

139 FERC ¶ 61,045
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Jon Wellinghoff, Chairman;
Philip D. Moeller, John R. Norris,
and Cheryl A. LaFleur.

Turlock Irrigation District and
Modesto Irrigation District

Project No. 2299-076

ORDER CLARIFYING PROCEEDING ON INTERIM CONDITIONS

(Issued April 19, 2012)

1. Pending before us is request for final action on a proceeding on interim measures to protect fishery resources pending relicensing of the Don Pedro Project No. 2299. 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. The current license expires in 2016, and the relicensing process is underway. For the reasons discussed below, we clarify that because the Commission previously found that interim measures are not warranted, and the proceeding on interim measures concluded without either an agreement among the parties or a recommendation for Commission action, no final action is required with respect to that proceeding. We also find that, because some required studies are not yet complete and relicensing is now underway, it is not feasible to begin a new proceeding to reopen the license and determine whether to impose interim measures pending relicensing.

Background

2. A more detailed procedural history appears in our July 16, 2009 order directing the appointment of a presiding judge for a proceeding on interim measures pending relicensing.¹ What follows is a brief history of the fisheries issues as related to the pending request for action on the interim conditions proceeding.

¹ *Turlock Irrigation District and Modesto Irrigation District*, Order on Rehearing, Amending License, Denying Late Intervention, Denying Petition, and Directing Appointment of a Presiding Judge for a Proceeding on Interim Conditions, 128 FERC ¶ 61,035 (2009) (July 2009 Order).

3. The Commission issued an original license for the 161-megawatt New Don Pedro Project in 1964,² with specified minimum flow releases for the first 20 years of operation (1971-1991) followed by the possibility of changes to those minimum flows, and a requirement to study the Tuolumne River fishery and how it could be feasibly sustained. In 1987, after the Districts applied to amend their license to add a fourth generating unit, the Commission approved an amended fish study plan, with a report and recommendations for any possible changes due in 1998.³ Meanwhile, in 1992 the Districts filed a request to implement proposed changes in minimum flows after the first 20 years of project operation. The City and County of San Francisco (San Francisco) and area water users opposed the application, and the Commission instituted a proceeding to determine what changes in flow, if any, would be necessary to protect the fishery resources of the Tuolumne River. In 1996, after the parties reached a settlement, the Commission amended the license to implement the minimum flows and fishery monitoring studies provided for in the settlement agreement, with a final report of the results due in 2005.⁴

4. As amended in 1996, Article 37 of the license required revised minimum flows to benefit fishery resources, and allowed some changes to those flows by agreement among the Districts, California Department of Fish and Game (California DFG), and U.S. Fish and Wildlife Service (FWS). Article 58 required the Districts, after consulting with 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 by April 1, 2005, with intervening annual reports.

5. In 1998, while the studies were underway, the National Marine Fisheries Service (NMFS) listed Central Valley steelhead as threatened under the Endangered Species Act (ESA). In 2002, NMFS requested that the Commission initiate formal consultation under the ESA to consider the effects of the Don Pedro Project on Central Valley steelhead. In March 2003 the Districts, acting as the Commission's non-federal representative, began informal consultation with NMFS. Shortly thereafter on May 2, 2003, NMFS filed a petition requesting that the Commission amend the license to require interim minimum

² *Turlock and Modesto Irrigation Districts*, 31 FPC 510 (1964), *aff'd sub nom. California v. FPC*, 345 F.2d 917 (9th Cir. 1965). The license was effective as of the first day of the month in which the Districts accepted it, which did not occur until May 1965 after judicial review. The new project submerged and replaced the original Don Pedro Project, which was constructed in 1924.

³ *Turlock and Modesto Irrigation Districts*, 38 FERC ¶ 61,097 (1987).

⁴ *Turlock and Modesto Irrigation Districts*, 76 FERC ¶ 61,117 (1996).

flows pending relicensing to benefit steelhead as well as Chinook salmon, and also requesting that the Commission initiate formal ESA consultation on the effects of the Don Pedro Project on steelhead. On December 22, 2003, the Commission deferred action on the petition pending completion of informal consultation and ongoing fisheries studies.⁵ In doing so, the Commission noted that the parties were consulting informally on the possible need for changes in minimum flows, and the Districts had agreed to consider the project's possible effects on steelhead in their consultation and ongoing studies.

6. The Districts filed their Summary Report on fisheries studies on March 25, 2005. Commission staff issued notice of the report and solicited comments on it, and held two public meetings in 2006 and 2007 in Sacramento, California, to discuss the report. On April 3, 2008, staff issued an order approving the Summary Report.⁶ Staff also required the Districts to file annual reports on Chinook salmon escapement numbers (the number of fish that escape harvest in commercial and recreational fisheries and return to the river to reproduce), and to implement their proposed monitoring plan to determine whether the Tuolumne River currently supports steelhead, the anadromous form of rainbow trout, with a report due by January 15, 2010.

7. NMFS, FWS, California DFG, and Conservation Groups⁷ filed requests for rehearing. In our July 2009 order, we granted in part and denied in part the requests for rehearing. We denied the petition, filed by NMFS on May 2, 2003, to amend the license to require interim measures pending relicensing and to initiate consultation pursuant to section 7(a)(2) of the ESA.⁸ Relying on the court's decision in *California Sportfishing*,⁹ we found that the Districts' ongoing operation of the Don Pedro Project was not a federal agency action that would trigger the requirement to initiate formal consultation for Central Valley steelhead.¹⁰ We reviewed new information provided by the parties and found it sufficient to support the conclusion that steelhead are present in the Tuolumne

⁵ *Turlock and Modesto Irrigation Districts*, 105 FERC ¶ 61,332 (2003).

⁶ *Modesto and Turlock Irrigation Districts*, 123 FERC ¶ 62,012 (2008).

⁷ Conservation Groups are the California Rivers Restoration Fund, Tuolumne River Preservation Trust, California Trout, and Friends of the River.

⁸ *Turlock and Modesto Irrigation Districts*, 128 FERC ¶ 61,035 at PP 35-47.

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

¹⁰ *Turlock and Modesto Irrigation Districts*, 128 FERC ¶ 61,035 at PP 37-47.

River, but noted that this finding did not change our decision that there was no federal action that could trigger the formal consultation requirement.¹¹

8. We also denied the requests of NMFS, FWS, and Conservation Groups to amend the license to require the agencies' recommended flow schedule on an interim basis to benefit steelhead and Chinook salmon pending relicensing. We found that additional information was needed to determine flow requirements for steelhead and whether higher flows might result in higher steelhead production.¹² We found that the recent decline of the Tuolumne River fall-run Chinook salmon could not be attributed to the Article 37 flow regime, and concluded that other factors, such as poor ocean conditions, made it unlikely that more water in the Tuolumne River would have yielded an increase in escapement.¹³ We further found that there was insufficient information in the record to conclude that the agency-recommended flows should be required on an interim basis to benefit these fish, and that the record was also insufficient regarding the possible effects of these flows and reasonable alternatives on the full range of interests that would be affected, including not only fisheries resources, but also power generation, irrigation, flood control, and water supply.¹⁴ We added that, in light of the potential for these increased flows to have significant impacts on municipal, agricultural, and industrial water use, we would likely need to prepare an environmental assessment or an environmental impact statement before we could recommend amending the license to require them.¹⁵

9. We required the Districts to develop and implement an instream flow study to determine flow requirements for *Oncorhynchus mykiss* (*O. mykiss*, a scientific term that includes both resident rainbow trout and anadromous steelhead) and Chinook salmon necessary to maximize fish production and survival, and to develop a water temperature model to determine the downstream extent of thermally suitable fish habitat under various flow conditions.¹⁶ In response to requests from FWS and NMFS, we amended Article 37 of the license to add NMFS as an agency to be consulted on any authorized changes to the minimum flow release schedule for the project, and we amended Article

¹¹ *Id.* P 61-62.

¹² *Id.* P 89.

¹³ *Id.* P 81.

¹⁴ *Id.* P 85.

¹⁵ *Id.*

¹⁶ *Id.* P 92-93.

58 of the license to add NMFS as an agency to be consulted on monitoring Chinook salmon populations and habitat in the Tuolumne River.

10. Finally, we noted that although the parties had been consulting informally since late 2003, shortly after NMFS filed its petition, they had been unable to agree on whether listed Central Valley steelhead were present in the Tuolumne River or on what measures might be needed to protect fall-run Chinook salmon, which is not an ESA-listed species.¹⁷ We therefore directed the appointment of an administrative law judge to assist the parties in assessing the need for and feasibility of possible interim measures pending relicensing.¹⁸ We directed the 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.¹⁹

11. We directed the judge to provide us with two reports; one on any possible measures that the Districts would be willing to undertake voluntarily pending relicensing, and a final report on the results of the proceeding, with the parties' written comments or conclusions. We stated that, after reviewing the report and the parties' comments, we would reconsider the need for interim protective measures pending relicensing, in light of the information developed. We also stated that we would consider whether further procedures, such as preparation of an environmental review or initiation of ESA consultation, might be needed before any proposed interim measures could be implemented.²⁰

12. No party filed a request for rehearing of any part of our July 16, 2009 order.

13. The presiding judge directed the Districts to provide information on interim protective measures they would be willing to undertake voluntarily, together with the other parties' views on those measures. On August 27, 2009, after reviewing the Districts' filing, the presiding judge filed her preliminary report. The report described six measures that the Districts believed they could implement immediately without the need to amend the current license for the Don Pedro Project. San Francisco supported all of the Districts' proposed additional protective measures. Conservation Groups and Friends of the Tuolumne did not support any of the Districts' proposed measures. California

¹⁷ *Id.* P 87

¹⁸ *Id.* P 99.

¹⁹ *Id.*

²⁰ *Id.* PP 100-102.

DFG, FWS and NMFS stated that, while a few measures would have some value in assessing the benefits of increased flows, they did not consider them additional protective measures.

14. The presiding judge held a site visit on October 5, 2009, and held hearings on October 6 and 7, 2009. The parties filed proposed findings of fact on October 21, 2009. On November 20, 2009, the presiding judge issued her final report on interim measures. The presiding judge found that there are measures aimed at protecting both fish and people that could be tried on an interim basis, such as shifting the timing and magnitude of Article 37 flows and conducting more studies to determine the effects of increased instream flow releases and other modifications to project operations on the viability of fall-run Chinook salmon and steelhead populations in the lower Tuolumne River.²¹ However, the judge also found that the benefits of implementing the agencies' proposed interim flow measures would need to be weighed against possible harm to other water users.²²

15. On January 5, 2009, the parties filed comments on the report. The Districts, San Francisco, and Bay Area Water Users Association (Association) generally supported the report and provided some proposed corrections and clarifications. NMFS, FWS, and California DFG (Agencies) and Conservation Groups jointly filed their comments, which they designated a Statement, regarding the report. The Statement generally criticized the report and provided detailed responses to specific findings. It also recommended that the Commission use its reserved authority to reopen the license and prepare an environmental analysis, with a decision on interim flows by December 2010.

16. On January 20, 2010, the Districts filed an answer to the Agencies' and Conservation Groups' Statement on the judge's final report. On February 5, 2010, Conservation Groups filed a request that the Commission reject the Districts' answer.

17. Meanwhile, on January 14, 2010, the Districts filed the results of their monitoring plan for *O. mykiss*.²³ The Districts stated that they were unable to conduct parts of their

²¹ The lower Tuolumne River refers generally to the portion of the river downstream of the Don Pedro Project and La Grange Dam, whereas the upper Tuolumne River refers to the portion of the river that is upstream of the Don Pedro Project.

²² *Turlock and Modesto Irrigation Districts*, 129 FERC ¶ 63,015 at P 291-292.

²³ By letter dated February 1, 2011, Commission staff acknowledged receipt of the Districts' 2009 Lower Tuolumne River annual summary report (filed on Mar. 25, 2010) and 2010 *O. mykiss* monitoring report (filed on Jan. 14, 2010). Staff advised the Districts that, while it would continue to review the Districts' filings, it would no longer issue acknowledgement letters for future filings, unless further Commission action was needed.

monitoring plan because the resource agencies denied their requests for the necessary sampling permits. For this reason, the Districts reported the results of their monitoring for *O. mykiss* but were unable to determine whether any of the fish were anadromous, because of the lethal sampling needed to obtain otoliths.²⁴

18. On May 10, 2010, Commission staff issued an order modifying and approving the Districts' *O. mykiss* monitoring report in part, and requiring the Districts to continue to pursue the appropriate permits and to file status reports every six months.²⁵ Staff also required the Districts to file annual reports of the results of all additional *O. mykiss* monitoring by January 15, 2011, and January 15, 2012, and a final summary report for the required 2005-2012 fisheries study plan by July 1, 2013.²⁶

19. On May 12, 2010, Commission staff issued an order modifying and approving the Districts' instream flow and temperature model study plans required by the July 2009 order. Among other things, staff found that these study plans "would provide the data and information necessary to assist in determining potential interim and long-term instream flows, pulse flows, and flows necessary to maintain thermal criteria in the Tuolumne River below La Grange Dam for the protection and enhancement of *O. mykiss* and fall-run Chinook salmon life stages."²⁷ Staff also required the Districts to file progress reports on the studies, with a final report on the temperature model by January 26, 2011, and a final report on the flow study by January 25, 2012. No party filed a request for rehearing of either the May 10 or the May 12, 2010 order.

20. On July 21, 2010, Commission staff issued an order granting the Districts' requests for several extensions of time in connection with their instream flow and temperature model study plans. The deadlines to file progress reports on the instream flow study plan were extended to December 11, 2010, and July 31, 2011, with the final report due on April 28, 2012. The deadline to file a progress report on the temperature model study plan was extended to November 9, 2010, with the final report due on March 12, 2011.

²⁴ 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, and thus can provide evidence of anadromy.

²⁵ *Modesto and Turlock Irrigation Districts*, 131 FERC ¶ 62,097 (2010).

²⁶ *Id.* P 22 and Ordering Paragraph (C).

²⁷ *Modesto and Turlock Irrigation Districts*, 131 FERC ¶ 62,110 (2010).

21. On December 28, 2010, Conservation Groups filed their request for final action on the proceeding on interim measures pending relicensing. On January 12, 2011, San Francisco filed an answer to Conservation Groups' request, noting that the Districts supported the position taken in the answer and elected not to file a separate response.

22. The Districts filed timely progress reports on their instream flow and temperature model studies.²⁸ On January 15, 2011, the Districts filed their 2011 *O. mykiss* monitoring report.²⁹ On March 11, 2011, the Districts filed their final report on their temperature modeling study, noting that they did not receive any agency comments on the report. On March 30, 2011, the Districts filed their 2011 Tuolumne River annual report, including annual updates of project operations and ongoing Chinook salmon monitoring activities as well as *O. mykiss* population estimates and acoustic tracking study results.

23. On July 29, 2011, the Districts filed their second progress report on the instream flow study. In that report, the Districts stated that, because of high flows in the winter and spring of 2011, minimum summer flows were currently 250 cubic feet per second (cfs), which would preclude them from collecting data for the 100 cfs study parameter. They therefore requested either a variance or an extension of time to complete the required study. By letter dated August 10, 2011, NMFS informed the Commission that the proposed flow variance is an action that may affect threatened Central Valley steelhead and would require the Commission to enter into formal ESA consultation. On August 15, 2011, the Districts' contractor for the study, Stillwater Sciences, requested comments from the resource agencies on the District's proposed one-year extension of time to complete the required study. The agencies did not file any comments on the request. On December 5, 2011, Commission staff issued an order granting an extension of time to complete the instream flow study and file the final report by April 13, 2013.

24. Meanwhile, on April 8, 2011, Commission staff published notice of the Districts' February 10, 2011 filing of their notice of intent to file a relicense application and their pre-application document. Staff's notice, which began the pre-filing phase of the relicensing proceeding, announced the beginning of the pre-filing process and environmental scoping, and requested comments on the Districts' pre-application

²⁸ The Districts filed their progress reports on the instream flow study on December 8, 2010, and July 29, 2011. Commission staff accepted these progress reports by letter dated August 18, 2011. The Districts filed their progress report on the temperature model study on November 8, 2010. Commission staff accepted this progress report by letter dated November 18, 2010.

²⁹ As provided in Commission staff's February 1, 2011 letter to the Districts, staff did not issue a letter accepting the filing, and considered the report's posting in the Commission's eLibrary system as staff's acknowledgement of its receipt.

document, staff's environmental scoping document, and issues to be considered in the proceeding, together with any related study requests. The pre-filing phase of relicensing is now underway and the relicense application must be filed no later than April 30, 2014. The existing license expires on April 30, 2016.

25. The Districts filed their final *O. mykiss* monitoring report on January 15, 2012. Their final instream flow study report is due on April 13, 2013, and their final 2005-2012 summary report on their fisheries study is due on July 1, 2013.

Discussion

26. As explained in more detail below, the Commission previously found in its July 2009 order that interim conditions were not warranted. The non-adversarial fact finding proceeding on interim conditions before a settlement judge ended without any recommendation for Commission action. It did not identify a clear need for interim measures to protect fishery resources, and also did not identify any interim measures that could feasibly be implemented pending relicensing without the need for an environmental review and further proceedings. As a result, we clarify that no further action is required with respect to that proceeding. In addition, because some required studies are not yet complete and relicensing is now underway, it is not feasible to begin a new proceeding to reopen the license and determine whether to impose interim measures pending relicensing.

A. Preliminary Matters

27. As noted, parties to the interim conditions proceeding filed comments on the presiding judge's report on January 5, 2010. On January 20, 2010, The Districts filed an answer to the Agencies' and Conservation Groups' Statement, and on February 5, 2010, Conservation Groups filed a request that the Commission reject the District's answer.

28. The Districts argue that, because the Statement includes a specific request for relief, it is a motion under 18 C.F.R. § 385.212 of the Commission's rules and the Districts are therefore entitled to respond under 18 C.F.R. § 385.213(d)(1). Conservation Groups contend that the Districts' answer is "a brief that opposes another party's exceptions to an Administrative Law Judge's report," within the meaning of 18 C.F.R. § 385.711(a)(ii), and thus violates the Commission's direction in its July 16, 2009 order that it "will not entertain the filings of briefs on or opposing exceptions."³⁰ In the alternative, Conservation Groups request an opportunity to reply to the Districts' answer if the Commission considers it.

³⁰ *Turlock and Modesto Irrigation Districts*, 128 FERC ¶ 61,035 at P 102.

29. Both the Districts and Conservation Groups are incorrect. The Districts' response was not an answer to a motion, but rather was a response to the Agencies' and Conservation Groups' comments on the report. Contrary to Conservation Groups' assertion, the Districts' response also was not a brief on exceptions under Rule 711, which applies by its terms to exceptions to an initial decision in a proceeding set for a formal evidentiary hearing under subpart E of part 385.³¹

30. In our July 2009 order, we directed the appointment of an administrative judge "to conduct and facilitate an expedited, non-adversarial fact finding proceeding on possible interim measures."³² We did not set the matter for formal hearing under subpart E, and expressly stated that the presiding judge's report of the results of the proceeding "will not be an initial decision, so we will not entertain the filings of briefs on or opposing exceptions."³³ Because our July 2009 order provided an opportunity for all parties to file comments on the report and did not provide for responses to comments, we reject the Districts' response on that basis and dismiss Conservation Groups' request as moot.

B. The Judge's Report

31. In our July 2009 order, we directed the appointment of a settlement judge "to assist the parties in determining whether interim measures are needed to benefit these fish [steelhead and Chinook salmon], and, if so, what measures can feasibly be required pending the ultimate resolution of these matters at relicensing."³⁴ The interim conditions proceeding ended without either an agreement among the parties on interim measures or a recommendation that specific interim measures be implemented pending relicensing.

32. The presiding judge issued an 88-page final report that reviewed the testimony of 25 witnesses and made 21 findings.³⁵ As these findings make clear, the parties' witnesses were not in agreement about the need for or feasibility of interim measures to benefit steelhead and Chinook salmon pending relicensing. As a result, the judge did not make any recommendations for interim measures. In the following paragraphs (33 through 50) we summarize the judge's findings.

³¹ See 18 C.F.R. §§ 385.711, 385.702(a), and 385.501-510 (2011).

³² *Turlock and Modesto Irrigation Districts*, 128 FERC ¶ 61,035 at P 99.

³³ *Id.* P 102.

³⁴ *Id.* P 66.

³⁵ *Turlock and Modesto Irrigation Districts*, 129 FERC ¶ 63,015 (2009).

33. The judge found that the Don Pedro Project impedes Tuolumne River flows from upstream tributaries and released from upstream reservoirs. Minimum flows released from the project are below actual Tuolumne River flows at La Grange dam, and change the times of the year that flows peak; a concern because the fish have different flow needs depending on the times of their various life stages, and the life stages of salmon and steelhead do not always coincide.³⁶

34. The judge found that in developing the Article 37 flow schedules, primary consideration was given to the needs of fall-run Chinook salmon, although the needs of *O. mykiss* populations were given some consideration. Anadromous and resident forms of *O. mykiss* share a co-dependent life history.³⁷ The various life stages of *O. mykiss* and Chinook salmon require cooler water temperatures. Increased flows from La Grange decrease temperatures, but it is not known what amount of flow will sufficiently reduce water temperatures.³⁸

35. The judge found that Article 37 flows have provided some benefit to *O. mykiss* and Chinook salmon by providing increased habitat, increased depth, and decreased temperatures, but their numbers have not increased to pre-project levels. In the lower Tuolumne River, anadromous *O. mykiss* are rare and the Chinook salmon population has declined.³⁹

36. The judge found that *O. mykiss* can either migrate to the ocean or remain in freshwater, and their probability of survival is higher if they do not attempt to migrate. Although the increased summer flows required under Article 37 have resulted in higher numbers of *O. mykiss* overall, it is not clear that additional increases would lead to increased populations of anadromous populations in the Tuolumne.⁴⁰

37. The judge found that although the Tuolumne River Chinook salmon population may be subject to extirpation, it is not at risk of extinction pending relicensing. Recent declines in Chinook salmon escapement levels are comparable to those occurring in other San Joaquin River tributaries and, based on past patterns of high and low spawning returns, escapement levels in the Tuolumne River and other tributaries are likely to

³⁶ *Id.* P 270.

³⁷ *Id.* P 271.

³⁸ *Id.* P 272.

³⁹ *Id.* P 273.

⁴⁰ *Id.* P 274.

rebound. More monitoring is needed to determine what factors, in addition to instream flows, are adversely impacting the salmon.⁴¹

38. The judge found that salmon and steelhead (the latter to a lesser degree) benefit from seasonal floodplain habitat, but Article 37 minimum flows may not provide adequate inundation of floodplain habitats, especially in drier water years, to produce sufficient forage, support growth, or enhance the predator avoidance environment necessary to promote juvenile steelhead survival.⁴²

39. The judge found that factors outside of the Tuolumne River affect the survival of anadromous *O. mykiss* and Chinook salmon. Those factors include, among other things: inland, commercial, ocean, and sport harvest; unscreened riparian water diversion; entrainment and predation of outmigrant smolts at state and federal pumping facilities; low dissolved oxygen; lack of suitable habitat in the ship channel; water pollution; hatcheries; and climatic factors affecting ocean food production. It would not be possible for flow levels to overcome all of these and other out-of-river factors before relicensing.⁴³

40. The judge found that, in determining the financial, human, and other costs of implementing the FWS and NMFS (Services) Interim Flow Proposal, which they presented in their direct testimony on September 14, 2009, it was reasonable to use a “worst case” scenario based on the 1987-1992 drought. Although other available methodologies could provide some information and may be worth considering, the judge found it prudent to plan for the worst, because it is not possible to predict future droughts with absolute accuracy.⁴⁴

41. The judge found that about 85 percent of the water that San Francisco provides to about 2.5 million people primarily in the San Francisco Bay Area comes from the Tuolumne River.⁴⁵ If San Francisco were required to provide additional water to the

⁴¹ *Id.* P 275. The Tuolumne River is a tributary of the San Joaquin River, which flows into the Sacramento River and then into the San Francisco Bay-Delta. *See Turlock and Modesto Irrigation Districts*, 128 FERC ¶ 61,035 at P 79.

⁴² *Turlock and Modesto Irrigation Districts*, 129 FERC ¶ 63,015 at P 276. The Districts take issue with this finding and offer some substantive corrections and clarifications. *See* Districts’ Comments at 4-5 (filed Jan. 5, 2010).

⁴³ *Turlock and Modesto Irrigation Districts*, 129 FERC ¶ 63,015 at P 277.

⁴⁴ *Id.* P 278.

⁴⁵ *Id.* P 279. The City and County of San Francisco provide this water through the San Francisco Public Utilities Commission. For simplicity, we refer to all of these entities as San Francisco in this order, unless the context requires more specificity.

Districts above the current Article 37 flows, as the Services propose, it would have to reduce the amount of water it could deliver to its wholesale and retail customers. At current delivery levels and with current water supplies and reservoir storages, San Francisco's regional water system can be expected to experience up to a 25 percent shortage, 15 to 20 percent of the time, over multiple year drought sequences. Under a system-wide reduction of 20 percent, individual wholesale customers could experience up to a 40 percent reduction in deliveries.⁴⁶

42. The judge found that under a 41 percent rationing scenario, San Francisco would cut back discretionary use first. Because discretionary use in San Francisco tends to be relatively low, a greater proportion of reduction would be required in the residential and non-residential sectors to meet rationing levels. It is estimated that residential consumption would need to be no greater than 46 gallons per capita per day to minimize total economic loss, which would allow for no outdoor use and would require reductions in water for bathing and washing clothes and dishes. Under a 51 percent rationing scenario, residential use would be restricted to 38 gallons per capita per day, requiring even greater limitations on water use in the home for bathing and washing clothes and dishes, with public health and safety implications.⁴⁷

43. The judge found that if water supplies were unavailable or severely rationed for 10 to 30 days (and possibly as long as 60 days), estimated losses in the San Francisco Bay Area would likely be in excess of \$27.7 billion, including commercial and industrial losses of at least \$14 billion. Lost consumer and producer surplus from water rationing would be significant and have been estimated at \$471 million annually for the 51 percent rationing scenario, \$314 million for 41 percent rationing, \$119 million for 20 percent rationing, and \$53 million for 10 percent rationing.⁴⁸

44. The judge found that if the Districts experience a 35 to 37 percent (or greater) shortage in the amount of water they would normally divert to meet the supply needs of their irrigation customers, those customers would be significantly adversely affected, with significant related adverse impacts on groundwater levels, water quality, cost, and instream flows. There would be devastating crop and employment losses.⁴⁹

⁴⁶ *Id.* P 280.

⁴⁷ *Id.* P 281.

⁴⁸ *Id.* P 282. San Francisco notes that the correct figure for the 41 percent rationing scenario is \$324 million. *See* San Francisco's Comments at 4 (filed Jan. 5, 2010).

⁴⁹ *Turlock and Modesto Irrigation Districts*, 129 FERC ¶ 63,015 at P 283.

45. The judge found that complying with the Services' interim flow proposals would reduce the Districts' ability to maximize the value of their respective shares of the Don Pedro power plant, with a resulting loss of energy and capacity requiring costly acquisition of replacement capacity and increase in greenhouse gas emissions.⁵⁰ A reduction in Modesto Irrigation District's deliveries of Tuolumne River water would result in increased costs, because any alternative sources of surface water acquired to offset the reductions would be far more expensive than the water from Modesto Irrigation District.⁵¹ Increased groundwater pumping would require use of more energy-intensive and costly treatment technologies to reduce salinity in the effluent, with associated costs for brine disposal.⁵² Implementing the Services' flow proposal would result in a significant increase in the cost of energy if the hydrology of water years 1987 and 1988 were repeated over the next two water years (October 1, 2009 through September 30, 2011). Energy reliability would also be impacted.⁵³

46. The judge found that reduced water levels in the Don Pedro Project reservoir would reduce community recreation opportunities and Don Pedro Recreation Association revenues. If the reservoir empties down to "dead storage," recreational use of the reservoir would be severely adversely impacted. There would be negative effects on boating, recreational fishing, houseboating, and other recreational uses, and marinas would have to close.⁵⁴

47. The judge found that San Francisco and the Districts have considered and employed management strategies to address water shortages on an interim and long-term basis. San Francisco is planning a groundwater conjunctive use project with three of its wholesale customers to provide groundwater during dry years to augment water supply, but construction of the extraction wells is not anticipated before 2014, and wholesale customers who currently pump from this groundwater basin do not have wells with

⁵⁰ *Id.* P 284.

⁵¹ *Id.* P 285. Although the judge's finding discusses Modesto Irrigation District's deliveries to San Francisco, San Francisco and the Districts note that these deliveries are made to the City of Modesto, not to San Francisco. *See* San Francisco's Comments at 4 (filed Jan. 5, 2010); Districts' Comments at 4 (filed Jan. 5, 2010).

⁵² *Turlock and Modesto Irrigation Districts*, 129 FERC ¶ 63,015 at P 285.

⁵³ *Id.* P 286.

⁵⁴ *Id.* P 287. The Districts note that adverse effects to recreation would occur even if the reservoir is not drawn down to the dead storage level, but is just below normal levels. *See* Districts' Comments at 5.

capacity to pump additional water.⁵⁵ San Francisco has also considered desalination, but does not currently own or operate any desalination plants and does not believe it could likely bring one online before 2016. Water transfers through the Delta are not a viable option because of deterioration of the Delta ecosystem and regulatory restrictions.⁵⁶

48. The judge found that the Districts have made canal lining improvements, including mechanisms to better measure stream flows and allow for more efficient deliveries, as well as automation to better measure deliveries to farmers and reduce their operation outflows. Modesto is designing and construction three new water tanks and associated pipelines to improve its delivery system, and is improving its metering system.⁵⁷

49. The judge found that although this could appear to be a zero-sum game, there are measures aimed at protecting both fish and people that could be tried on an interim basis. Specifically, the timing and magnitude of Article 37 flows could be shifted, and more studies could be conducted to determine the effects of increased instream flow releases and other modifications to project operations on the viability of fall-run Chinook salmon and steelhead populations in the lower Tuolumne River.⁵⁸

50. With regard to the Services' instream flow proposal, however, the judge found that implementing those measures aimed at promoting effective monitoring of the salmon and steelhead populations' biological response to the interim flow measures would need to be weighed against possible harm to other water users.⁵⁹

51. The judge did not make any further findings regarding the possible need for interim measures pending relicensing. Similarly, the judge did not make any recommendations for interim protective measures. As a result, the report did not provide a basis for changing the findings we made in our July 2009 order.

C. The Parties' Comments on the Report

52. San Francisco, the Bay Area Water Users Association, and the Districts filed comments in support of the judge's report. The Agencies and Conservation Groups jointly filed comments in opposition to the judge's report. We discuss these comments briefly below.

⁵⁵ *Turlock and Modesto Irrigation Districts*, 129 FERC ¶ 63,015 at P 288.

⁵⁶ *Id.* P 289.

⁵⁷ *Id.* P 290.

⁵⁸ *Id.* P 291.

⁵⁹ *Id.* P 292.

53. San Francisco supports the report's findings and offers comments to clarify certain points. San Francisco also provides some minor corrections to the report. Where relevant to the judge's findings, we have noted these corrections in the preceding section.

54. The Bay Area Water Users Association states that it appreciates the judge's consideration of the witness testimony and concurs with the judge's finding that it is appropriate to use a worst-case scenario in determining the financial, human, and other costs of implementing the proposed interim flow measures. The Association supports the judge's finding that any proposed interim flow measures must be weighed against possible harm to other water users, and recommends that the Commission prepare an environmental analysis of the effects of the measures, as it did for the 1996 amendments to Articles 37 and 58 of the license. The Association also provides additional information, based on the testimony and exhibits, about the effects of San Francisco's water shortage allocation plan on wholesale customers

55. The Districts state that, with a few minor corrections, the report fairly and accurately describes the relevant facts, the important issues involved in the proceeding, the parties' positions on the issues, and the bases for those positions. The Districts add that the judge's findings are generally correct and reflect the fact that requiring the Districts to implement the agencies' and Conservation Groups' proposed interim flow measures is not necessary, would not likely appreciably benefit Chinook salmon and anadromous *O. mykiss* populations in the Tuolumne River, and could cause devastating impacts to farmers, domestic water users, and other users and resources that depend on water from the Tuolumne River. The Districts provided a number of clarifications and corrections to the report. The Districts also provided corrections and clarifications of some of the judge's findings, which we noted in the previous section.

56. Agencies and Conservation Groups jointly filed extensive comments in opposition to the judge's report. After discussing at some length the background of the issues and the regulatory and legal context, they provide some general comments about the overall treatment of the hearing record and responses to specific findings. We summarize here only those parts of their comments that relate specifically to the interim conditions proceeding and the judge's findings.

57. Agencies and Conservation Groups argue that the judge's report adopts certain disputed evidence without explanation. They maintain that the judge's findings are not supported by substantial evidence, and do not include specific findings of fact and conclusions of law. They add that, although the judge's summary of the testimony confirms that conflicting evidence exists on each topic, the judge's report does not explain the basis for the findings or the reason for determining that certain evidence was more probative than other evidence.

58. Agencies and Conservation Groups misunderstand the nature of the proceeding on interim conditions. This was a non-adversarial, fact-finding proceeding that we hoped

would assist the parties in reaching agreement on whether there is a need for interim measures pending relicensing and on what measures might feasibly be implemented. It was not a formal evidentiary hearing and did not require the judge to make formal findings of fact or conclusions of law, or to make choices regarding conflicting evidence. More importantly, the proceeding ended without either an agreement among the parties on interim conditions or specific recommendations from the judge regarding interim measures that could feasibly be implemented pending relicensing. As a result, it did not provide us with any basis for changing our findings in the July 2009 order.

59. Agencies and Conservation Groups argue that the Districts and San Francisco based key testimony on an improbable scenario, and the report adopts it without explanation. They maintain that the assumption that the next several years will be drought years is based on unsupported supposition, and ignores the Agencies' testimony that it is very unlikely the next several years will be consecutive drought years. They contend that the Commission must evaluate a range of reasonable hydrologic scenarios in determining the possible effects of increased minimum flows.

60. In our view, it was reasonable for the judge to use a worst-case scenario to evaluate the possible financial, human, and other costs of providing higher minimum flows. Under the existing Article 37 flow schedule, minimum flows range from 50 cfs to 300 cfs, depending on the time of year and the amount of water available.⁶⁰ The Agencies' recommended a year-round minimum flow of 275 cfs, regardless of the amount of water available, with a requirement to release even higher minimum flows if necessary to meet certain specified stream water temperatures below La Grange dam.⁶¹ Given that these recommended flows are open-ended and did not provide for any decrease in drier water years, we think it made sense to consider the possible effects of these flows during a period of recent drought conditions, when sufficient water might not be available. The judge used the worst case scenario not as a prediction of what the weather would likely be during the next several years, but rather as a means of assessing the potential costs if the increased flows were required during a drought period, which had occurred and could possibly recur.

61. Agencies and Conservation Groups argue that the record is incomplete with regard to the economic and social value related to the loss of the fishery. They point out that, in our July 2009 order, we directed the judge to assist the parties in developing a factual

⁶⁰ See *Turlock and Modesto Irrigation Districts*, 76 FERC ¶ 61,117 at 61,611-13.

⁶¹ See Agencies' Recommended Interim Measure Elements, included as Attachment A to their comments on the presiding judge's report (filed Jan. 5, 2010). As noted there, the Agencies introduced these measures in the interim conditions proceeding as Exhibits NMF-1, FWS-1, and DFG-1. *Id.* at 91.

record that considered the cost of implementing possible interim measures, including capital cost and the value of foregone generation, as well as the effects on other non-fishery resources, such as irrigation, municipal water supply, and flood control, but did not provide for developing a record on the costs associated with ongoing impairment of the fisheries. They contend that, in balancing fishery and non-fishery values, the Commission must supplement the record to account equally for the costs of the anadromous fishery decline in the Tuolumne River.

62. In providing for a proceeding on interim conditions, our intent was to assist the parties in determining whether there might be some basis for agreement on interim conditions and, if not, whether the presiding judge could recommend any measures that might feasibly be implemented pending relicensing. It was not to develop a complete record on which the ultimate balancing of fishery and non-fishery values could be based. That is a matter for the relicensing proceeding, the pre-application phase of which is now underway. Having found in our July 2009 order that interim conditions were not warranted, there is no need to supplement the record now to include information on the economic costs of diminishing catches and fishery closures which are not directly attributable to operation of the Don Pedro Project. Because no party sought rehearing of that order, it became final and the findings we made there are not now subject to challenge.

63. Agencies and Conservation Groups argue that the record is incomplete with regard to the costs of ongoing maintenance of ESA-listed species, and the Commission should supplement the record to quantify these costs. They maintain that the Commission must supplement the record and “quantify the societal cost of neglecting the fresh water needs of fish and wildlife in the Central Valley watersheds and in the San Francisco Bay-Delta estuary.”⁶²

64. This far exceeds the scope and intent of the interim conditions proceeding. One ESA-listed species, Central Valley steelhead (*O. mykiss*) exists in the lower Tuolumne River. As we found in our July 2009 order, there is currently no federal agency action that would trigger the requirement to consult formally with NMFS under section 7 of the ESA. In addition, the interim conditions proceeding ended without either an agreement or a recommendation for interim conditions to benefit Central Valley steelhead. The Commission will consult formally with NMFS concerning the effects of the Don Pedro Project on steelhead as part of the relicensing proceeding. Nothing further is currently required.

65. Agencies and Conservation Groups argue that the Commission-defined scope of the hearing was the Tuolumne River, but the report focused on factors beyond the

⁶² Agencies’ and Conservation Groups’ Comments at 30 (filed Jan. 5, 2010).

Tuolumne River. They contend that our July 2009 order specified that the scope of the proceeding was limited to an assessment of conditions in the Tuolumne River downstream of the Don Pedro Project that may affect the fish, and any interim protective measures, including minimum flows, that may be needed to improve conditions for the fishery resources. They maintain that, despite these directions, San Francisco and the Districts presented testimony and evidence concerning impacts beyond the Tuolumne River and effects to the species caused by factors other than those within the Don Pedro Project's direct sphere of influence.

66. In our July 2009 order, our statement regarding the scope of the proceeding was intended to signal that the focus should be on the effects of the Don Pedro Project and any interim conditions that might be needed to address those effects. In particular, we sought to ensure that the judge and the parties would consider only those interim measures that might be needed to address the effects of the Don Pedro Project, and to exclude consideration of measures that might be needed to address other factors that were not related to the project. In short, we wanted to ensure that there would be a nexus between project effects and any possible interim measures. We did not intend to preclude the judge and the parties from considering information about other factors unrelated to the Don Pedro Project that might be affecting these fish. In fact, our July 2009 order recognized the relevance of these other factors in concluding that they could reduce or eliminate the effectiveness of possible increases in minimum flows. Thus, it was not improper for the parties and the judge to consider the possible effects of other limiting factors that may be affecting these fish once they leave the Tuolumne River.

67. Agencies and Conservation Groups take issue with the report's findings relating to hydrology, habitat conditions, and fisheries (Findings 270-277). They argue that the report understates the Don Pedro Project's hydrologic alteration of Tuolumne River flows (Finding 270), dismisses Agency concerns about project effects on *O. mykiss* (Finding 271), does not adequately represent the evidence presented regarding the project's effects on downstream temperatures (Finding 272), downplays the high risk of extinction for Chinook salmon and Central Valley steelhead in the Tuolumne River (Finding 273), oversimplifies and mischaracterizes the behavior of *O. mykiss* and does not adequately consider the need to modify project-controlled factors influencing anadromy (Finding 274), makes unsupported assertions regarding Chinook salmon (Finding 275), fails to consider the floodplain inundation benefits of the proposed interim flow measures (Finding 276), and improperly considers the effects of out-of-river factors (Finding 277).

68. Agencies and Conservation Groups also dispute the report's findings related to water supply, irrigation, and economics (Findings 278-290). They maintain that these findings are based on unsubstantiated and unstated assumptions. They argue that the report improperly uses the Districts' and San Francisco's worst case drought scenario (Finding 278), makes no evidentiary connection between the hypothetical shortages and the decreased availability of water that might result from the interim measures (Findings 279-282), overstates the likely social and economic consequences (finding 281), lacks

necessary analysis (Finding 283), fails to account for many years in which there would be almost no effect on power production (Finding 284), and provides no quantification of impacts (Findings 285-290).

69. As noted earlier, it was reasonable for the presiding judge to use a worst-case scenario to assess possible effects of the proposed interim flow measures. The proceeding on interim conditions was not an evidentiary hearing and did not require the judge to make detailed findings of fact. In addition, the proceeding did not result in any agreement on interim conditions or any specific recommendation for interim measures that could feasibly be implemented pending relicensing. Therefore, it did not provide a basis for changing the findings in our July 2009 order. Given these circumstances, we need not review in detail the basis for the judge's findings or the evidence in support of or contradicting those findings. Instead, we accept them as the judge's explanation of why the parties did not reach agreement and why the judge did not recommend any interim measures pending relicensing.

70. Agencies and Conservation Groups recommend that the Services' proposed interim flow measures be implemented "within the context of a robust, empirical study protocol aimed at optimizing the balance of flows for both people and fish over the full range of water year types."⁶³ They urge the Commission "to institute reasonable interim measures for immediate fisheries relief."⁶⁴ To that end, they request that the Commission reopen the license and prepare an environmental analysis, with a decision on interim flows by December 2010.

71. As we have seen, the interim conditions proceeding ended without an agreement on interim measures, a finding that interim conditions are needed, or any recommendations for interim protective measures that could feasibly be implemented pending relicensing. The judge's report did not provide a basis for changing the findings we made in our July 2009 order. We therefore had no basis for taking the action that Agencies and Conservation Groups requested.

D. Conservation Groups' Request for Final Action

72. In their December 28, 2010 filing, Conservation Groups request that the Commission take final action on the proceeding on interim measures to protect fishery resources in the lower Tuolumne River pending relicensing. They assert that the Commission has not issued a timely decision regarding the need for interim measures to protect fish pending relicensing, as required by section 706(1) of the Administrative

⁶³ Agencies' and Conservation Groups' Comments at 82 (filed Jan. 5, 2010).

⁶⁴ *Id.*

Procedure Act (APA).⁶⁵ They maintain that, despite calling for an expedited proceeding, the Commission has unreasonably delayed a final decision on whether interim measures are needed. They argue that the Commission must make a final determination of whether the threshold for interim protective measures has been met so the parties may determine how to proceed.⁶⁶

73. San Francisco responds that Conservation Groups appear to misunderstand the nature of the non-adversarial proceeding that the Commission established in its July 2009 order. They argue that no final Commission action is required, because the record of that proceeding does not support the issuance of an order reopening the license at this time, or requiring interim measures pending relicensing. They add that the Commission must fully consider the socioeconomic impacts on the San Francisco Bay area, including preparation of an environmental impact statement under NEPA, before it could impose additional interim flow schedules that could have severe impacts on San Francisco and Bay Area water users.⁶⁷

74. As discussed above, we previously found that interim measures were not warranted, and our July 2009 order was uncontested. The interim conditions proceeding ended without either an agreement among the parties on interim measures or a judge's recommendation that specific interim measures could feasibly be implemented pending relicensing. As a result, neither the proceeding nor the judge's report provided a basis for changing the findings we made in our July 2009 order. Contrary to Conservation Groups' assertion, a decision was not unreasonably delayed because no action was called for.

75. 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

⁶⁵ 5 U.S.C. § 706(1) (2006). Section 706(1) of the APA concerns judicial review, and provides that a reviewing court shall "compel agency action unlawfully withheld or unreasonably delayed." Under section 555(b) of the APA, 5 U.S.C. § 555(b) (2006), agencies must conclude matters presented to them "within a reasonable time." In this case, as we have seen, the interim conditions proceeding ended without the need for any final agency action.

⁶⁶ Conservation Groups' Request for Final Action on Proceeding on Interim Measures to Protect Fishery Resources Pending Relicensing (filed Dec. 28, 2010).

⁶⁷ Answer of the City and County of San Francisco, Public Utilities Commission to Motion of Conservation Groups for Final Action (filed Jan. 12, 2011). The answer notes that the Districts fully support San Francisco's position that the license should not be reopened at this time and have elected not to file a separate answer in opposition to Conservation Groups' request. *Id.* at 2 n. 2.

license to determine what, if any, additional mitigation measures are required by the public interest, after notice and opportunity for hearing.”⁶⁸ In its recent *Hoopa Valley*⁶⁹ decision, the U.S. Court of Appeals for the D.C. Circuit affirmed our use of this standard. In this case, we have found although some adverse effects on fishery resources are occurring, they are not solely attributable to the project. Other factors such as ocean conditions are a major contributor, and increased flows in the Tuolumne River could not likely overcome the effects of those other factors. Lacking a sufficient nexus between the project and adverse effects on fishery resources, we are unable to find that the Don Pedro Project is having unanticipated, serious impacts on those resources.

76. More importantly, however, some studies are not yet complete and relicensing is now underway. As a result, it is not feasible to begin a new proceeding to reopen the license and determine whether to impose interim measures pending relicensing. There are several reasons for this. First, we do not yet have all of the information we determined was needed in our July 2009 order. Although the Districts filed their final temperature modeling study report, we are still awaiting the results of the instream flow study, which is not due until April 29, 2013. In addition, the Districts’ final summary report of their 2005-2012 fisheries studies is not due until July 1, 2013. Second, we could not impose interim conditions without reopening the license. This requires notice and an opportunity for a hearing, which would take time and could divert scarce resources from relicensing and complicate parties’ participation in the relicensing proceeding. Third, in light of the potentially significant impacts of the recommended interim flow measures on municipal water supply, we would need to prepare an EIS on the proposed interim measures, examining the effects of these measures on the full range of affected interests, including fishery resources, recreation, municipal water supply, irrigation, flood control, and power production. In addition, we could not make any changes to the project’s minimum flow requirements without engaging in formal consultation with NMFS under section 7 of the ESA on the effects of the proposed changes on threatened Central Valley steelhead. Under the ESA and its implementing regulations, formal consultation requires a minimum of 135 days, followed by another 45 days in which the Service is required to provide its biological opinion. Thus, the minimum time to complete formal ESA consultation and obtain a biological opinion is six months. In our experience, formal consultation often takes much longer, particularly in cases like this one with complex and controversial issues.

77. Finally, because relicensing is now underway, the Districts are conducting studies and developing information that will be needed for a relicensing decision, which must strike an appropriate balance among competing resources under the comprehensive

⁶⁸ *Ohio Power Co.*, 71 FERC ¶ 61,092, at 61,314 n.43 (1995).

⁶⁹ *Hoopa Valley Tribe v. FERC*, 629 F.3d 209 (2010).

development standard of section 10(a)(1) of the FPA. Commission staff is gathering information needed to prepare an EIS, and will be required to complete formal consultation with the Services on any ESA-listed species that may be affected by operation of the Don Pedro Project. Under the current schedule,⁷⁰ the Districts must file a preliminary license proposal by December 1, 2013, and have the option of filing a draft license application by that date, including all necessary exhibits, a draft biological assessment of effects on ESA-listed species, and a draft historic properties management plan. The relicense application is due by April 30, 2013. Commission staff is scheduled to issue a notice that the application is ready for environmental analysis in June 2014, calling for interventions, recommendations, and preliminary terms and conditions. Parties will have an opportunity to request a trial type hearing with the agencies on any mandatory conditions. Commission staff is scheduled to issue a draft EIS in February 2015, and a final EIS in September of that year. After reviewing the EIS and the record of the relicensing proceeding, the Commission will issue a decision on the relicense application. In these circumstances, it is not feasible to conduct a duplicative, parallel proceeding on interim conditions absent a compelling need to do so. In this case, as we have seen, there is no compelling need.

The Commission orders:

(A) Conservation Groups' request for final action on the proceeding on interim measures to protect fishery resources pending relicensing, filed on December 28, 2010, is denied.

(B) The Districts' answer to the Agencies' and Conservation Groups' comments on the presiding judge's report, filed on January 20, 2010, is rejected.

(C) Conservation Groups' request for rejection of the Districts' January 20, 2010 answer to the Agencies' and Conservation Groups' comments on the presiding judge's report is dismissed as moot.

By the Commission.

(S E A L)

Nathaniel J. Davis, Sr.,
Deputy Secretary.

⁷⁰ See Appendix B to Scoping document 2 for the Don Pedro Hydroelectric Project (issued July 25, 2011).