River. *See* map of Tuolumne River water rights, available at: <http://waterightsmaps.waterboards.ca.gov/ewrims/gisapp.aspx>. These many diversions also contribute to lower instream flows and impaired salmon runs.

⁶⁹ Peterson, William T., et al., *Ocean Conditions and Salmon Survival in the Northern California Current* (NMFS, November 2006).

⁷⁰ Lindley, S.T., et al., *What caused the Sacramento River fall Chinook stock collapse?* (2009) (Attachment 1 to Conservation Groups motion, filed June 16, 2009).

⁷¹ *Id.* at 4.

⁷² *Id.* at 5.

long-term, steady degradation of the freshwater and estuarine environment.”⁷³ It is this latter finding that Conservation Groups request us to consider, arguing that it demonstrates that “years of poor freshwater conditions left the fishery vulnerable to such a collapse.”⁷⁴

80. Conservation Groups also request that we take into account California DFG’s 2008 escapement estimate for fall-run Chinook salmon in the Tuolumne River. Based on its preliminary analysis, as discussed in that agency’s draft report, escapement is estimated at 372 fish for 2008.⁷⁵ Conservation Groups argue that, while this represents a slight improvement over the 2007 estimate of 211 fish, it still falls far short of the goal of improving smolt survival and successful escapement in the Tuolumne River and continues a precipitous downward trend.

81. We agree that ocean conditions are only one factor, and that other factors are also contributing to the decline in these fish. However, in light of the report’s finding that ocean conditions were the proximate cause of the collapse of the fishery, we question whether providing more water to improve conditions in the Tuolumne River could have resulted in a meaningful increase in escapement. The recent decline in runs of fall Chinook salmon in the Tuolumne River cannot be solely attributed to the flow regime required by Article 37 of the Don Pedro Project license. Concurrent declines in fall Chinook salmon runs have been observed in other rivers adjacent to the Tuolumne River, all of which flow into the San Joaquin River. The impact of unfavorable ocean conditions on the survival of maturing fall Chinook salmon and the effect of withdrawal of water for municipal and irrigation uses through many unscreened intakes on the downstream migrating young cannot be discounted. While more water in the Tuolumne River might have produced greater numbers of fish, it would not have yielded an increase in escapement if those fish were unable to survive poor conditions elsewhere, in the San Francisco Bay Delta and the ocean.

82. NMFS, FWS, California DFG, and Conservation Groups also argue that the Commission must take into account the new information provided in an unpublished report by Mesick of FWS which suggests that the natural fall-run Chinook salmon population in the Lower Tuolumne River is at a high risk of extinction due to insufficient

⁷³ *Id.* at 4.

⁷⁴ Conservation Groups’ motion at 4 (filed June 16, 2009).

⁷⁵ O’Brien, J., *Draft 2008 Tuolumne River Fall Chinook Salmon Escapement Survey* at 1 (2009), included as Attachment 2 to Conservation Groups motion for decision (filed June 16, 2009).

instream flow releases.⁷⁶ The study characterizes the risk of extinction based on population size, rates of population decline, catastrophes, and hatchery influence. Based on population size, NMFS argues that escapement rates of naturally produced fish in the Tuolumne River are probably less than a total of 250 fish between fall 2005 and fall 2007, which places the Tuolumne River at a high risk of extinction. NMFS notes that there has also been a precipitous decline in escapement, which on the Tuolumne has “declined from about 16,000 adults in fall 2000 to few if any fish between fall 2005 through fall 2007,”⁷⁷ and that escapement in 2007 was “catastrophically low.”⁷⁸

83. NMFS notes that the report includes recommendations for a minimum flow schedule that should be able to sustain both naturally producing Chinook salmon and *O. mykiss* populations that would include the following elements: (1) pulse flows of 1,330 cfs for 45 days during April and May to provide suitable conditions for migrating juvenile salmon and Central Valley steelhead; (2) fall pulse flows of 1,500 cfs for 10 days during mid-October to attract adult Chinook salmon to the Tuolumne River and minimize straying; and (3) year round base flows of 235 cfs to provide suitable water temperatures throughout the summer in 12.4 miles of habitat for *O. mykiss* and suitable spawning and rearing conditions for fall-run Chinook salmon.⁷⁹ The NMFS, FWS, and Conservation Groups urge the Commission to adopt these flows now, on an interim basis pending relicensing. California DFG requests the Commission to direct the Districts to evaluate alternative approaches to provide higher magnitude and greater duration instream flows, especially during the spring of drier than average water years, to assure acceptable salmon smolt survival. California DFG also requests that the Districts be directed to work with the agencies to develop a hatchery plan for salmon conservation.

84. The Districts argue that there are methodological inconsistencies in this report and its supporting analyses that reduce the credibility of the analysis and the development of population and flow targets. They maintain that the assumption that large numbers of hatchery fish from the Sacramento River basin released in the Bay and Delta should return to the Tuolumne River in recent years, when few fish of any origin are returning to

⁷⁶ Mesick, C., “The High Risk of Extinction for the Natural Fall-Run Chinook Salmon Population in the Lower Tuolumne River due to Insufficient Instream Flow Releases (April 30, 2008) (Attachment to NMFS request for rehearing; Item 5 included with FWS rehearing request).

⁷⁷ *Id.* at 2.

⁷⁸ *Id.* at 3.

⁷⁹ *Id.* at 4.

the river, is not tenable. They also question the practicality of providing floodplain inundation for these fish while meeting obligations for water supply and flood control.⁸⁰ They state that the report should be peer-reviewed before being accepted as a basis for any conclusions regarding the population status of the Tuolumne River fall-run Chinook salmon.

85. In our view, this new information provides some basis for concern. Although it cannot be said that the Don Pedro Project alone is the proximate cause of the major factors that are producing the decline in these fish, flow releases from the project appear to be a contributing factor among others, and we would not want to disregard this information only to find that the fish are approaching extinction pending relicensing. We do not currently have sufficient information to conclude that the agency-recommended flows should be required on an interim basis. In addition, we do not have sufficient information regarding the effects of these flows and reasonable alternatives on the full range of interests that would be affected, including not only fishery resources, but also power generation, irrigation, flood control, and water supply. Our preliminary analysis suggests that in order to maintain these flows, the Districts would be required to release significantly more water than under the current flow regime.⁸¹ Because of the potential

⁸⁰ Districts' motion for clarification at 4.

⁸¹ Commission staff considered the flow regimes described in the agencies' Limiting Factor Analysis, Conservation Groups rehearing request, and the Mesick Extinction Paper, and compared them to the current flow regime, as well as flow alternatives considered in the 1996 EIS. The EIS found that these higher flow regimes, while improving water quality and fish production in the lower Tuolumne River, resulted in increased groundwater pumping and reduced water supplies.

The flow allocation for the fisheries in the Tuolumne River downstream of La Grange Dam comprises between 5 and 10 percent of the unimpaired runoff. The flow regime in the Limiting Factor Analysis requires between 2.3 and 7.4 times more water than the current allocation, and would increase the percentage of water for fisheries to 14 percent in drier years and over 40 percent in wetter years. Compared to the Staff Alternative in the EIS, it would allocate 6 percent more water to fisheries in a dry year, 12 percent more water in a normal year, and 10 percent more water in a wet year. Compared to the FWS alternative in the EIS, it would allocate about the same percentage of water in critical and dry years, around 9-10 percent more water in normal years, and 11-24 percent more water in wet and very wet years. (Article 37 defines seven different water-year types, according to their frequency of occurrence and the amount of water available, based on the California State Water Resources Control Board's water supply index for the San Joaquin Basin and the California Department of Water Resources')

(continued...)

for significant impacts on municipal, agricultural, and industrial water use, we would likely need to prepare an EA or an EIS before we could recommend amending the license to require these flows.

86. However, based on our reevaluation of existing information and consideration of this new evidence, we find that the Districts should be required to develop and implement an instream flow study to determine flow requirements for Central Valley steelhead and Chinook salmon. We further find that additional procedures are needed to assist in determining whether interim measures should be required pending relicensing, and, if so, what measures are feasible.

unimpaired runoff forecast for the San Joaquin Valley. *See Turlock and Modesto Irrigation District*, 76 FERC ¶ 61,117, at 61,111 (1996).) Because they differ somewhat from the three water-year types considered in the EIS, staff adjusted them for purposes of comparison by averaging adjacent water year allocations (combining critical and dry years, for example, to create a single allocation).

The flow regime in Conservation Groups, rehearing request is nearly identical to that of the Limiting Factor Analysis, but does not include a base flow of 400 cfs during April in dry and critical water years (defined in Article 37 as the driest of water years, occurring about 6.4 percent of the time). It would increase the fisheries flow allocation from 2 to 7.4 times that currently required, and would increase the fisheries percentage of unimpaired runoff by from 12 percent in drier years to over 40 percent in wetter years. Compared to the Staff Alternative in the EIS, Conservation Groups' proposal allots 8 percent more water in a dry year, 12 percent more water in a normal year, and 10 percent more water in a wet year. Compared to the FWS alternative in the EIS, it would allot about the same percentage of the unimpaired runoff in critical and dry years, but 17 percent more in a normal year and 24 percent more in a wet year.

The flow proposal in the Mesick Extinction Paper did not define any water year types, but simply identified a year-round base flow, with pulse flows in the spring for juvenile rearing and migration, and in the fall for adult attraction (for a total of 293 thousand acre-feet). It would result in an increase in the fisheries allocation of from 2 to 3.5 times that currently required, and would require 21 percent more water in critical years. Compared to the Staff Alternative in the EIS, it allots 9 percent more water in dry years and 3 percent more water in normal years, but 18 percent less water in wet years. Compared to the FWS alternative in the EIS, it would require almost 244 percent more water in critical years, 80 percent more water in dry years, 20 percent more water in normal years, and 4 percent less water in wet years.

G. Additional Procedures to Assess Interim Measures

87. We have explained that “[i]f, with the passage of time, a project is found to have unanticipated, serious impacts on . . . fishery resources, the Commission can reopen the license to determine what, if any, additional mitigation measures are required by the public interest, after notice and opportunity for hearing.”⁸² In addition, “[w]hen it appears that ongoing operation may have adverse effects on listed species, a necessary first step is to determine whether and how the project may be affecting the species, and what changes may be needed to the project or its operation to address any adverse effects.”⁸³ To assist in developing this information for ESA-listed species, our staff’s usual course of action is to direct the licensee to consult informally with the FWS or NMFS, as well as other interested entities, to examine project effects and any proposed changes. If the parties are able to agree on what changes are needed, the licensee can request a license amendment to implement them, and the Commission will institute a reopener proceeding to consider the proposed amendment and any alternatives. In this case, however, the Districts have been consulting informally with NMFS since late 2003, and the parties have been unable to agree on the presence of listed Central Valley steelhead in the Tuolumne River, or on what measures may be needed to protect fall-run Chinook salmon, which is not an ESA-listed species. Therefore, it appears that further informal consultation would not be productive.

88. The existing license expires in 2016, and procedures for relicensing will not begin until 2011. At relicensing, the Commission will have an opportunity to consider anew how best to balance the competing interests involved for the term of any new license that it may issue. However, in light of the presence of ESA-listed steelhead and the serious decline of fall-run Chinook salmon that is occurring, there may be a need for interim protective measures pending relicensing. To assist in determining what measures may be required, the following additional procedures are necessary.

1. Instream Flow Study and Temperature Model

89. In the April 3, 2008 Order, Commission staff found that monitoring for *O. mykiss* should be completed before requiring additional instream flow studies. Now that we have found that steelhead are present in the Tuolumne River, additional information is needed to determine flow requirements for steelhead and whether higher flows result in

⁸² *Ohio Power Co.*, 71 FERC 61,092, at 61,314 n.43 (1995).

⁸³ *City of Tacoma, Washington*, 104 FERC 61,324, at 62,221 (2003).

higher steelhead production. Further, the Districts should monitor abundance of juvenile and adult *O. mykiss* in the spring and summer to evaluate the effectiveness of the releases.

90. NMFS, FWS, California DFG, and Conservation Groups have recommended that the Districts be required to release and study higher instream flows for steelhead and Chinook salmon. At various times, these parties have suggested different flow regimes for further study. In their Limiting Factor Analysis in February 2007, NMFS, FWS, and California DFG jointly recommended study of releases that included summer base flows of 150 to 250 cfs, spawning base flows of 200 to 300 cfs, and spring pulse flows of from 500 to 5,000 cfs, depending on the water year type.⁸⁴ In September 2007, in comments on the Districts' fisheries study plan, NMFS recommended studies of experimental flow releases that included summer flows of 150 cfs, 200 cfs, and 250 cfs, and spring pulse flows of 3,000 cfs for three different flow periods (April 15 to June 1, March 15 to June 1, and March 1 to June 1).⁸⁵ In their requests for rehearing, based on the 2008 Mesick report,⁸⁶ NMFS, FWS, and Conservation Groups now recommend that we require the Districts to release and study: (1) year-round base flows of 235 cfs to provide suitable water temperatures throughout the summer for *O. mykiss* and suitable spawning and rearing conditions for fall-run Chinook salmon; (2) pulse flows of 1,330 cfs for 45 days during April and May to provide suitable conditions for migrating juvenile salmon and Central Valley steelhead; and (3) fall pulse flows of 1,500 cfs for 10 days during mid-October to attract adult Chinook salmon to the Tuolumne River and minimize straying.⁸⁷ They maintain that we should immediately require these changes in the flow schedule on an interim basis, pending relicensing, to benefit steelhead and Chinook salmon.

⁸⁴ Mesick, Carl, *et al.*, *Draft Limiting Factor Analyses and Recommended Studies for Fall-run Chinook Salmon and Rainbow Trout in the Tuolumne River* at 2 (filed Feb. 27, 2007).

⁸⁵ Letter from Steven A. Edmondson, NMFS, to Kimberly D. Bose, FERC, at 7-8 (filed Sept. 18, 2007).

⁸⁶ Mesick, Carl, *The High Risk of Extinction for the Natural Fall-Run Chinook Salmon Population Due to Insufficient Instream Flow Releases* (April 30, 2008) (included as Attachment B to NMFS rehearing request and Attachment 11 to FWS rehearing request).

⁸⁷ See Conservation Groups request for rehearing at 25, NMFS request for rehearing at 19, and FWS request for rehearing at 21.

91. As explained above, we do not currently have sufficient information to amend the license to require these flows. However, we agree that the Districts should be required to develop and implement an instream flow study to determine flow requirements for Central Valley steelhead. Because this study will also benefit fall-run Chinook salmon, we include them as well.

92. We require the Districts, in consultation with the resource agencies, to develop and implement an instream flow incremental methodology (IFIM)⁸⁸ study to determine instream flows necessary to maximize Chinook salmon and *O. mykiss* production and survival throughout their various life stages. The results of the physical habitat simulation (PHABSIM) flow model under the IFIM framework would assist in identifying the amount of available habitat (weighted usable area) for the species under various flow conditions. Based on the agencies' base flow recommendations, the Districts' instream flow study and analyses should evaluate base flows including, but not limited to, 150 cfs, 200 cfs, 250 cfs, 300 cfs, and at least 400 cfs from La Grange Dam. Furthermore, the instream flow study should evaluate spring pulse flows of 1,000 cfs to 5,000 cfs and fall pulse flows of up to 1,500 cfs from La Grange Dam.

93. Based on available habitat information and generally available information on water temperature requirements and life history for *O. mykiss* and Chinook salmon, we require the Districts, in consultation with the resource agencies, to develop a water temperature model in connection with the IFIM study to determine the downstream extent of thermally suitable habitat under various flow conditions, and to determine flows necessary to maintain water temperatures at or below 68 degrees F. According to the Limiting Factor Analysis, the range of suitable habitat extends from La Grange Dam at river mile 52 to Roberts Ferry Bridge at river mile 39.4. To ensure the maintenance of suitable summer water temperatures for the protection of summer juvenile *O. mykiss* rearing, the study should therefore determine flows necessary to maintain temperatures at or below 68 degrees F from La Grange Dam to Roberts Ferry Bridge.

94. NMFS recommends that the Commission require the immediate release of higher instream flows for the purposes of further study and to benefit steelhead. We therefore presume that agency's concurrence that the study would not likely adversely affect the species or its designated habitat.

⁸⁸ This method provides an analysis of various issues related to developing an instream flow policy that incorporates multiple or variable flow rules to meet the needs of the aquatic ecosystem while considering habitat-flow relationships, timing of flow events, institutional arrangements, and water supply and allocation.

95. The parties do not indicate how the Districts should monitor for abundance of steelhead. NMFS recommended operating the rotary screw traps and conducting snorkeling surveys to determine production estimates for Chinook based on the recommended spring pulse flows. Presumably, the same measures are acceptable for *O. mykiss* monitoring. The Districts' study plan provides for using paired rotary screw traps to determine Chinook fry density and movement. This monitoring would also assist in collecting the necessary *O. mykiss* data. The Districts' study plan provides for conducting surveys for *O. mykiss* using electrofishing, snorkel, and seining methods. The Districts' monitoring surveys would assist in monitoring *O. mykiss* abundance based on the release of experimental summer flows.

2. Amendment of Articles 37 and 58

96. FWS argues that the April 3, 2008 Order failed to address its earlier requests that the Commission should amend Articles 37 and 58 to ensure appropriate participation by NMFS. Article 37 of the existing license, as amended in 1996, requires the Districts to release flows for fish in accordance with a schedule, with different flows to be provided according to whether the preceding year was either normal or dry. It also includes a provision that permits the Districts, in consultation with FWS and California DFG, to agree to modifications in the flow schedule without prior Commission approval. Thus, it allows for some flexibility in flow releases, within limits of the total quantities of water involved. Article 58 of the existing license, also as amended in 1996, requires the Districts, after consulting with FWS and California DFG, to implement a program to monitor Chinook salmon populations and habitat in the Tuolumne River, document the monitoring information in annual reports, and file the results of fishery studies by April 1, 2005. Those actions were completed with the Districts' filing of the Summary Report. However, Commission staff determined in the April 3, 2008 Order that additional monitoring for Chinook salmon and steelhead is required pursuant to Article 58.⁸⁹

97. FWS states that Article 37 has resulted in annual consultations among the Districts, FWS, and California DFG regarding the flow schedule for each water year. FWS adds that, since the listing of steelhead, FWS has deferred to NMFS in making decisions about the appropriate flow schedule, and will continue to do so, because the flows must provide protection to Chinook salmon and steelhead, species which are both

⁸⁹ April 3, 2008 Order, 123 FERC ¶ 62,012 at 64,032. Staff's December 20, 2006 letter to the Districts made a similar finding, and required that the Districts prepare their study plan and schedule for additional monitoring in consultation with NMFS, as well as other agencies and organizations.

under NMFS's jurisdiction. FWS therefore requests that NMFS be added as an agency to be consulted with respect to flow modifications and fishery studies.

98. NMFS did not participate in either the 1996 amendment proceeding or the underlying settlement agreement. As a result, there was no consideration of whether to include NMFS as an entity to be consulted in Articles 37 and 58. Because both Chinook salmon and steelhead are species for which NMFS has jurisdiction, we will amend these articles to add NMFS as a consulted agency.⁹⁰

3. Appointment of a Settlement Judge

99. We direct the Chief Administrative Law Judge or his designee to appoint an administrative law judge to conduct and facilitate an expedited, non-adversarial fact-finding proceeding on possible interim measures to benefit Central Valley steelhead and fall-run Chinook salmon pending relicensing, in order to develop a more complete factual record and to assist the parties in evaluating possible interim solutions. Participation will be limited to the existing parties to this proceeding; that is, the Districts, the intervenors set forth in paragraph 13 of this order, and Commission staff. The scope of the proceeding will be limited to an assessment of the conditions in the Tuolumne River downstream of the Don Pedro Project that may affect these fish, and any interim protective measures, including minimum flows, that may be needed to improve conditions for the fishery resources.⁹¹ In particular, the judge should assist the parties in developing a factual record that considers: (1) the effects of operation of the Don Pedro Project on the fishery resources for the near term pending relicensing; (2) the views of the parties regarding proposals for interim protective measures and any reasonable alternatives that may be considered necessary or desirable to address those effects, including possible changes in project facilities or operation; (3) information on the cost of implementing those measures, including capital cost and value of foregone generation;

⁹⁰ Although by doing so we are taking action to amend the license for the Don Pedro Project, this is not the type of agency action that can trigger formal consultation under the ESA. The amendment is procedural in nature, and makes no substantive changes to the license requirements. The Commission is not proposing to make any changes to the minimum flow schedule that could affect listed species or their critical habitat. Rather, it is the Districts, in consultation with the agencies, who will determine whether to make any such changes, as they are already permitted to do within the terms of their existing license. The only difference is that NMFS is added as an agency to be consulted in connection with any such changes.

⁹¹ See *City of Tacoma, Washington*, 104 FERC ¶ 61,324 (2003).

(4) the effects of implementing the measures on other, non-fishery resources, such as irrigation, municipal water supply, and flood control; and (5) whether there is any basis for agreement among the parties on possible solutions to the issue of interim protective measures for fishery resources.

100. The presiding judge should convene a conference as soon as possible, but no later than 30 days from the date of this order, and shall conduct such proceedings as may be necessary to compile a factual record and assist the parties in addressing the foregoing issues. We direct the presiding judge to provide us with two reports.

101. First, within 45 days from the date of this order, we direct the presiding judge to inform us whether there are any additional protective measures that the Districts are willing to undertake, on a voluntary basis, to benefit fishery resources in the Tuolumne River pending relicensing. The judge shall also inform us whether any of these measures can be implemented immediately, without the need for a license amendment, and whether they are supported by any of the other parties.

102. Second, we direct the presiding judge to file a report of the results of this proceeding within 120 days from the date of this order. Parties may offer written comments or conclusions that will be appended to the report. The report will not be an initial decision, so we will not entertain the filings of briefs on or opposing exceptions. Further, we do not anticipate the need for cross-examination of witnesses. The judge need not create an exhaustive record, but may work with the parties to create a record that provides a thorough picture of the facts, problems, and possible solutions. After reviewing the report and the parties' comments, we will reconsider the need for interim protective measures pending relicensing, in light of the information developed in this proceeding on interim conditions. We will also consider whether further procedures, such as preparation of an environmental assessment or initiation of ESA consultation, may be needed before any proposed interim measures can be implemented.

H. Conclusions Regarding Fisheries Studies

103. In its December 20, 2006 letter to the Districts and its June 15, 2007 preliminary analysis of the Summary Report, Commission staff found that most of the required monitoring studies completed to date had produced data that were insufficient to reach any valid conclusions about the effects of stream flow releases. Staff further found that additional, well-designed and well-executed studies were necessary before the effectiveness of the flow schedule and other measures could be determined. The April 3, 2008 Order required the Districts to continue to file annual reports of monitoring and spawning escapement data for Chinook salmon, and to implement their proposed monitoring plan for steelhead. However, it did not require additional instream flow studies, finding that *O. mykiss* monitoring should first be completed in order to determine whether steelhead are present in the Tuolumne River. The order also did not adopt the

Districts' proposal to extend studies into the relicensing process, preferring that studies needed to support an application for relicensing should be determined during the relicensing process.

104. California DFG argues that the Commission should require the Districts to conduct further and more comprehensive analysis related to the in-river limiting factors for the Tuolumne River salmon population. NMFS, FWS, and Conservation Groups argue that the April 3, 2008 Order ignores Commission staff's earlier conclusions that most of the required monitoring studies completed to date had produced insufficient data and that additional studies were needed. They add that the April 3, 2008 Order failed to provide any reasoned analysis that would support reversal of staff's earlier conclusions. However, NMFS and FWS do not address in detail what additional studies should be required, but rather simply reference their earlier comments on the study plan. This is insufficient to support their requests for rehearing.

105. The April 3, 2008 Order explained that studies needed to support a relicense application should be determined during relicensing. As a general matter, we agree. However, staff's earlier conclusions were based on its finding that the information provided in the Summary Report was inadequate. Therefore, a decision to require additional studies, even if they extended into the relicensing period, would not be directed to obtaining information needed for relicensing, but rather to correcting deficiencies in the information collected to date regarding the effects of instream flows and other measures. Therefore, we agree that in these circumstances, the time required to conduct additional studies would not provide a basis for finding that they should not be required. As discussed above, we are requiring the Districts to develop a temperature model and conduct an instream flow study that will include the agencies' recommended instream flows. We are also directing the appointment of a presiding judge to assist in assessing the need for and feasibility of interim measures. If, after receiving the presiding judge's report, it appears that additional studies beyond the temperature model and instream flow study are needed, we will consider them at that time.

106. Conservation Groups make several specific arguments concerning additional studies. These are addressed below.

1. Instream Flows

107. Conservation Groups point out that staff's December 2006 letter directed the Districts to collect additional data to "better define the flow to survival relationship; in particular, data points are needed for higher flow years (i.e., greater than 4,000 cfs)." The April 3, 2008 Order did not recommend any changes in Article 37 flows, even for purposes of further study. Conservation Groups argue that the order provides no reason for this significant change in position, and does not indicate why this information is no longer needed.

108. As noted, we are requiring an instream flow study. We agree with staff's earlier assessment that flows greater than 4,000 cfs should be included at least once in the next four years.

2. Habitat Restoration

109. Conservation Groups argue that staff's December 2006 letter directed the Districts to complete the remaining habitat projects and assess their effectiveness, but the April 3, 2008 Order required no further action with regard to habitat restoration projects. They maintain that the order provides no explanation for why this finding was reversed.

110. As explained in the April 3, 2008 Order, the habitat restoration projects are part of the non-flow mitigation measures that the Commission did not include as license requirements in the 1996 license amendment order. The Commission required that the Districts include information about these measures, and all monitoring studies related to them, in their annual reports. However, the Commission did not amend the license to require that these measures be completed. Staff's December 2006 letter simply stated that the "remaining habitat restoration projects should be completed and the effectiveness of all projects should be assessed." Given that these projects were not license requirements, staff's statement was advisory, not mandatory. The ALJ and the parties can consider whether the Commission should require completion of any of these projects in the proceeding on interim protective measures.

3. Fry Survival

111. Conservation Groups argue that the December 2006 letter directed the Districts to provide a "statistically valid estimate of fry production per female spawner and of fry distribution." They maintain that, although the April 3, 2008 Order did not directly address this, it appears to find that the existing fry data are adequate without explaining the inconsistency.

112. We are requiring that the Districts develop a temperature model and instream flow study, and have decided to defer the issue of the need for any additional studies until after receipt of the ALJ's report on interim measures.

4. River Temperature

113. Conservation Groups argue that the December 2006 letter directed the Districts to assess the project's effects on river temperatures, and the effect of river temperatures on fishery resources, but the April 3, 2008 Order appears to find that no further assessment is needed. They maintain that the order is deficient because it does not explain why this information is not needed. They also argue that the discussion in the order is limited to Chinook salmon, and does not address evidence that the project causes increases in river temperatures that adversely affect over-summering *O. mykiss*.

114. We are requiring the Districts to develop a temperature model to address these matters in connection with their instream flow study.

The Commission orders:

(A) The requests for rehearing filed by the National Marine Fisheries Service on May 2, 2008, the U.S. Fish and Wildlife Service on May 2, 2008, the California Department of Fish and Game on May 2, 2008, and Conservation Groups on May 5, 2008, are granted in part and denied in part, as discussed in this order.

(B) The motions for late intervention filed by the California Sportfishing Protection Alliance and Golden West Women Flyfishers on May 5, 2008, are denied.

(C) The motion to clarify the record, filed by the Turlock Irrigation District and the Modesto Irrigation District on July 7, 2008, is granted.

(D) The motion for decision filed by Conservation Groups on June 17, 2009, is dismissed as moot, and their motion to consider additional evidence, also filed on that date, is granted.

(E) The petition to modify project structures and operations and to initiate consultation pursuant to section 7(a)(2) of the Endangered Species Act, filed by the National Marine Fisheries Service on May 2, 2003, is denied.

(F) The Turlock and Modesto Irrigation Districts (Districts) shall develop and implement an IFIM/PHABSIM study plan to determine instream flows necessary to maximize fall-run Chinook salmon and *O. mykiss* production and survival throughout their various life stages. The PHABSIM flow models under the IFIM should evaluate base flows, to include, but not be limited to, 150 cubic feet per second (cfs), 200 cfs, 250 cfs, 300 cfs, and at least 400 cfs. The instream flow study shall also evaluate spring pulse flows of 1,000 to 5,000 cfs and fall pulse flows of up to 1,500 cfs from La Grange Dam. In general, the instream flow study shall include the following steps, unless agreed upon otherwise in consultation with the resource agencies: (1) selection of target species or guild, selection or development of appropriate micro- and/or macro-habitat suitability criteria; (2) study area segmentation and study site selection; (3) cross section placement and field data collection; (4) hydraulic modeling; (5) habitat modeling; (6) derivation of total habitat time series, micro- and macro-habitat; (7) determination of habitat bottlenecks; and (8) evaluation of management alternatives and problem resolution. In connection with the IFIM study, the Districts shall also develop a water temperature model to determine the downstream extent of thermally suitable habitat to protect summer juvenile *O. mykiss* rearing under various flow conditions and to determine flows necessary to maintain water temperatures at or below 68 degrees Fahrenheit from La Grange Dam to Roberts Ferry Bridge.

The Districts shall file for Commission approval, within 90 days from the date of this order, their instream flow study plan, to include provisions for developing and completing a water temperature model. The study plan shall include the following: (a) a detailed description of the study and methodologies to be used; (b) a schedule for conducting the IFIM study and water temperature model; and (c) a provision for filing periodic progress reports with the Commission. The Districts shall design and prepare their study plan in consultation with the National Marine Fisheries Service, the U.S. Fish and Wildlife Service, and the California Department of Fish and Game prior to filing their plan and schedule with the Commission. The Districts shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. The Districts shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments and recommendations are accommodated by the plan. If the Districts do not adopt a recommendation, the filing shall include the District's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

(G) Article 37 of the license for the Don Pedro Project, issued March 10, 1964, and amended July 31, 1996 (Ordering Paragraphs (D) and (E), *Turlock and Modesto Irrigation District*, 76 FERC ¶ 61,117), is amended to add the National Marine Fisheries Service as an agency to be consulted on any changes to the minimum flow release schedule for the project.

(H) Article 58 of the license for the Don Pedro Project, issued March 10, 1964, and amended July 31, 1996 (Ordering Paragraphs (F) and (G), *Turlock and Modesto Irrigation District*, 76 FERC ¶ 61,117), is amended to add the National Marine Fisheries Service as an agency to be consulted on monitoring Chinook salmon populations and habitat in the Tuolumne River.

(I) The Chief Administrative Law Judge is directed to appoint a presiding administrative law judge to conduct, on an expedited basis, whatever proceedings, hearings, and settlement discussions may be appropriate to develop a factual record and assist the parties in evaluating possible interim solutions to benefit fall-run Chinook salmon and threatened Central Valley steelhead in the Tuolumne River pending relicensing of the Don Pedro Project No. 2299. The presiding judge shall convene a conference in the proceeding as soon as possible, but no later than 30 days after issuance of this order. The presiding judge is authorized to establish procedural dates and to rule on all motions (except motions to dismiss) as provided for in the Commission's Rules of

Practice and Procedure. The presiding judge shall file a preliminary report within 45 days after the date of this order, and a final report within 120 days after the date of this order. The Commission's Office of Administrative Litigation and Office of Energy Projects shall provide technical support to the administrative law judge and the parties in this proceeding.

By the Commission.

(S E A L)

Nathaniel J. Davis, Sr.,
Deputy Secretary.