129 FERC ¶ 61,244
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

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

United Water Conservation District Project No. 2153-015

ORDER DENYING REHEARING, DISMISSING AS MOOT
REQUEST TO HOLD REHEARING ORDER IN ABEYANCE, AND
DENYING REQUEST FOR AN EVIDENTIARY HEARING

(Issued December 17, 2009)

1. On October 14, 2008, United Water Conservation District (United) filed a request for rehearing, motion to hold rehearing order in abeyance, and request for an evidentiary hearing concerning Commission staff's September 12, 2008 order issuing a new 40-year license for its 1,420 kilowatt (kW) Santa Felicia Project No. 2153.[1] The project is located on Piru Creek, a tributary of the Santa Clara River, in Ventura County, California, and occupies 174.5 acres of federal lands in the Los Padres and Angeles National Forests. With a few minor exceptions, all of the issues raised on rehearing concern a biological opinion prepared by the National Marine Fisheries Service (NMFS) under the Endangered Species Act (ESA). For the reasons discussed below, we deny rehearing, dismiss as moot the request to hold the rehearing order in abeyance, and deny the request for an evidentiary hearing.

Background

2. The Commission issued an original 50-year license for the Santa Felicia Project in 1954. As explained in more detail in the relicense order, the original license provided for deferred construction of the powerhouse and associated generating equipment, and the project did not begin generating power until 1990.[2] The original license expired in 2004, and the project operated under an annual license until Commission staff issued the new license on September 12, 2008.

[1] *United Water Conservation District*, 124 FERC ¶ 62,193 (2008).

[2] *Id.* P 1 n.2.

3. The headwaters of Piru Creek are in Lockwood Valley, an upland basin in the southern section of the Los Padres National Forest about 5,200 feet above sea level. Piru Creek has a drainage area of 437 square miles and flows into Pyramid Lake, formed by Pyramid Dam approximately 15 river miles (RM) upstream of the Santa Felicia Project.[3] Upon exiting Pyramid Lake, Piru Creek flows to Piru Lake, which is impounded by the Santa Felicia dam and is the project's reservoir. Lower Piru Creek, downstream of the Santa Felicia dam, continues for another six miles to its confluence with the Santa Clara River approximately 30 RM from the Pacific Ocean.

4. United designed and constructed the Santa Felicia Project in 1955 for water supply purposes, as an integral part of its overall management to recharge downstream groundwater supplies from basins that have been depleted due to substantial overdraft and to combat saltwater intrusion in the groundwater aquifers near the Pacific Coast. To accomplish this, water is retained and stored within Lake Piru during the winter and spring months, when groundwater basins are at their fullest level. United uses the stored water to make conservation releases averaging approximately 270 cubic feet per second (cfs) from the Santa Felicia dam in September and October when the downstream groundwater basin levels are at their seasonal lows. The conservation releases are designed to maximize the amount of water that reaches the Freeman Diversion Dam, located downstream on the Santa Clara River at RM 12, where the water is used to recharge coastal groundwater basins.

5. United added the hydroelectric facilities to the Santa Felicia dam in 1986 and began operating them in 1990. The Santa Felicia Project typically generates power when releases are made to recharge the groundwater basins, normally a period of about 50 days during September and October. The average annual generation is 1,300 megawatt hours (MWh), and the project power is sold to Southern California Edison Company. The turbines are sized to generate power with a maximum flow of 108 cfs. The powerhouse is operated manually. In its relicense application, United proposed to continue operating the project in the same manner, without adding capacity or proposing any new facilities.

6. United filed its relicense application on April 30, 2002. Commission staff found it deficient and required additional consultation and studies. United filed the required information on December 30, 2004, and staff issued notice that the application was accepted for filing and ready for environmental analysis on June 13, 2005.

7. Staff issued a draft environmental assessment (EA) on November 16, 2005, and a final EA on January 23, 2007. The final EA served as the Commission's biological assessment for ESA consultation. In it, staff found that relicensing the Santa Felicia

[3] Pyramid Lake and Pyramid Dam are components of the California Aqueduct Project No. 2426, which carries water from Northern California to Southern California.

Project would be likely to adversely affect the endangered Southern California Distinct Population Segment (DPS) of steelhead (*Oncorhynchys mykiss*) and its designated critical habitat.[4] As a result, by letter dated November 30, 2005, Commission staff requested initiation of formal consultation with NMFS under section 7 of the ESA. NMFS requested additional information and Commission staff issued a revised biological assessment on January 23, 2007. Formal consultation was initiated on February 7, 2007.

8. NMFS issued a draft biological opinion on November 8, 2007. On December 14, 2007, Commission staff held a teleconference with NMFS and United to discuss the draft. Commission staff and United provided comments on the draft by letters dated January 11, 2008. On March 4, 2008, Commission staff met with United and NMFS to discuss the comments and the draft biological opinion. After the meeting, on March 24, 2008, NMFS distributed proposed revisions to meeting participants. Commission staff provided comments on the proposed revisions on April 1, 2008. Thereafter, on May 5, 2008, NMFS issued its final biological opinion, finding that relicensing the Santa Felicia Project was likely to jeopardize steelhead and destroy or adversely modify the species' critical habitat. The biological opinion included measures to avoid jeopardy and adverse modification, as well as measures to avoid or minimize incidental taking of steelhead. Among other things, these measures included a water release plan to benefit steelhead. By letter dated July 10, 2008, NMFS provided guidance to United regarding the water release plan.

9. On September 12, 2008, Commission staff issued a new minor license for the project. Among other things, staff included in the license the measures that NMFS

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[4] NMFS initially listed the Southern California Evolutionarily Significant Unit (ESU) of Steelhead in 1997, and designated critical habitat for the Southern California Steelhead ESU up to (but not above) the Santa Felicia Dam in 2005. NMFS reaffirmed the listing of the Southern California Steelhead DPS in 2006. There are two principal life history forms for *O. mykiss*: anadromous and resident. The anadromous form (steelhead) spends a portion of its life history in the ocean before returning to fresh water for spawning. The resident form (rainbow trout) spends its entire life in fresh water. The listing covers only the anadromous form of *O. mykiss* and their progeny downstream of impassible barriers to upstream migration; the listed unit of *O. mykiss* is termed a "distinct population segment" or DPS. The term "evolutionarily significant unit," or ESU, refers to both the non-anadromous and anadromous *O. mykiss*. *See* Endangered and Threatened Species, Listing of Several Evolutionarily Significant Units of West Coast Steelhead, 62 Fed. Reg. 43,937 (Aug. 18, 1997); Designation of Critical Habitat for Seven Evolutionarily Significant Units of Pacific Salmon and Steelhead in California, 70 Fed. Reg. 52,488 (Sept. 2, 2005); Final Listing Determination for Ten Distinct Population Segments of West Coast Steelhead, 71 Fed. Reg. 834 (Jan. 5, 2006).

provided in the biological opinion to protect steelhead and its critical habitat. Staff also required additional measures to improve recreational opportunities at the project.

10. On October 10, 2008, in preparation for filing its rehearing request, United filed supplemental materials for the record.[5] On October 14, 2008, United filed its request for rehearing, focusing primarily on issues related to endangered steelhead, but also raising several issues regarding recreation measures. United's rehearing request included a motion to hold the rehearing order in abeyance to allow time to achieve consensus with NMFS on a flow plan to benefit steelhead, a request for an evidentiary hearing if consensus could not be reached, and a request to correct certain errors in the license order. On October 29, 2008, NMFS filed a motion for leave to file a brief in response to United's rehearing request. On November 20, 2009, California Trout filed a motion for leave to file comments in opposition to United's rehearing request, together with a request for leave to participate in any further proceedings, if ordered.

Endangered Species Act Issues

11. Under section 7 of the ESA, a federal agency must ensure, in consultation with the Service (either the U.S. Fish and Wildlife Service (FWS) or NMFS, as appropriate), that its proposed action is not likely to jeopardize the continued existence of any species listed as threatened or endangered, or destroy or adversely modify the species' designated critical habitat. If the action agency determines that its action is likely to adversely affect listed species or their critical habitat, formal consultation is required. The action agency prepares a biological assessment of the proposed action and requests initiation of formal consultation with the Service.

12. Formal consultation must be completed within 90 days, unless the action agency and the Service agree to extend the consultation. The Service must then provide its biological opinion to the action agency within 45 days after consultation is completed. If the Service concludes that the proposed action is likely to jeopardize the continued existence of the species or destroy or adversely modify the species' critical habitat, the biological opinion will include a "reasonable and prudent alternative" (RPA) that will avoid jeopardy, or destruction or adverse modification of habitat, as well as "reasonable

[5] These materials were two papers on surface water and groundwater interactions one undated and one from 1999), an examination of minimum flow requirements for Southern steelhead passage on the lower Santa Clara River in California dated July 2006, and the Commission's final environmental assessment for an application to amend the license for the California Aqueduct Project No. 2426 dated June 2008. They are included as attachments to a letter from Michael Swiger, United's counsel, to Kimberly Bose, Commission Secretary (filed Oct. 10, 2008). NMFS did not object to the inclusion of these materials.

and prudent measures" to implement the RPA. If the proposed action may result in a taking of any individual members of the listed species, the biological opinion will also include an incidental take statement, setting forth limits on such incidental taking and including terms and conditions to avoid or minimize the taking.

13. In this case, NMFS found in its biological opinion that Commission staff's recommended alternative for relicensing the Santa Felicia Project was likely to jeopardize the continued existence of the listed steelhead and was likely to destroy or adversely modify the species' designated critical habitat. To avoid these effects, the biological opinion provided an RPA containing three elements for inclusion in the license. The three elements required United to: (1) minimize the effects of Santa Felicia Dam and its operation on the quality and quantity of habitat for steelhead in Piru Creek downstream of the dam; (2) provide a water release plan and schedule to ensure unimpeded migration of adult and juvenile steelhead in Piru Creek downstream of Santa Felicia Dam and in the Santa Clara River, and to create and maintain freshwater spawning and rearing sites for steelhead throughout Piru Creek downstream of the dam; and (3) assess the feasibility of providing passage of steelhead at or around Santa Felicia Dam or a suitable alternative to passage. The biological opinion also included measures to implement the RPA, as well as measures to minimize and monitor the incidental taking of steelhead, and terms and conditions to implement those measures.

14. On rehearing, United argues that NMFS was arbitrary and capricious in reaching its jeopardy opinion, the RPA is arbitrary and capricious and an abuse of discretion, and Commission staff's adoption of the biological opinion's RPA violates the Commission's responsibilities under both the ESA and the Federal Power Act (FPA). We address these arguments below, after disposing of several motions filed in this proceeding.

A. Preliminary Matters

15. We dismiss United's motion to hold the rehearing order in abeyance as moot, because we are issuing this order on rehearing and because United and NMFS have had an opportunity in the interim (of more than one year) to seek to reach consensus on a flow plan to benefit steelhead. This plan is a requirement of Article 401 of the new license and is an element of the RPA that NMFS included in its biological opinion as necessary to avoid jeopardizing the continued existence of endangered steelhead or destroying or adversely modifying the species' critical habitat. Although United and NMFS have not yet reached consensus on the plan, NMFS has filed comments on United's draft plan, and NMFS held a November 16, 2009 meeting with United to discuss the amount of time that will be needed for revising the plan in response to the comments.[6] Accordingly, no purpose would be served by delaying issuance of this order.

[6] *See* Letter from Rodney McInnis, NMFS Regional Administrator, to Kimberly (continued)

16. We deny United's request for a trial-type evidentiary hearing. Throughout this proceeding, United has had multiple opportunities to present its views regarding the matters addressed in the biological opinion. Among other things, United filed comments on the draft EA, which served as the Commission's draft biological assessment for the project; participated in meetings and conference calls with NMFS and Commission staff concerning the draft biological assessment and preparation of NMFS's biological opinion; participated with NMFS and other interested entities in meetings facilitated by the Commission's Dispute Resolution Service in an attempt to resolve the disputed issues; twice filed additional information, which NMFS considered in preparing its biological opinion, after obtaining consent to extend the time to complete formal consultation; filed comments on the draft biological opinion; and participated in a teleconference and a meeting with NMFS and Commission staff to discuss the comments and possible revisions to the draft biological opinion.

17. Under the FPA and the Commission's regulations, hydroelectric proceedings are normally conducted using notice-and-comment hearings.[7] The decision whether to conduct a trial-type hearing is in the Commission's discretion, and the Commission may deny an oral, trial-type hearing even where material facts are in dispute, so long as the disputes can be adequately resolved through written submissions, taking into account the circumstances of the case.[8]

18. United argues that a trial-type evidentiary hearing should be held on the following issues: (1) whether and to what extent the Piru Creek Groundwater Basin imposes a migratory barrier to steelhead under natural and normal conditions; (2) whether and to what extent steelhead inhabited areas of Piru Creek Basin upstream and downstream of the Santa Felicia Dam prior to its construction; (3) whether and to what extent adequate habitat for steelhead exists in the Piru Creek Basin upstream and downstream of Santa Felicia Dam today; (4) whether and to what extent implementation of the RPA would limit or preclude the District's ability to operate the project as a groundwater recharge project, and the impacts implementation of the RPA would have on water supply and project economics; (5) whether and to what extent construction of volitional fish passage facilities is technically, economically, and biologically feasible at Santa Felicia Dam and the cost of any such feasible facilities; and (6) whether and to what extent releases from Santa Felicia Dam could provide sufficient surface flows in Piru Creek and the Santa

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Bose, Commission Secretary (filed Oct. 27, 2009). The plan is currently overdue. On May 11, 2009, Commission staff denied United's request for additional time to file this plan, along with others required by Article 401.

[7] *See* 18 C.F.R. §§ 4.34(a) and (b); *see also* 18 C.F.R. § 5.23 (2009).

[8] *See City of Tacoma, Washington*, 102 FERC ¶ 61,029, at P 6 (2003).

Clara River to create a migratory corridor for steelhead from Freeman Diversion Dam to the Santa Felicia Dam. United has presented evidence and arguments on all of these issues throughout the proceeding, and NMFS has considered and responded to United's filings in its biological opinion. In addition, United raises all of these issues anew in its request for rehearing, as discussed in more detail later in this order.

19. In essence, United disagrees with the biological opinion and seeks to challenge it by means of a trial-type evidentiary hearing. In our view, this would be inappropriate in light of our role as an action agency in consultation with NMFS under the ESA. The scientific and technical matters at issue in this case are of the type that the ESA contemplates can be addressed through consultation, based on the best scientific and commercial information available, without the need for a trial-type evidentiary hearing.[9] The areas of disagreement between United and NMFS concern the nature and quality of the evidence on which NMFS has relied and the ultimate conclusions that may appropriately be drawn from that evidence. Granting United's request would require us to review the validity of the biological opinion, substituting our judgment for that of NMFS, the agency that Congress has determined in the ESA should be responsible for providing its expert opinion regarding whether relicensing the Santa Felicia Project is likely to jeopardize the continued existence of the listed species, or to destroy or adversely modify its critical habitat. The Commission does not have the authority to render a decision on the validity of the biological opinion. Rather, when a biological opinion is prepared in the course of a Commission licensing proceeding, the only means of challenging its substantive validity is on judicial review of the Commission's decision in the court of appeals.[10] Therefore, a reviewing court, and not the Commission, must decide whether NMFS considered the relevant factors and adequately explained its choices in the biological opinion. While the Commission must make an independent decision under the FPA as to what measures should be included in a license, we are unlikely to contradict the consulting agency's recommendations in the absence of a showing that the biological opinion and the remainder of the record do not provide substantial evidence to support them. As discussed in more detail below, United has not made such a showing here.

20. As a licensing (or federal action) agency, our role is to ensure, in consultation with NMFS, that the proposed action will not result in jeopardy to the species or adverse modification of its critical habitat.[11] In this context, the ESA exerts a "powerful coercive

[9] *See* 16 U.S.C. § 1536(b)(1)(B)(i) (2006); 50 C.F.R. § 402.14(e) (2009).

[10] *See City of Tacoma, Washington v. FERC*, 460 F.3d 53, 75 (D.C. Cir. 2006).

[11] Under the ESA, consultation is triggered by a federal agency action that may affect listed species or their critical habitat. In describing formal consultation, courts often refer to the federal agency proposing to take an action as the action agency, and the

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effect" on agency action.[12] As the Supreme Court has observed, although the action agency bears the ultimate responsibility for compliance with the ESA, a federal agency disregards a jeopardy finding in a biological opinion "at its own peril" and must articulate the reasons for reaching a contrary conclusion.[13] An action agency "need not undertake a separate, independent analysis" of the issues addressed in the biological opinion.[14] We may appropriately rely on the opinion of NMFS, and will satisfy our obligations under the ESA if the record supports that reliance and if United can point to no new information that NMFS did not take into account that would provide a basis for doubting that agency's conclusions.[15] As noted, NMFS has considered United's information and arguments concerning these issues in preparing its biological opinion. Nothing further is required in this case

21. Moreover, United has not adequately explained how a trial-type hearing with cross examination of witnesses would produce a fuller and truer disclosure of the facts than the paper hearing process already employed.[16] Accordingly, we believe the existing record is sufficient to resolve these issues, and no purpose would be served by conducting further proceedings. We therefore deny United's request for a trial-type evidentiary hearing. We address United's request for errata later in this order.

22. We grant NMFS's motion for leave to file a brief in response to United's rehearing request. Under our rules, answers to requests for rehearing are not permitted unless otherwise ordered.[17] As NMFS points out, however, in this case nearly all of the issues raised in United's rehearing request relate to NMFS's biological opinion for relicensing the Santa Felicia Project. To address these issues, we must examine both the biological opinion and the District's arguments in opposition to it. Having the benefit of NMFS's views on these matters will facilitate our review and help to avoid any possible

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Service (FWS or NMFS) as the consulting agency. *See, e.g., City of Tacoma,* 460 F.3d at 75.

[12] *Bennett v. Spear*, 520 U.S. 154, 169 (1997).

[13] *Id.* at 170.

[14] *City of Tacoma*, 460 F.3d at 75, *quoting ALCOA v. Bonneville Power Admin.*, 175 F.3d 1156, 1161 (9th Cir. 1999).

[15] *See City of Tacoma*, 460 F.3d at 75-76.

[16] *See Sierra Association for Environment v. FERC*, 744 F.2d 661, 663 (9th Cir. 1984).

[17] 18 C.F.R. §§ 385.213(a)(2) and 385.713(d) (2009).

misunderstanding of NMFS's findings and conclusions. Therefore, to ensure a complete record, we grant the motion and consider NMFS's response.

23. We deny California Trout's motion for leave to file comments in opposition to United's rehearing request. California Trout's motion is simply a brief, general statement of its views, and would not add anything of substance to our consideration of the issues. In addition, since we have denied United's request for a trial-type hearing, California Trout's request to participate in any further proceedings is moot.

B. The Jeopardy Decision

24. United contends that NMFS was arbitrary and capricious in reaching its jeopardy decision, arguing that the decision is not based on substantial evidence. In particular, United argues that the jeopardy determination is flawed because it (1) does not demonstrate the existence of suitable habitat for steelhead upstream of Santa Felicia Dam; (2) ignores the significant percolative barrier downstream of Santa Felicia Dam; (3) improperly attributes to the proposed action any and all adverse effects to steelhead; and (4) fails to use the best scientific and commercial data available. Regarding the last item, best available data, United contests the evidence supporting: (1) NMFS's finding that steelhead historically inhabited areas upstream of the present-day location of Santa Felicia Dam, (2) its conclusion that the Piru Groundwater Basin does not block passage of migrating steelhead, (3) its estimates of available habitat for steelhead upstream of Santa Felicia Dam, and (4) its statements in the biological opinion regarding the life cycle and migration pattern of steelhead. In response, NMFS argues that United raised these issues in comments on the draft biological opinion and has not presented any new information not already taken into account. We address these issues below.

25. The issues raised under United's item 4, best available data, are closely related to those addressed under United's items 1 through 3. To avoid repetition, we consider all of the related issues together, instead of addressing them under a separate heading as United did in its rehearing request.

1. Habitat Upstream of Santa Felicia Dam

26. United first argues that there is no evidence in the record that relicensing the Santa Felicia Project is likely to cause jeopardy to listed steelhead, because there is no evidence to suggest that the proposed action will appreciably reduce the listed steelhead's chances of either survival or recovery. In support, United cites Commission staff's conclusions in the final EA that relicensing the project with staff's recommended measures would not constitute a major federal action significantly affecting the environment, and would benefit steelhead as compared to baseline conditions. United adds that the biological opinion fails to justify why the proposed action, absent the measures to implement the RPA, may jeopardize the species, particularly because there is no evidence suggesting

how the survival of the species might be at risk or why the proposed action will appreciably reduce the likelihood of recovery.

27. NMFS points out that United has not raised any issues related to the conclusion in the biological opinion that the proposed action is likely to destroy or adversely modify critical habitat, and that the ESA requires an RPA based on this conclusion alone.[18] NMFS adds that its jeopardy opinion is based on the effects of the proposed action, which include continuing to disrupt migration of adult and juvenile steelhead; continuing to disrupt steelhead spawning, incubation, and emergence; and continuing to harm juvenile steelhead.

28. United overstates staff's conclusions in the final EA. Staff found that the majority of the measures included in its recommended alternative would likely improve or at least maintain the existing condition of designated critical habitat.[19] However, as United recognizes, staff also found that relicensing the project would be likely to adversely affect steelhead because all adverse effects could not be avoided. Staff also found that continued operation of the project is likely to adversely affect designated critical habitat for steelhead.[20] If baseline conditions already jeopardize a species, an agency may not take additional action that deepens the jeopardy by causing additional harm.[21] Thus, depending on the circumstances, it may not be sufficient to improve or at least maintain existing habitat conditions. NMFS has provided the Commission with its opinion that the continuing adverse effects of the Santa Felicia Project are sufficient to appreciably reduce the likelihood of both the survival and recovery of listed steelhead. While our staff's analysis was not in complete accord with all aspects of NMFS's analysis in support of its biological opinion, NMFS's conclusions have sufficient record support for us to rely on them.

29. United next argues that the biological opinion fails to demonstrate the existence of suitable habitat for steelhead upstream of Santa Felicia Dam, and that NMFS cannot possibly make a jeopardy finding without establishing the existence and amount of such habitat. Instead, United maintains that the RPA requires United to investigate whether suitable habitat for steelhead even exists upstream of Santa Felicia Dam, and that NMFS cannot support its jeopardy decision on non-existing information.

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[18] *See* 16 U.S.C. 1536(b)(3)(A) (2006).

[19] Final EA at D-20.

[20] *Id*.

[21] *See National Wildlife Federation v. NMFS*, 524 F.3d 917, 930 (9th Cir. 2007).

30. NMFS states that scientists in the field of fishery science commonly use information on the abundance or distribution of fish in streams as a means to infer the existence of suitable habitat for a species. NMFS notes that the biological opinion references fishery investigations that report on the abundance and distribution of rainbow trout (the resident form of *O. mykiss*) in the Piru Creek basin, including the mainstem Piru Creek upstream of Santa Felicia Dam and the principal tributaries such as Agua Blanca Creek and Fish Creek. NMFS states that these investigations indicate that the existing habitat is suitable for spawning and rearing of rainbow trout, as evident by the finding of young-of-the-year and older juvenile trout. NMFS states that it is reasonable for the biological opinion to infer the existence of suitable habitat for the anadromous form of *O. mykiss* based on the presence of the resident form for the following reasons: (1) the resident and anadromous forms simply represent different life histories of the same species, (2) the two life-history forms can be genetically similar and sympatric (i.e., they can occupy the same geographic area without interbreeding), and (3) the resident form can produce anadromous progeny and vice versa.

31. NMFS further maintains that United's allegation that the RPA requires United to investigate whether suitable habitat for steelhead exists upstream of Santa Felicia Dam as part of the feasibility assessment for fish passage at the dam represents a fundamental misunderstanding of the RPA. NMFS explains that a sub-element of the RPA requires United to investigate steelhead behavior, ecology, and habitat requirements for the purpose of assessing the feasibility of steelhead passage. NMFS explains that by "habitat requirements," NMFS means that United must collect data regarding the specific characteristics of the habitats at locations used by adults and juveniles, such as water depth and velocity, and pool, riffle, and run types, and this would not require United to investigate whether suitable habitat exists.

32. In light of these explanations, United's arguments do not indicate that the biological opinion is facially flawed, such that we would be unable to rely on it.

33. United takes issue with NMFS's use of habitat for resident rainbow trout as a proxy for establishing suitable habitat for steelhead, arguing that elsewhere in the biological opinion, NMFS found this approach inappropriate. United cites a statement in the biological opinion that field log notations by California Department of Fish and Game personnel should not be used to discount the appropriateness of the Piru Creek drainage as living space for southern steelhead, because they were assessing the suitability of the instream habitat for receiving plants of hatchery trout, not for native *O. mykiss* including juvenile steelhead.[22] In response, NMFS states that it was referring to the specific situation of using observations of stream conditions for judging whether planting domestic trout was appropriate as a mean to infer the appropriateness of the stream

[22] *See* Final Biological Opinion at 15 (filed May 5, 2008).

conditions for the indigenous *O. mykiss*. NMFS adds that, although the field log notations indicate that the habitat may not have been appropriate for planting domestic trout, this does not mean that the same habitat was inappropriate for native *O. mykiss* including juvenile steelhead.

34. Insofar as we can determine, it appears that NMFS is saying that suitable habitat for resident trout can be used as a proxy for suitable habitat for steelhead, but habitat that may not be suitable for planting hatchery trout should not necessarily be discounted as suitable habitat for steelhead. In the biological opinion, NMFS states that Southern California steelhead have demonstrated a local adaptation to southern California streams in which they reside, including heat tolerance. Therefore, NMFS suggests that while hatchery-stocked rainbow trout (of unknown origins) may not be capable of surviving in stream reaches that the California Department of Fish and Game identified as not suitable for hatchery rainbow trout, the locally-adapted Southern California steelhead may be.[23] In any event, it appears that NMFS was commenting on the observations of state personnel, and there is other information in the biological opinion to support NMFS's finding that there is suitable habitat for steelhead upstream of Santa Felicia Dam. Therefore, we do not consider this potential inconsistency to be a significant problem that would preclude our reliance on the biological opinion.

35. United argues that there is no basis for NMFS's conclusion in the biological opinion that a significant amount of habitat for steelhead is available upstream of Santa Felicia Dam.[24] United maintains that NMFS fails to attempt to quantify the amount of available habitat, suggesting that up to 250 miles of habitat could be available. United argues that this estimate is "exponentially overstated," as it relies solely on a model used by FWS for calculating the total number of stream miles upstream of a dam or other barrier. United contends that, when habitat factors such as the availability and depth of water, presence of gravel, and turbidity are considered, "all but a very few miles of the Piru Creek Basin are uninhabitable by resident rainbow trout or any other fish." United adds that NMFS's assertion of the existence of up to 250 miles of habitat is ten times as much as NMFS asserts existed prior to construction of Santa Felicia Dam, and that most of the 250 miles cited in the biological opinion "are no more than dry canyons and gullies

[23] *Id.* at 12-13.

[24] United also argues that, as a result, this conclusion is not based on the best scientific and commercial data available, as required by the ESA. As explained above, United's argument is based on a mischaracterization, and thus provides no basis for concluding that the biological opinion is not supported by the best scientific and commercial data available.

in the Piru Creek watershed that cannot support any fish species, much less [the Southern California] Steelhead DPS."[25]

36. NMFS responds that United misunderstands the information contained in the biological opinion. NMFS points out that it used the phrase "250 miles of stream network," not habitat, and expressly stated in the biological opinion that "not all 250 miles of stream network may be suitable given the seasonality of some of the sub-basins."[26] NMFS adds that the biological opinion responds to United's comments on this specific issue. NMFS states that the biological opinion relies on site-specific data that indicate rainbow trout are distributed throughout the basin, including the mainstem and tributaries upstream of both Santa Felicia and Pyramid Dams, and that these data show that rainbow trout inhabit much of the basin. NMFS further states that the function and value of ephemeral or seasonal drainages should not be discounted, because adult *O. mykiss* actively seek out and spawn in drainages during winter or spring that are devoid of surface water during the dry season, producing young that would otherwise not be produced. NMFS concludes that overall, given the extensiveness of the Piru Creek basin, the potential for the basin to produce a large number of steelhead is high, and that "extensive habitat exists for steelhead in Piru Creek upstream of Santa Felicia Dam."[27]

37. We agree that United's arguments regarding the estimate of 250 miles of stream network in the basin mischaracterize the information in the biological opinion. Moreover, United's arguments do not take into account NMFS's findings regarding the

[25] United's request for rehearing at 16-17.

[26] Final Biological Opinion at 30.

[27] NMFS's response at 36. In the final EA, Commission staff found that approximately 25 miles of potential steelhead habitat exists between Lake Piru and Pyramid Dam, a barrier to upstream migration. Final EA at 86. Staff found that the Santa Clara River Basin historically provided more than 89 miles of steelhead spawning and rearing habitat, of which 11 miles were in Santa Paula Creek, 53 miles in Sespe Creek, and 25 or more miles in Piru Creek. *Id.* Staff further found that both Santa Felicia and Pyramid dams currently block the upstream migration of steelhead into middle and upper Piru Creek and its tributaries, representing a loss of about 25 miles of historical riverine habitat, including that inundated by the reservoirs, and that approximately 15 miles of habitat exists within middle Piru Creek and its large tributaries in the reach between Lake Piru and Pyramid Dam, including Agua Blanca and Fish Creeks. *Id.* at 87. Contrary to United's assertion, these findings are not inconsistent with NMFS's conclusion that extensive habitat exists upstream of Santa Felicia Dam.

potential ecological role of ephemeral streams. As NMFS explains in the biological opinion: [28]

> Prolonged rain-free periods can cause streams to become intermittent, sometimes over extensive areas. Migration of steelhead to and from spawning and rearing areas and the ocean is not likely under such conditions. Perennial waterways, as such exist often in protected areas within upper basins, can serve as refuges for fish during the drought conditions and may be the only place where reproduction of native steelhead is occurring. With regard to the Piru Creek drainage, the tributaries in the upper drainage (e.g., Agua Blanca Creek, Fish Creek, Buck Creek, Snowy Creek) can possess flowing water even during dry periods. Given that *O. mykiss*, which are similar to other native southern California steelhead stocks, are produced in the habitats above Pyramid Dam and Santa Felicia Dam, such areas are expected to protect the progeny of *O. mykiss* during prolonged dry periods.

38. While NMFS's statement that there are 250 miles of stream network in the basin does not demonstrate that there is a similar amount of steelhead habitat, the fact that there was at least 25 miles of historic steelhead habitat is sufficient to support relying on NMFS's conclusion that suitable habitat exists upstream of Santa Felicia Dam.

39. United argues that, to the extent that NMFS does rely on actual habitat studies in making habitat estimates in the biological opinion, NMFS's conclusions are erroneous because the studies were undertaken during unusually wet years, not during the dry conditions that typically prevail in the Piru Creek Basin, and were completed before more recently implemented flow reductions at Pyramid Dam. United notes that Moore's habitat studies that NMFS relied on in the biological opinion were completed in 1979 and 1980. United argues that, according to U.S. Geological Survey records, precipitation totals in the Piru Creek Basin in 1979 were much higher than normal, and as a result Pyramid Dam released flows of 20 cfs, or nearly double that to the natural inflow under normal conditions. United adds that, in 1980, Pyramid Dam was required by its license to release 10 cfs during the summer months, which also created flows that were higher than natural conditions, and that in 2005, the Commission approved a temporary waiver in the minimum flow requirements at Pyramid Dam, which has resulted in reduced flows in Piru Creek, to the detriment of habitat for rainbow trout. United maintains that the Moore studies simply do not reflect current conditions, and they never accurately reflected available habitat for steelhead under normal precipitation conditions. Similarly, United criticizes the 2005 study by Stoecker and Kelly as inherently unreliable because it

[28] *Id*. at 31 (citations omitted).

was completed prior to the reduced releases at Pyramid Dam and relied on modeling and flyovers instead of on-the-ground fieldwork to calculate features such as water depth, presence of gravel, and other habitat indicators.

40. NMFS responds that United raised these arguments in comments on the draft biological opinion, and that NMFS substantively revised the final biological opinion in response to them. NMFS therefore maintains that the Commission should not accept United's arguments and substitute its judgment for the expert consulting agency's judgment in the biological opinion.

41. Although there is not conclusive evidence as to how much actual steelhead habitat currently exists upstream of Santa Felicia Dam, United's arguments do not prevent us from relying on NMFS's biological opinion. We agree that, because NMFS has had an opportunity to consider United's arguments, they do not represent new information not considered by the consulting agency that would require us to reject the biological opinion.[29] NMFS, as the consulting agency, is well situated to judge the adequacy of the studies and the conclusions that may properly be drawn from them. Further review of these matters is for the court of appeals, not the Commission.

42. United argues that NMFS incorrectly assumes that releases from Pyramid Dam, upstream of the Santa Felicia Project, continue to enhance natural flow conditions in Piru Creek, whereas in fact, the Commission granted a waiver of minimum flow requirements at Pyramid Dam in April 2005 to protect the federally endangered arroyo toad and to avoid incidental taking of this species.[30] United points out that, since then, Pyramid Dam has been operating to generally mimic natural flow conditions, and Piru Creek has not received the minimum flow releases previously required under the license for aquatic resources. United maintains that, as a result, available habitat for rainbow trout in the Piru Creek Basin downstream of Pyramid Dam has been reduced, and the biological opinion "completely ignores this changed circumstance."[31]

43. NMFS explains that it did not include the new flow conditions for Pyramid Dam as part of the environmental baseline because they were being implemented on an interim basis, and the Commission had not yet issued a license amendment authorizing them. We note that on October 28, 2009, Commission staff issued an order amending the license for the California Aqueduct Project to require these flow releases from Pyramid Dam on a

[29] *City of Tacoma*, 460 F.3d at 55.

[30] *California Department of Water Resources*, 111 FERC ¶ 62,040 (2005).

[31] United's request for rehearing at 17-18.

permanent basis.[32] However, our review of NMFS's biological opinion and response suggests that this change would not significantly affect the information and analysis in the biological opinion for the Santa Felicia Project. As explained in the biological opinion, NMFS found it appropriate not to include the Pyramid Dam flow conditions as part of the environmental baseline because operations due to Santa Felicia Dam, not Pyramid Dam, ultimately define the pattern and magnitude of discharge in Piru Creek downstream of Santa Felicia Dam. NMFS further found that including these flows would have consequences only for dry-season flows, because water releases that more closely resemble natural flows would mean high winter and spring base flows, rain-induced pulses in discharge during winter and spring, and low base flows during summer and fall.[33] NMFS concluded that, overall, this would have little implication for conclusions regarding the dry season flows that result from the proposed action, noting that the Commission's analysis also makes it clear that the proposed action will often result in dry season flows that are less than 5 cfs.[34]

44. In response to United's argument, NMFS also states that the biological opinion did not assume that releases from Pyramid Dam would continue to enhance natural flow conditions. NMFS argues that these releases are irrelevant for purposes of developing a general understanding of the amount of habitat for steelhead that exists upstream of Santa Felicia Dam, because habitat for steelhead includes areas that often experience natural instream drying, such as mainstem habitats. NMFS adds that, as discussed in the biological opinion, the principal tributaries to the mainstem Piru Creek downstream of Pyramid Dam, Agua Blanca Creek and Fish Creek, both contribute surface flow to Piru Creek independent of water releases from Pyramid Dam.

45. Based on this explanation, it appears that NMFS has considered United's arguments in the biological opinion and has shown them to be of little consequence. As a result, United's arguments do not lead us to conclude that we may not rely on the biological opinion.

46. We note that, in the relicense decision, Commission staff included a provision for interim minimum flows, to be implemented until NMFS and United complete their consultation on a water release schedule and file a license amendment request, for Commission approval, that would alter the minimum flows required by Article 403. Staff noted that minimum flows would affect ESA-listed amphibians as well as steelhead. In the final EA, staff found that providing United's proposed minimum flow, the natural

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[32] *See California Dept. of Water Resources*, 129 FERC ¶ 62,073 (2009).

[33] Final Biological Opinion at 59.

[34] *Id*.

inflow to Lake Piru plus one cfs and within a range of 1.4 to 5 cfs, would support natural riparian habitat functions and would mimic the natural hydrograph and likely improve the habitat for the federally endangered arroyo toad. Because Commission staff consulted with the U.S. Fish and Wildlife Service regarding effects of the Santa Felicia Project on listed terrestrial species, including the arroyo toad, and received the concurrence of FWS on staff's recommended minimum flow, the Commission may need to reinitiate consultation with FWS prior to approving any deviation from this minimum flow, particularly flows greater than 5 cfs, and prior to implementing the water release schedule developed in response to NMFS's RPA.[35]

47. United argues that "it is well-established that trout populations in Piru Creek downstream of Pyramid Dam have never been self-sustaining," and it is therefore inappropriate for NMFS to rely on abundance of rainbow trout as a proxy for estimating available habitat for steelhead.[36] NMFS responds that United's statement is puzzling, given the manner in which the California Department of Fish and Game has managed selected areas of Piru Creek downstream of Pyramid Dam. NMFS adds that natural and self-sustaining production of wild rainbow trout have been documented in Piru Creek, and notes that the section of Piru Creek extending from Pyramid Dam downstream to near Frenchman's Flat is a California-designated Wild Trout area and part of the Heritage and Wild Trout Program.

48. Minimum flows below Pyramid Dam have been modified several times to enhance the tailwater trout fishery that extends downstream to Frenchman's Flat and to provide artificial habitat conditions that would support a natural and self-sustaining production of wild rainbow trout. Currently, minimum instream flow releases from Pyramid Dam into Piru Creek simulate the natural hydrology of the creek to the extent operationally feasible and benefit the federally-listed arroyo toad.[37] While the first two miles downstream of Pyramid Lake were designated as "Wild Trout Waters" and "Heritage Trout Waters" by the California Fish and Game Commission, these

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[35] *See United Water Conservation District*, 124 FERC ¶ 62,193, at P 31-33 (2008).

[36] United's request for rehearing at 19.

[37] *See California Dept. of Water Resources*, 129 FERC ¶ 62,073 (2009). In that order, Commission staff found that the institution of more diversified flow releases from Pyramid Dam, rather than continuous flows, will likely benefit native fish populations, including rainbow trout, and reduce populations of non-native, aquatic predators. Staff found that the new flow regime will likely improve the conditions that maintain aquatic habitat and should be beneficial for rainbow trout and other native fish during normal water years, but will be detrimental to those fish during periods of low or no flow.

designations have been removed.[38] In any event, as discussed above, this change in flows upstream of Santa Felicia Dam does not preclude our reliance on the biological opinion.

2. Steelhead in Upper Piru Creek before Project Construction

49. United asserts that, in finding that a run of Southern California Steelhead DPS inhabited the Piru Creek Basin upstream of the location of the Santa Felicia Dam before the dam was constructed, NMFS failed to use the best scientific and commercial data available, as required by the ESA. Specifically, United maintains that NMFS relied on three inherently unreliable sources of information: (1) a photograph allegedly depicting several steelhead taken in Agua Blanca Creek in approximately 1915; (2) an alleged one-time sighting of steelhead reported to the California Department of Fish and Game many years after the alleged sighting; and (3) genetic studies that NMFS believes demonstrate that native steelhead volitionally ascended Piru Creek as late as 1955, before the construction of Santa Felicia Dam. United maintains that the first two sources do not qualify as scientific and commercial data, and that the third source simply does not support NMFS's conclusion.

50. Regarding the photograph, United argues that NMFS cannot establish its authenticity, date, or when it was taken, and that the third- and fourth-hand oral history associated with it is "multi-layered hearsay" that falls far short of the evidentiary standard that the ESA requires.[39] Regarding the anecdotal report by an angler to an official with the California Department of Fish and Game of a sighting of steelhead in Piru Creek in 1944-45, United argues that the statement is hearsay, appears only in field notes, and allegedly occurred approximately six years after the alleged sighting, and that non-contemporaneous hearsay statements such as this are inherently unreliable.[40]

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[38] California Fish and Game Commission, Designated Wild Trout Waters (Amended: June 22, 1995, March 6, 1997. Nov. 6, 1998, April 2, 1999, Dec. 8, 2000, April 3, 2003, Dec. 12, 2008) retrieved Dec. 8, 2009 from: http://www.dfg.ca.gov/fish/Resources/Wild Trout/Waters/index.asp .

[39] United's request for rehearing at 26.

[40] United further maintains that, even assuming for the sake of argument that the angler's alleged statement is accurate, it actually contradicts what NMFS seeks to establish in the biological opinion, that a self-sustaining run of steelhead inhabited areas upstream of the present location of the Santa Felicia Dam before the dam was built. United argues that, according to the biological opinion, a self-sustaining run in the Santa Clara Basin would have consisted of 4,510 steelhead per year, yet the sighting was so unique that the angler remembered this event six years later and reported it, yet if

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51. In response, NMFS simply states that the support for its conclusion that steelhead historically migrated into the Piru Creek basin before construction of the Santa Felicia Dam consists of these two items and the findings of genetic investigations conducted on *O. mykiss* within the Santa Clara Basin. NMFS adds that the findings of the genetic investigations alone are sufficient to conclude that steelhead were present in the Piru Creek basin before construction of the dam.

52. If the genetic evidence is sufficient, any possible error associated with NMFS's reliance on the photo and anecdotal report is harmless. Accordingly, we see no need to address whether it was appropriate for NMFS to consider these items.

53. United argues that the biological opinion extrapolates beyond the actual genetic analysis in two studies. United maintains that, as explained in detail in a report United previously prepared and filed in this proceeding, the genetic analyses in these studies suggest only that *O. mykiss* sampled throughout the Santa Clara Basin and in five study basins in California north of San Francisco are closely related and that they have an anadromous ancestor. United acknowledges that this conclusion is not controversial, but argues that what is controversial is NMFS's extrapolation of the results of these genetic analyses. United maintains that, in essence, the studies resulted only in a high correlation, but that NMFS attempts to use this high correlation to establish causation; specifically, that because of similar genetics and common ancestry, current populations of rainbow trout above Santa Felicia Dam must have descended from steelhead that migrated to the upper reaches of Piru Creek until construction of the dam in 1955. United agues that, in doing so, NMFS is actually assuming what it seeks to prove.

54. United points out that, in comments on the draft biological opinion, Commission staff found the genetics analysis inconclusive, because NMFS could not confirm whether trout from Fillmore Hatchery sampled for these genetic analyses were descended from a naturally-spawning Southern California steelhead population or were the progeny of Southern California steelhead stocks. United also maintains that, by ascribing a causal relationship from a high genetic correlation, NMFS ignores how fish disperse within the watershed and interbreed with neighboring populations even without anadromous inputs to the population. As an example, United argues that *O. mykiss* offspring from anadromous parents that remain in fresh water as resident *O. mykiss* could disperse into non-anadromous drainages during certain high flow years, spawn with resident *O. mykiss* in that drainage, and thereby transfer the anadromous genetic footprint to that population.

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steelhead were prevalent, there would be many more reports and accounts of their presence. As explained above, we need not consider whether it was error for NMFS to rely on this evidence.

55. United further argues that NMFS's assumption that a high genetic correlation among *O. mykiss* in the Santa Clara Basin means that Piru Creek supported a self-sustaining run of the Southern California DPS of steelhead as late as 1955 "exhibits a fundamental misunderstanding of the limits of the genetics analyses."[41] United contends that these genetic analyses can only describe general patterns within a few thousand years, and cannot possibly be used to describe the recent life history or specific chronology of *O. mykiss*.

56. NMFS responds that the biological opinion does not extrapolate beyond the conclusions of the genetic studies, and that United's arguments are incorrect. NMFS states that the data can detect migration events in the last generation and identify individual migrants and their population of origin, and can also provide inference about migration over both the recent and distant past, with analyses that can detect differentiation that arises in a single generation and measure it relative to differentiation that occurred thousands of generations in the past.[42]

57. NMFS states that in the 2006 Girman and Garza study,[43] NMFS draws biological inference about multiple time scales, from the immediate past to many thousands of generations ago, and conclusively demonstrates that anadromy has played a primary role in shaping population structure of the species in the Santa Clara River and throughout the region. NMFS adds that this study also demonstrates definitively that the trout stocks from Fillmore Hatchery are not closely related to southern California steelhead populations. NMFS notes that this last point might not have been easily extrapolated from the study by non-experts, but that in a 2008 study[44] that focuses on Central Valley *O. mykiss* but uses some of the present data, NMFS shows explicitly that the Fillmore Hatchery trout strains are more closely related to Central Valley trout populations than to southern California populations, as has been traditionally believed. NMFS states that it

[41] United's request for rehearing at 30.

[42] NMFS's response at 34.

[43] Girman, D., and J.C. Garza, Population Structure and Ancestry of *O. mykiss* Populations in South-Central California Based on Genetic Analysis of Microsatellite Data, Final Report of the National Marine Fisheries Service, Southwest Fisheries Science Center, Santa Cruz, California (2006).

[44] Garza, J.D., and D.E. Pearse, Population Genetic Structure of *Oncorhynchys mykiss* in the California Central Valley, prepared by the University of California, Santa Cruz, and NOAA Southwest Fisheries Science Center, Santa Cruz, for the California Department of Fish and Game (2008) (included as Attachment 1 to NMFS's response).

previously addressed both of United's claims in its letter of March 3, 2008,[45] and in its responses to United's "lay-person's questions."[46]

58. NMFS adds that the work described in the 2006 study was recently published in the journal *Conservation Genetics*, and the journal article describes analysis of a larger set of data using six additional genes that were predicted to be most likely to show signs of differentiation if some of the populations in the study were of distinct genetic origin. NMFS states that this larger set of data provided qualitatively identical results and interpretation as the original data and that, with this amount of data, there is no question that *O. mykiss* populations throughout the Santa Clara River, both above and below dams, are part of the same metapopulation that has been exchanging genes in the recent past. NMFS further states that the patterns of population structure reported in the article leave little doubt about the role of anadromy in linking populations in different basins of the region. Based on these two pieces of inference, NMFS concludes that United's hypothesis that the *O. mykiss* population in Piru Creek maintained a resident life history strategy in the face of immigrants from populations with anadromy is not tenable.

59. In commenting on the draft biological opinion, Commission staff questioned NMFS's statement that the current *O. mykiss* population in Piru Creek upstream of Santa Felicia Dam are progeny of a naturally reproducing population of Southern California steelhead that volitionally migrated upstream and spawned within the Piru Creek watershed above the current location of the dam. Specifically, staff questioned the origin of 94,000 steelhead stocked in Piru Creek between 1915 and 1938, prior to the construction and operation of the Fillmore Fish Hatchery, and found the genetics analyses inconclusive.[47] In its final biological opinion, NMFS suggests that these fish may have originated at the Shasta Hatchery but does not affirmatively identify the origin of these stocked steelhead or address whether any within-basin transfers occurred. Therefore,

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[45] Letter from D. Boughton and J.C. Garza, Southwest Fisheries Science Center, NMFS, to R. McInnis, Southwest Regional Office, NMFS (dated March 3, 2008) (filed with Commission staff's communications memo dated July 30, 2008).

[46] *See* letter from J.C, Garza, Southwest Fisheries Center, NMFS, to R. McInnis, Southwest Regional Office, NMFS (undated), and letter from D. Boughton et al, Southwest Fisheries Science Center, NMFS, to R. McInnis, Southwest Regional Office, NMFS (dated Aug. 13, 2007), included as Attachments A and B to NMFS's draft biological opinion (filed Nov. 8, 2008). United posed its questions in a letter from J. Dickinson, United, to R. McInnis, NMFS (filed June 21, 2007).

[47] *See* Commission staff's comments on the draft biological opinion at 2-3 (issued January 11, 2008)

while the 94,000 stocked steelhead may have originated from the Shasta Hatchery, the evidence on this issue is not conclusive.

60. However, United's arguments are not new, and NMFS has had an opportunity to consider and respond to them. When urging an action agency to reject a biological opinion, it does not suffice to reargue factual issues that the consulting agency already took into account.[48] In these circumstances, the Commission may appropriately rely on NMFS's biological opinion.

61. United argues that, in reaching its conclusion regarding the presence of a run of southern California steelhead in upper Piru Creek prior to the construction of Santa Felicia Dam, NMFS ignored data that the District brought to NMFS's attention, which in the District's view establishes that this is not the case. Specifically, United asserts that the biological opinion fails to account for the following information: (1) stream surveys from 1931 to 1949 conducted by the California Department of Fish and Game indicating that, before construction of the dam, natural conditions provided little or no trout habitat, very few rainbow trout were observed, and no anadromous steelhead were observed; (2) a 1918 U.S. Forest Service map depicting trout fishing areas in the Santa Clara Basin that does not designate Piru Creek as a trout fishing area; and (3) United's 2007 McEachron report,[49] which surveys scientific reports, stream surveys, newspaper archives, historic stocking records, personal communications with long-time residents, and hydrological records, and concludes that Piru Creek is beyond the natural range of southern California steelhead.

62. NMFS responds that, contrary to United's assertion, it considered and responded to United's information and arguments in the biological opinion. NMFS states that it considered the historical stream surveys as well as the 1918 Forest Service map and United's review of historical information, and provided responses to United's comments on these matters in the biological opinion. In light of this, we find no basis for disregarding the biological opinion.[50]

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[48] *City of Tacoma*, 460 F.3d at 55.

[49] M. McEachron, A Review of Historical Information Regarding Steelhead Trout in the Piru Creek Watershed (filed May 14, 2007).

[50] United also argues that NMFS failed to use the best available scientific and commercial data as required by the ESA, because the biological opinion completely ignores or unreasonably discounts information demonstrating a lack of habitat for steelhead upstream of Santa Felicia Dam. United maintains that, in particular, the biological opinion fails to adequately consider not only the three items discussed in paragraph 60 above, but also the Commission's final EA for relicensing the Santa Felicia

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63. United argues that, in addition to the information listed above, it has undertaken a massive effort to review, compile, and catalog information regarding *O. mykiss* in the region for the period from 1870 to 1955, including books, pamphlets, newspaper articles, fishermen logs, minutes from meetings of the Ventura County Board of Supervisors, hatchery records, and precipitation data. United argues that, aside from several documents referencing the artificial stocking of steelhead trout and the two anecdotal accounts included in NMFS's biological opinion, United's review of more than 2,000 documents did not reveal a single account documenting the presence of steelhead in Piru Creek or any of its tributaries, either upstream or downstream of the present-day location of Santa Felicia Dam.[51]

64. NMFS responds that, when it first listed endangered steelhead in 1997, it was required to consult on many proposed actions for waterways where there was scant if any information indicating historical or contemporary presence of steelhead, but later found through site visits, snorkel surveys, and, occasionally, interviews with local residents, that steelhead were common and at times abundant, even in waterways where existing information was either silent about the presence of steelhead or indicated that the species was not likely to be present. NMFS explains that it characterizes this as the "sampling problem," which means that steelhead are often located when someone undertakes a reliable survey for the specific purpose of investigating the presence of the species. For this reason, NMFS concludes that it is important not to judge the presence of the species based on the lack of evidence of their presence in existing information sources.

65. This explanation is plausible. Given that NMFS has already considered and responded to similar arguments, United's review of additional documents does not provide any basis for disregarding the biological opinion.

Project, finding that only about 25 miles of available habitat existed in Piru Creek before construction of Santa Felicia Dam; and the final EA for the California Aqueduct Project, finding that implementing natural flow conditions downstream of Pyramid Dam to protect the endangered arroyo toad will adversely affect rainbow trout habitat in Piru Creek from Pyramid Dam to Lake Piru. As discussed above and elsewhere in this order, NMFS considered this information in preparing its biological opinion. We find no basis for concluding that the biological opinion was not based on the best available scientific and commercial data.

[51] United's request for rehearing at 32, *citing* the Bowers Declaration (included as Attachment 1 to United's rehearing request).

3. Piru Groundwater Basin

66. United contends that, even assuming for the sake of argument that adequate habitat exists for steelhead upstream of Santa Felicia Dam, the biological opinion considerably overestimates the significance and availability of this habitat, because NMFS fails to account for the Piru Groundwater Basin, a geologic feature that the Santa Clara River traverses downstream from its confluence with Piru Creek. United maintains that, because significant surface flows are lost to the underlying strata, causing the Santa Clara River to be an ephemeral stream for sustained periods, often extending to years, the Piru Groundwater Basin prevents steelhead from migrating to habitat upstream of Santa Felicia Dam.

67. United cites information in the final EA finding that, in the period 1991 to 2003, on average only 61 percent of conservation releases at Santa Felicia Dam reach Freeman Diversion Dam. United adds that, given these significant losses, United developed a model to calculate percolation rates within the Santa Clara Basin, and the Nature Conservancy used the model in a 2006 study to conclude that a continuous flow of 700 cfs would be required to maintain a depth of 0.6 feet for 10 contiguous feet in the Santa Clara River below its confluence with Piru Creek. Based on these results, United concludes that, on average, surface flows in the Santa Clara Basin would be sufficient to allow upstream passage of steelhead beyond the Piru Groundwater Basin only once every seven years. Given that steelhead are a short-lived species, with a generation time of 3 to 4 years, United argues that any steelhead progeny that might successfully migrate upstream of the Piru Groundwater Basin during a high-flow event typically would be prevented in subsequent years from smolting and migrating to the ocean within their lifetime. Thus, United concludes that the Santa Felicia Project is not blocking access to areas inhabited by steelhead under natural and normal conditions, such habitat cannot contribute to the survival or recovery of the species, and any habitat upstream of the Piru Groundwater Basin cannot support a jeopardy decision.

68. NMFS responds that United's arguments are not new, and that NMFS made revisions to the draft biological opinion to address United's comments that the groundwater percolation precludes steelhead from the Piru Creek Basin. NMFS states that the biological opinion acknowledges the percolative behavior of this basin when discussing the findings obtained from NMFS's hydrologic analyses that pertain to the effects of the proposed action on steelhead and their critical habitat, and concludes that "there is no reliable information indicating that the percolation can render the Santa Clara River mainstem impassible during those periods when steelhead would be migrating."[52]

[52] Final Biological Opinion at 17. As NMFS explained in the biological opinion, steelhead have evolved to exploit rain-induced pulses of river discharge, and both adult and juvenile life stages have been found to migrate during periods of elevated winter and (continued)

69. United regards this claim as "staggering," and argues that NMFS's conclusion regarding the nature and extent of the Piru Groundwater Basin is not only not supported by the best scientific and commercial data available, but is unsupported by all existing scientific data. United maintains that NMFS ignored studies, data, United's flow model, and even studies that NMFS relied on in the biological opinion for other purposes.[53]

70. NMFS responds that, contrary to United's claims, the final biological opinion is based on documentation indicating the nature and extent of the Piru Groundwater Basin. NMFS explains that the point of the statement at issue is to clarify that a suitable migration corridor for steelhead is expected in the Santa Clara River mainstem when surface flow connectivity exists during and shortly after periods of substantial rainfall, hence, at a time when steelhead would be migrating. NMFS adds that, while the biological opinion does not dismiss the existence of the Piru Groundwater Basin, United's model and related results are inappropriate for estimating the frequency at which steelhead may have migrated into Piru Creek, because it lacks any biological realism that would allow translation of the findings from the flow-duration analyses into meaningful estimates regarding the migratory behavior of steelhead. NMFS observes that climatic conditions at the southern extent of the geographic range of steelhead fluctuate widely, making migratory conditions limited or non-existent one year and then suitable the next, and that this variability is probably one reason why the species' life history is exceedingly complex. NMFS adds that the genetic and ecological evidence indicate that steelhead migrated into Piru Creek prior to the construction of Santa Felicia Dam, and native southern California steelhead, which are not currently listed under ESA, exist and dominate reproducing populations of *O. mykiss* in the Piru Creek drainage upstream of Pyramid Dam and Santa Felicia dam. Overall, NMFS rejects United's arguments that the Piru Groundwater Basin is sufficient to prevent migration of steelhead into Piru Creek as unfounded and inconsistent with substantial scientific evidence.

71. In the final EA, Commission staff took into account the percolative behavior of the Piru Groundwater Basin but did not regard it as a barrier to migration. Instead, staff recognized that low flows can affect fish passage conditions in the lower Santa Clara River between the estuary and Freeman diversion dam.[54] More specifically, staff found

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spring discharge. NMFS states that, prior to construction of Santa Felicia Dam, river discharge is expected to have been elevated and continuous throughout the Santa Clara River during periods when steelhead were migrating, and that, even today, elevated continuous wet-season discharge in the Santa Clara River in the vicinity and downstream of the confluence with Piru Creek is not uncommon, and the mainstem Santa Clara River is known to flood during rainfall events. *Id.*

[53] United's request for rehearing at 32, 33-35.

[54] EA at 51, 97.

that operation of the Santa Felicia Project for its primary purpose of groundwater recharge would continue to reduce flows downstream of the project during the migration season for juvenile and adult steelhead, and this reduction in wet season flows might adversely affect passage conditions at the mouth of the Santa Clara River and through lower Piru Creek.[55] Staff recommended a steelhead monitoring plan tor determining the presence of steelhead in lower Piru Creek, as well as weekly reporting of surface flow connectivity from the Freeman diversion to Piru Creek to aid in understanding seasonal changes in connectivity and in determining when spawning surveys should be conducted.[56]

72. Staff's analysis does not suggest that the Piru Groundwater Basin is a barrier to steelhead migration. Rather, it appears that the percolative nature of the Basin, in combination with operation of the Santa Felicia Project, can affect steelhead migration, because the project operates to store water during the winter months and release it in the late summer, which reduces streamflows during the steelhead migration season.

73. The consultation provisions of the ESA are based on the assumption that expert agencies such as NMFS are knowledgeable about the precise conditions that pose a threat to listed species and are in the best position to make the necessary discretionary factual determinations about whether a proposed action will create problems for listed species and what measures might be needed to protect them.[57] Even when a biological opinion is based on "admittedly weak" information, an action agency's reliance on it will satisfy the ESA if a challenging party can point to no new information that the consulting agency did not take into account that would challenge the conclusions in the biological opinion.[58] Given that NMFS considered and responded to United's arguments, we find no basis for disregarding the biological opinion.

74. United also argues that the biological opinion is not based on the best scientific and commercial data available, because it fails to support the claim that the migration patterns of southern California steelhead are timed to allow passage upstream of the Piru Groundwater Basin. United maintains that NMFS essentially claims that the life cycles of southern California steelhead have evolved to account for the rare instances in which, under natural and normal conditions, surface flows across the Piru Creek Groundwater

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[55] *Id.* at 99.

[56] *See* EA at 51, 194.

[57] *City of Tacoma*, 460 F.3d at 75.

[58] *Id.* at 76, *citing Pyramid Lake Paiute Tribe v. U.S. Dep't of Navy*, 898 F.2d 1410, 1415 (9th Cir. 1990).

Basin would create a migratory corridor in the Santa Clara River from the Pacific Ocean. United argues that NMFS fails to cite to a single study suggesting that the lifecycle of these fish is flexible and extended enough to overcome the protracted periods, measured in years in most instances, in which a lack of precipitation and the presence of the Piru Groundwater Basin would block steelhead migration to the Piru Creek Basin.

75. This is essentially a reiteration of United's arguments regarding the percolative nature of the Piru Groundwater Basin and whether it presents a barrier to steelhead migration. Given that NMFS considered and responded to these arguments, we do not regard them as providing a basis for rejecting the biological opinion.

4. Adverse Effects to Steelhead

76. United argues that the biological opinion improperly attributes to the proposed action any and all adverse effects to steelhead. United acknowledges that the biological opinion identifies land and water users other than the District, as well as other water uses in the action area, that could threaten steelhead, such as water storage and diversion facilities, land use activities, groundwater pumping, sport fishing, and the introduction of non-native exotic species. United maintains, however, that instead of accounting for these other water users and uses in its jeopardy analysis, NMFS improperly finds jeopardy based on the erroneous assumption that the proposed action is the sole cause of any and all adverse effects to steelhead. United argues that NMFS should have analyzed these other ongoing activities in its jeopardy analysis to determine whether they account for any appreciable reduction in the likelihood of survival or recovery of steelhead, or accounted for the fact that Piru Creek is a minor contributor to the overall flow regime in the Santa Clara River. United maintains that, as a result, the RPA improperly requires the District to mitigate all effects to steelhead in the entire Santa Clara Basin, even though the Santa Felicia Project is a facility on a minor tributary of the Santa Clara River, and other diversions on private lands below the dam can significantly affect flows in lower Piru Creek to a large degree. As an example, United notes that the RPA requires it to "ensure" an unimpeded migratory corridor in the Santa Clara River, even though water users and water uses in the Santa Clara Basin upstream of Piru Creek also contribute to the prevailing hydrology in the Basin.

77. NMFS responds that the biological opinion undertook an analysis and synthesis of information that is consistent with the ESA and NMFS's implementing regulations. NMFS states that the sections of the biological opinion that address the environmental baseline and the status of listed species and their critical habitat consider the past and present effects of anthropogenic (human-caused) activities on endangered steelhead and their habitat. NMFS adds that it developed the RPA to focus exclusively on the expected effects of the proposed action, including (1) effects on channel-bed morphology, and substrate character and condition in Piru Creek downstream of Santa Felicia Dam (RPA sub-element 1); (2) effects related to the alteration of the pattern and magnitude of stream flow in Piru Creek and the Santa Clara River downstream of Santa Felicia Dam (RPA

sub-element 2); and (3) effects resulting from habitat loss and fragmentation, and blocking steelhead from historical spawning and rearing habitats upstream of Santa Felicia Dam (RPA sub-element 3). NMFS states that United's claim that the RPA extends to effects other than those due to the proposed action is incorrect, and that the RPA does not require United to mitigate all effects to steelhead in the entire Santa Clara Basin.

78. NMFS also explains that it used the phrase "unimpeded migration" in the RPA to ensure that the water releases provided from Santa Felicia Dam "are truly meaningful for promoting a properly functioning migratory corridor for steelhead."[59] NMFS clarifies that the phrase is not intended, and will not be used, to establish a freshwater migration corridor for steelhead when such would not otherwise be expected, for example, during the dry season. NMFS notes that the biological opinion includes information on the life history and habitat requirements of steelhead, triggering criteria for the development of water releases for steelhead migration, and an adaptive management plan for water releases. NMFS states that this information, combined with the guidance contained in its July 10, 2008 letter to United, clarifies the means by which water releases for migration of steelhead will be defined.

79. NMFS also takes issue with United's characterization of the Piru Creek basin as a minor contributor to the Santa Clara River, arguing that United understates the functional value of this tributary to the Santa Clara River population of steelhead and the entire Southern California DPS of steelhead as a whole. NMFS states that, as discussed in the biological opinion, the Piru Creek basin contributes substantially to the pattern and magnitude of surface flows in the Santa Clara River, and provides an extensive amount of habitat for steelhead. NMFS concludes that, given the extensiveness and quality of the habitat, the Piru Creek basin possesses the potential to produce a large number of steelhead.

80. United's arguments are general and are not supported by specific examples, apart from its criticism of the requirement to ensure unimpeded migration for steelhead. United will have an opportunity to obtain greater specificity regarding this requirement in developing its water release plan in consultation with NMFS. This does not strike us as unreasonable. Moreover, we do not find any basis for concluding that NMFS is attributing all adverse effects to steelhead to the proposed action. United seems to suggest that NMFS must allocate to various other activities in the area specific portions of the harm to steelhead that has led to its currently endangered status, but we find nothing in the ESA or its implementing regulations that would require such an approach. NMFS has analyzed the effects of the proposed action and addressed them in its RPA, and we find no basis for rejecting that analysis.

[59] NMFS response at 25.

C. The Reasonable and Prudent Alternative

81. United maintains that, even assuming for the sake of argument that a jeopardy circumstance is present, a consulting agency must include an RPA that can be implemented to avoid jeopardy. United argues that under the ESA implementing regulations, the RPA must be reasonable, economically and technically feasible, and one that an applicant can implement in a manner consistent with the intended purpose of the action.[60] United contends that the RPA in this case fails to meet these requirements.

82. United argues that the RPA imposes physically impossible requirements, because United cannot possibly ensure each of the following: (1) that the magnitude, timing, frequency, duration, and rate-of-change of water released from Santa Felicia Dam into Piru Creek will provide unimpeded migration of adult and juvenile steelhead in Piru Creek downstream of Santa Felicia Dam and in the Santa Clara River from the confluence of Piru Creek downstream to the Vern Freeman Diversion Dam; (2) formation and preservation of freshwater rearing sites for steelhead throughout Piru Creek downstream of Santa Felicia Dam; and (3) creation and maintenance of freshwater spawning sites for steelhead (including incubation and emergence of life stages of steelhead) throughout Piru Creek downstream of Santa Felicia Dam. United contends that these requirements are impossible because the Piru Groundwater Basin captures the majority of Piru Creek flows, and only substantial and sustained flows of over 200 cfs for more than one week can lead to surface continuity to achieve the requirement of the RPA. United adds that, even if all water resources associated with the project were devoted entirely to supplying migration flows, there would be insufficient precipitation in the Piru Basin to provide unimpeded migration of adult and juvenile steelhead except in the wettest years, and that under natural and normal conditions, there is simply not enough water in the Piru Creek Basin to ensure the RPA's required flows and habitat.

83. NMFS responds that the RPA generally involves implementing a Santa Felicia Dam operations plan that requires establishing and preserving essential features of critical habitat to endangered steelhead in Piru Creek and the Santa Clara River, and restoring anadromy of steelhead to the Piru Creek Drainage. NMFS adds that it considered the physical possibility of implementing the elements of the RPA and found that they can be implemented in a manner consistent with the intended purpose of the proposed action, are within the scope of the Commission's authority and jurisdiction, are expected to be economically and technically feasible, and address those deficient aspects of the proposed action that would perpetuate the reduction in the amount and quality of habitat for steelhead and continue to cause a decrease in abundance of the species. NMFS states that it expects United will be able to ensure compliance with the RPA through consultation with NMFS on developing the plans that the elements of the RPA require, including

[60] *See* 50 C.F.R. § 402.02 (2009).

programs for effectiveness monitoring and adaptive management. NMFS also maintains that the Commission has no authority to review the substantive validity of the RPA.

84. NMFS also argues that, contrary to United's suggestion, the entire water resources associated with the Santa Felicia Project are not necessary to meet the requirements of the RPA. NMFS notes that early technical analyses undertaken among NMFS, United, and the California Department of Fish and Game, which United filed with the Commission on May 8, 2008, assessed the influence of water releases on storage in Lake Piru. NMFS states that these analyses indicated that sufficient water storage was available in Lake Piru to provide water releases for steelhead, and such releases were not expected to reduce storage in Lake Piru below critical levels. NMFS concludes that, overall, the RPA can be implemented without precluding United from storing and releasing water for downstream users and for recharging the over-drafted Oxnard Plain groundwater basin (one of seven main groundwater basins affected by Lake Piru that experiences saltwater intrusion when overdrawn), as discussed in the biological opinion. NMFS adds that the Commission should reject the new analysis contained in Attachment 2 of United's rehearing request, because United had not previously submitted the information and it is based on incorrect assumptions.

85. As an example, NMFS asserts that the analysis incorrectly assumes that a blanket water release from Santa Felicia Dam is necessary throughout the entire principal migratory season for steelhead (January through May). According to NMFS, this assumption is invalid because, as discussed in the biological opinion, steelhead migrate primarily during rain-induced periods of elevated flows (discharge pulses), the RPA identifies the need for triggering criteria to guide when water releases should start and stop, and the July 10, 2008 guidance letter from NMFS to United clearly indicates and discusses the triggering criteria in the context of the water releases for steelhead migration. NMFS concludes that, by assuming that water releases must be provided during times other than observed natural discharge pulses, the analysis grossly and artificially overestimates the influence of the RPA on the availability of the Project's water resources.

86. We agree that, while we must support our decisions with substantial evidence and, at least theoretically, have the ability not to require adoption of the RPA, the Commission has no authority to review the reasonableness of the RPA. Moreover, because United's implementation of the RPA will be governed by the plans that United must develop in consultation with NMFS, no purpose would be served by our attempting to resolve this dispute about what assumptions may be appropriate for analyzing the RPA. Given that NMFS rendered a jeopardy opinion, NMFS as the expert agency is responsible for making discretionary judgments about what alternative measures are needed to avoid jeopardy to the species or adverse modification to its critical habitat. Moreover, if in fact the RPA proves to be physically impossible to implement, the only way to avoid jeopardy would be for the Commission to disallow the proposed action and United to seek an

exemption from the Endangered Species Committee, because the ESA expressly requires federal agencies to ensure that their proposed actions will not jeopardize the continued existence of endangered species, or destroy or adversely modify critical habitat for those species. [61] Thus, United must either implement the RPA in consultation with NMFS in order to avoid jeopardy, or cease operating its project in a manner that would jeopardize the species.

87. United next maintains that, even assuming for the sake of argument that the RPA requirement to ensure flows and habitat downstream of Santa Felicia Dam is not impossible, it is not consistent with the intended purpose of the action. United argues that the primary purpose of the project is to supply water for groundwater recharge and to combat saltwater intrusion in downstream aquifers and that, under the RPA, United would be substantially impeded from meeting that primary purpose. United adds that, as set forth in the McEachron declaration (included as attachment 2 to United's rehearing request), except in the wettest years, complying with the RPA would completely foreclose United from providing conservation releases from Santa Felicia Dam for the purpose of groundwater recharge, and this in turn would prevent United from combating saltwater intrusion in coastal aquifers, causing the water quality in these aquifers to degrade.[62]

88. NMFS responds that it considered the relationship between the RPA and the intended purpose of the action in the biological opinion and concluded that they are consistent. NMFS reiterates that United's analysis is based on incorrect assumptions about water releases and steelhead migration, and ignores the need for triggering criteria and development of an adaptive management plan for water releases, as well as the

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[61] *See* ESA section 7(g), 16 U.S.C. § 1536(g) (2006). Among other things, the Committee must find that the proposed action is in the public interest and is of regional or national significance, and that the benefits of the proposed action clearly outweigh the benefits of alternative courses of action consistent with conserving the species or its critical habitat. *Id.* at section 7(h), 16 U.S.C. §1536(h) (2006).

[62] NMFS objects to United's attempt to supplement the record in Attachments 1 and 2 to United's rehearing request. As a general matter, we agree that a request for rehearing is not an appropriate time or place to introduce additional evidence, absent a compelling showing of good cause. *See McCallum Enterprises*, 126 FERC 61,127, at P 20 (2009). In this case, the attachments are similar to materials that United presented earlier in comments on the draft biological opinion. In addition, because we have decided to allow NMFS to file its response to United's rehearing request, NMFS has had an opportunity to review and respond to the material in these attachments. We will therefore consider them to the extent discussed in this order.

guidance that NMFS provided in its July 10, 2008 letter to United and in a meeting between NMFS and United held on September 17, 2008.

89. As explained above, we will not review the validity of the RPA. Moreover, it remains to be seen whether United and NMFS may be able to agree on the required plans to implement the RPA. In addition, as discussed above, FWS concurred with Commission staff's recommended minimum flows to protect the arroyo toad (required as an interim measure in Article 403 of the new license). As noted, the Commission may need to reinitiate consultation with FWS prior to approving any deviation from this minimum flow. Accordingly, no purpose would be served by our attempting to resolve this dispute about the assumptions underlying United's analysis and arguments.

90. United also argues that it is unreasonable for the RPA to require United to provide for passage of steelhead upstream of Santa Felicia Dam because NMFS has not demonstrated that such passage would be technically feasible, and the high cost of such an undertaking would not benefit steelhead. In support, United cites Commission staff's analysis in the final EA (with which the Director concurred), which found that implementing fish passage measures is not justified at this time, because habitat upstream of Santa Felicia Dam is limited, fish passage facilities would be costly (between $1.4 million for trap and haul facilities and $5 million for a fish ladder), the height of the dam might make a fish ladder infeasible for steelhead passage, and very few steelhead arrive at the downstream Freeman Diversion Dam.

91. NMFS responds that, contrary to United's arguments, the final biological opinion discusses how the RPA, including restoring steelhead access to habitats upstream of Santa Felicia Dam, would avoid jeopardy. NMFS adds that, with regard to the economic and technical feasibility of the RPA, the biological opinion provides for further consideration of these issues as part of the assessment of steelhead passage feasibility, which will include more specific information about the economic and technical feasibility of the RPA.

92. While we recognize that NMFS's open-ended approach provides less than ideal certainty, we cannot reject it as unreasonable. Under the FPA, the Commission is responsible for balancing environmental and developmental values in determining what measures should be required in connection with relicensing a hydroelectric project. Under the ESA, NMFS has a different role. As the consulting agency, NMFS must offer its expert opinion on whether the proposed action is likely to cause jeopardy to the species or destroy or adversely modify the species' critical habitat, without concern for other, possibly competing interests. We would not necessarily expect that NMFS would reach the same conclusions regarding fish passage under the ESA as Commission staff did under the FPA. Therefore, these differing conclusions do not provide us with any basis for rejecting the biological opinion. Further, the importance of the consulting agency's role in protecting endangered species, coupled with the coercive effect of the

ESA,[63] make it unlikely that we will act in a manner that is inconsistent with the conditions of a biological opinion.

93. United argues that the RPA is not reasonable because it requires United to implement a plan to minimize the effects of the project on downstream steelhead habitat, despite the absence of steelhead in Piru Creek and the natural percolative barrier downstream of the project. United adds that this requirement is completely open-ended, as United has no way of knowing the types or extent of mitigation NMFS may require, and how those requirements may adversely affect downstream private land owners.

94. NMFS points out that, as provided in the biological opinion, Piru Creek is designated critical habitat for endangered steelhead from the base of Santa Felicia Dam downstream to the confluence with the Santa Clara River. NMFS adds that geomorphic effects are one category of substantive effects identified in the biological opinion that reduce the quality and quantity of critical habitat for endangered steelhead, and that this element of the RPA is needed to address the degraded condition and characteristics of Piru Creek downstream of Santa Felicia Dam through remediation of habitat damages caused by continued operation of the Project. NMFS further states that this element requires coordination with NMFS on development and implementation of both study plans and habitat improvement plans, allowing specific details of the plans to be determined during that coordination.

95. Again, while we recognize that NMFS's open-ended approach might be problematic, it is not unreasonable. NMFS has considered United's arguments, and they do not provide us with any basis to reject the biological opinion.

96. United's remaining arguments about the reasonableness of the RPA are variations of arguments already addressed earlier in this order. Specifically, United argues that it is unreasonable for the RPA to require United to restore steelhead to areas where there is not credible evidence that they existed under natural conditions above Santa Felicia Dam, or even in the Santa Clara River upstream of the Piru Groundwater Basin, or that the RPA unreasonably requires United to mitigate any and all adverse effects to steelhead in the Santa Clara River Basin. We addressed these arguments earlier, and need not reconsider them here.

D. Commission Staff's Reliance on the Biological Opinion

97. United argues that Commission staff's adoption of the RPA in its relicensing decision was an abdication of the Commission's responsibilities under the ESA. United maintains that the Commission has an independent obligation to satisfy the requirements

[63] *See Bennett v. Spear*, 520 U.S. at 169-170.

of the ESA, and staff may not "blindly" accept a biological opinion or "carelessly" adopt an RPA incorporating it into the new license, even though it conflicts directly with staff's analysis and conclusions in the final EA, as well as staff's comments on the draft biological opinion. United contends that staff was required to seek to resolve the discrepancies between its findings and those in the biological opinion. United concludes that staff's acceptance of a biological opinion that is not supported by substantial evidence was arbitrary and capricious.

98. As we have explained throughout this order, the Commission lacks the authority to directly review the biological opinion. The Commission will generally follow a biological opinion and include measures required by an RPA or incidental take statement, particularly where there is a possibility that the proposed action will result in jeopardy or present a risk of incidental taking of listed species.[64] In reviewing whether the Commission may appropriately rely on the biological opinion, the relevant inquiry is not whether the biological opinion is flawed, but rather whether our reliance was arbitrary and capricious.[65] Even if the biological opinion is based on weak information, an action agency may rely on it if a challenging party can point to no new information that the consulting agency did not take into account that challenges the opinion's conclusions.[66] In this case, United is simply rearguing factual issues that NMFS considered in preparing the final biological opinion. Accordingly, we may appropriately rely on the consulting agency's expertise in these matters. Nor do we think that staff was required to resolve inconsistencies between its recommendations in the final EA pursuant to the FPA and NMFS's conclusions in the biological opinion pursuant to the ESA. As noted above, the statutory requirements are different, and can reasonably yield different conclusions.

99. United also argues that Commission staff's adoption of the RPA was an abdication of the Commission's responsibilities under the FPA. United maintains that, under the comprehensive development and public interest standards of sections 4(e) and 10(a)(1) of the FPA, the Commission must balance developmental and environmental resource values and ensure that the project is best adapted to a comprehensive plan for improving or developing a waterway for all affected developmental and non-developmental resources. United argues that the staff's preferred alternative in the final EA appropriately balances these resources and includes appropriate license conditions. However, United contends that by adopting the RPA as part of the license, staff disregarded this public interest balancing and put exclusive priority on the non-developmental aspects of the project above all other considerations. Specifically, United

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[64] *See Pacific Gas & Electric Co.*, 107 FERC ¶ 61,232, at P 16-17 (2004).

[65] *See City of Tacoma,* 460 F.3d at 75.

[66] *Id*. at 76.

argues that staff placed fish passage and flows to facilitate passage above water supply, water power, and all other non-developmental considerations, in violation of the FPA. United adds that staff arbitrarily questions the need and validity of the RPA on the one hand, yet adopts it on the other, and that such discrepant action does not fulfill the Commission's obligations under the FPA.

100. We disagree. While the FPA provides for balancing of developmental and non-developmental values, the ESA does not. Instead, the ESA requires the Commission to ensure, in consultation with NMFS, that its proposed action will not jeopardize the continued existence of listed species or destroy or adversely modify their critical habitat. Although the Commission bears the ultimate responsibility for determining what measures should be included in a license, it ignores a biological opinion "at its own peril," particularly if there is a risk of jeopardy, adverse habitat modification, or incidental taking of endangered species.[67] Accordingly, the Commission fulfills its responsibilities under both the FPA and the ESA by balancing developmental and non-developmental resources under the FPA, but also giving extra weight to the need to protect endangered species, as the ESA requires. Had we determined that requiring compliance with the RPA was inconsistent with the comprehensive development standard, we could have either disregarded the RPA or declined to issue the new license. We did neither. Instead, we concluded that issuing a license that required compliance with the RPA resulted in a project that was best adapted to the comprehensive development of the waterway.[68] United's arguments do not convince us to reverse this finding.

Recreation Issues

101. United argues that Commission staff's inclusion of additional recreation measures in the new license is not supported by substantial evidence and is therefore arbitrary, capricious, and an abuse of discretion. United correctly notes that recreation is one of the beneficial public uses of a waterway that the Commission must consider under section 10(a)(1) of the FPA and that the Commission therefore requires its licensees to make reasonable expenditures to develop suitable recreation facilities and to provide for adequate public access to project facilities and waters.[69] United contends, however, that the license conditions imposed in this case are not reasonable, feasible, or supported by evidence of public need or recreational demand. As discussed below, United seeks

[67] *Bennett v. Spear*, 520 U.S. at 170.

[68] 16 U.S.C. § 803(a)(1) (2006).

[69] United's request for rehearing at 56, *citing Pacific Gas & Electric Co.*, 102 FERC ¶ 61,309, at P 43 (2003).

rehearing of the requirements to provide escorted interim access for whitewater boaters, provide portage around the dam and permanent downstream access, construct a trail on the east side of Lake Piru, and develop an informal day-use area by providing parking, picnic tables, and a restroom.

A. Interim Access for Whitewater Boaters

102. Article 409 of the new license requires United, within one year of license issuance and until permanent whitewater boating access is provided, to implement interim whitewater boating access by providing restricted, escorted access by shuttle to the put-in site below Santa Felicia Dam. It requires United to provide escorted access for six hours (between 9:00 a.m. and 3:00 p.m.) each weekend day of the annual fall flow releases above 200 cfs and during other periods when flow releases exceed 200 cfs. United argues that Commission staff had no basis for requiring a six-hour time frame for escorted access, because it is "based solely on the unsupported request of the whitewater community without any demonstration of need."[70]

103. In its relicense application, United proposed to implement a system to notify the boating community of annual conservation releases to enable them to take advantage of boating opportunities at the Project. United also proposed to provide restricted and escorted access for one hour each weekend day of the annual conservation release. In comments on the draft EA, American Whitewater and Sierra Club commented that the one-hour window was inadequate and would limit whitewater boating opportunities. In the final EA, Commission staff found that extending the access period to six hours would provide more sufficient opportunity for whitewater boaters to access sections of lower Piru Creek until permanent access is obtained for this whitewater boating run.[71]

104. United maintains that its recreation surveys did not indicate a significant increase in the already low whitewater boating use at the Project, and that the burden of providing such access would be significant, because United would be required to create and fund a new part-time position, invest in a shuttle, and provide additional related resources.

105. As discussed in the final EA, United attributed the low whitewater use to access limitations, as well as the limited flow regime and constricted nature of the channel.[72] In addition, United's recreation assessment indicated that recreational use at the project, including boating, is projected to increase by about 37 percent by 2040. As noted,

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[70] United's request for rehearing at 57.

[71] Final EA at 157.

[72] *Id*. at 147.

organizations with an interest in whitewater boating specifically requested that the one-hour access period be expanded to six hours each weekend day during the two-to-six week fall flow release period (to alleviate logistical problems and accommodate the desire for most whitewater boaters to complete two runs per day).[73] Staff estimated that the total annualized cost of providing both interim and permanent access for whitewater boating at the Project would be $400.[74] In these circumstances, staff reasonably concluded that United should be required to provide increased escorted access for whitewater boating. Thus, we find that Article 409 is supported by substantial evidence, and we deny United's request for rehearing of this issue.

B. Portage Around the Dam and Permanent Access for Whitewater Boating

106. Article 410 of the license requires United, within three years of license issuance, to file with the Commission a plan for providing a whitewater boating portage around Santa Felicia Dam and permanent access for whitewater boating downstream of the dam. Among other things, the plan must include measures to control public access to project facilities for purposes of safety and security, parking for 20 vehicles, a spring-closing gate, a graded foot trail from the parking area to the creek, and a schedule for completing development of the site within five years of license issuance.

107. United argues that in the final EA, staff recommended that United study the feasibility of providing portage around Santa Felicia Dam and permanent access for whitewater boaters downstream of the dam, and provide such portage and access only after the Commission determines that these measures are feasible.[75] United asserts that staff did so in response to United's concerns about safety, security, and the possibility of conflicting property uses. United adds that, while it has no objection to providing such access if found to be feasible, the relicensing order simply requires United to file a plan to implement these measures, without first determining whether they are feasible and without any explanation for the change.

[73] *Id*. at 156.

[74] This annualized value includes the cost of providing the escorted, interim whitewater boating access directly downstream of Santa Felicia dam (at USGS gage no. 11109800), as well as any safety measures (signage, fences, etc.) and facility costs associated with developing a permanent whitewater access site downstream of the dam. It does not include the costs associated with creating the portage trail around the dam that will terminate at the permanent put-in site.

[75] *See* final EA at 202.

108. In the relicense order, Commission staff noted that, although the final EA recommended a feasibility study, there was no compelling reason why United could not move forward with actual development of providing portage and downstream whitewater boating access, considering the increase in demand for recreation activities at the project. As discussed in the final EA, United had received preliminary notice from Ventura County that its easements constitute public access, and United proposed to continue to negotiate with Ventura County and neighboring private property interests to secure access at the upstream Piru Canyon Road bridge crossing downstream of Santa Felicia Dam. United further proposed that, if access is secured, it would relocate the existing fences and grade an area to provide parking adequate for at least 20 vehicles and install a spring-closing gate with a foot trail graded to the creek. United further proposed to provide restricted and escorted access to the area in the interim, until the bridge access improvements were implemented.[76]

109. Since United already had proposed these measures, staff included them in the plan required under Article 410. Staff also required United to provide measures for safety and security, and allowed a three-year period for consultation and development of the plan. Although United contends that a feasibility study should be required, United has not provided us with any information that would suggest that these measures are not feasible. In these circumstances, we agree with staff's assessment that there does not appear to be any compelling need for a feasibility study. If, while preparing the plan, United encounters specific security, safety, or public access concerns that it is unable to accommodate, United can seek appropriate relief from the Commission.

110. United also objects to Article 410 on the grounds that it ignores the potential cost involved with such requirements. United argues that, because staff recommended a feasibility study in the final EA, staff's cost estimate included only the cost for the study, and acknowledged that the cost to implement the measures would depend on the outcome of the feasibility study and the details of any preferred feasible alternative.[77] United adds that the costs associated with providing portage and downstream access "could easily exceed $200,000, which could significantly change the levelized annual cost of operating the Project," and were not considered in any balancing of developmental and non-developmental uses of the project, as required by sections 4(e) and 10(a)(1) of the FPA.[78]

111. United's argument is only partially correct. Although the final EA includes the cost of the feasibility study for the portage, whitewater boating take-out, and

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[76] Final EA at 155.

[77] *Id.* at 181, 184.

[78] United's request for rehearing at 62.

development and extension of a trail, it also includes both capital costs and annual costs for providing both an interim and permanent whitewater boating put-in immediately downstream of the dam.[79] While we recognize that the cost of providing portage may exceed $200,000, we note that recreational demand at the project is expected to increase by 37 percent in the next 30 years.[80] Including the additional cost that United argues could be required would decrease the net annual benefits of the project by $11,686. In our view, the cost of these measures is reasonable in light of the enhanced recreational opportunities they would provide, coupled with the expected increase in demand for recreational activities at the project over the term of the license. Under sections 4(e) and 10(a)(1) of the FPA,[81] we find the costs justified for providing the best comprehensive plan for improving or developing Piru Creek. We therefore deny United's request for rehearing of this issue.

C. Construction of a Trail on the East Side of Lake Piru

112. Article 411 requires United to file a recreation trail plan for providing trail access to the east side of Lake Piru. Among other things, the trail plan must identify the location of existing trail sections to be formalized along the east side of the lake and the location and route for providing the missing 1.5 mile trail link between existing trails along the Forest Service roads. Article 411 requires United to file the plan within five years of license issuance and to complete construction of the trails within ten years of license issuance.

113. United argues that staff's decision to require this plan without first finding that it is feasible is not supported by substantial evidence and is arbitrary and capricious. United notes that, in the draft EA, staff recommended that United study the feasibility of providing trail access to the east side of Lake Piru. United adds that, in commenting on the draft, it stated that while it did not object to studying the feasibility of providing the trails, the study would very likely find that the suggested improvements are not feasible because of security, safety, and access issues. United maintains that staff acknowledged these concerns in the final EA and continued to recommend a feasibility study, but then arbitrarily disregarded them in imposing the trail plan as a license requirement.

114. As noted in the final EA, United estimated that recreational use at the project is expected to increase 37 percent by the year 2040, and the activities expected to have the

[79] *See* final EA at 181 (item 36) and 182 (item 39).

[80] *Id*. at 150.

[81] 16 U.S.C. §§ 797(e) and 803(a)(1) (2006), respectively.

greatest demand include day-use facilities and hiking trails.[82] In the relicense order, staff found that, as demand for recreation opportunities as the project grows, access to the east side of Lake Piru can provide additional recreation opportunities to meet these demands, and that formalizing existing trails and connecting existing Forest Service trails in the area would enhance recreation access by providing an around-the-lake connection. Staff further found that this increased access would help meet future recreational demand for hiking and shoreline access within the project area and would increase access to shoreline fishing and wildlife viewing opportunities, and that linking existing trails along the Forest Service roads would help meet future recreational demand over the next ten years. By allowing United to develop the plan over a five-year period, Article 411 provides sufficient time for United to further assess and attempt to resolve the safety, security, and access concerns that it raised in comments on the draft EA. If, in preparing the trail plan, United determines that these measures cannot feasibly be provided, United can seek appropriate relief from the Commission.

115. United also objects to the cost of these measures, estimating that they could exceed $500,000 and were not included in the final EA, because staff recognized that they would depend on the outcome of the feasibility study and the details of any preferred feasible alternative. United maintains that these costs could significantly change the levelized annual cost of operating the project and were not considered in any balancing of developmental and non-developmental uses of the project, as required by sections 4(e) and 10(a)(1) of the FPA.

116. Assuming that United's estimate is accurate, including this cost would reduce the project's net annual benefits by $32,665. In our view, the cost of these measures is reasonable in light of the enhanced recreational opportunities they would provide, coupled with the expected increase in demand for recreational hiking activities at the project over the term of the license. Under sections 4(e) and 10(a)(1) of the FPA,[83] we find the costs justified for providing the best comprehensive plan for improving or developing Piru Creek. We therefore deny United's request for rehearing of this issue.

D. Development of Lakefront Day-Use Area

117. Article 412 requires United to file a plan for completing improvements at the existing informal day-use area on the lakefront at the Juan Fernandez Boat Launch and Swim area between the northern swim beach and the Texaco knoll. These improvements include the addition of 25 picnic tables, a vault-type restroom, and a parking lot for 50 vehicles. Article 412 requires United to file the plan within eight years of license

[82] *See* final EA at 150.

[83] 16 U.S.C. §§ 797(e) and 803(a)(1) (2006), respectively.

issuance and to complete construction of the improvements within ten years of license issuance.

118. United requests that the Commission modify this article to delete the requirement to provide 25 picnic tables and 50 parking spaces, preferring that the exact numbers not be specified in order to provide flexibility to meet future recreational demands at the project. United explains that staff recommended these specific numbers in the draft EA, but then omitted them in the final EA in response to United's comments on the need for flexibility in providing these measures. United maintains that staff's reversion to these specific numbers of picnic tables and parking spaces in Article 412 was arbitrary and capricious, because it ignores the need for flexibility in developing and constructing these lakefront day-use facilities without explaining the reasons for the change. United requests that Article 412 be revised to require "picnic tables, a vault-type restroom, and a vehicular parking lot within the vicinity of the day-use area to meet projected future demand."[84]

119. We deny United's request. As stated previously, demand for recreational opportunities is expected to increase 37 percent by the year 2040, and one of the activities with the greatest expected increase in demand is shoreline day-use facilities. Based on the current and projected demand for recreational activities at the project, we find it reasonable to specify the number of parking spaces and picnic tables required at the day-use area. Furthermore, we note that the numbers that Commission staff recommended in the final EA were taken directly from United's Lake Piru Recreation Area Master Plan, and staff included them in the relicense order to provide more clarity. We recognize that some flexibility may be desirable, and if new information becomes available in the future that indicates a change in demand, that objective can be accommodated by a request to amend the requirements of Article 412 to meet any future changes in demand or use of the area.[85] By requiring that the plan be filed within eight years of license issuance, Article 412 allows sufficient time for United to assess whether any changes to these requirements should be considered. We therefore deny United's request for rehearing of this issue.

[84] United's request for rehearing at 68.

[85] Furthermore, we note that United is only partially correct in stating that the final EA recommended only "adequate parking facilities" at this location. United's request for rehearing at 67. Although United references the numbered list on page 191 of the final EA, this list is only a summary of the recommended measures. Later in the document (at 202), staff discusses these recommendations in more detail, and states that a "parking lot for 50 vehicles within the vicinity of the facility" should be provided.

Request for Errata

120. United requests correction of what it asserts are three errors in the relicensing decision. We address these in turn.

A. Project Facilities on Forest Service Lands

121. United asserts that, while the description of project facilities in paragraph 9 of the relicense order is largely correct, it erroneously states that project facilities are located on Forest Service lands when, in fact, there are no project facilities or project recreational facilities on Forest Service lands. United therefore requests that we delete the last sentence of paragraph 9, which states: "Included in these 53.5 acres [of Forest Service lands] are the dam, powerhouse, and associated facilities as well as several recreational facilities."

122. United is correct that the project boundary includes 53.5 acres of National Forest System lands at the northern end of Lake Piru that are not inundated by the reservoir at normal maximum water surface elevation. However, the project facilities listed in paragraph 9 of the relicense order are located at the southern end of Lake Piru. Therefore, we clarify that there are no project facilities located on National Forest System lands, and the final sentence in paragraph 9 of the relicense order is incorrect.

B. Effective Date for Payment of Annual Charges

123. United argues that the effective date for payment of annual charges in Article 201 is incorrect, because it requires such payment effective August 30, 2007, but Ordering Paragraph (A) provides that the license becomes effective the first day of the month in which the order was issued, or September 1, 2008.

124. Article 201 contains an incorrect effective date for payment of annual charges. The effective date should be September 1, 2008, as stated in ordering paragraph (A) of the license. Article 201 is amended to reflect this correction.

C. Range of Flows Required by Article 403

125. United asserts that there is an error in the table in paragraph (a) of Article 403, which sets forth the flow formula for calculating natural inflow to Lake Piru when the California Department of Water Resources in operating the California Aqueduct Project on an inflow equals outflow basis. United points out that Article 403 requires United to release a minimum flow that equals natural inflow to Lake Piru plus one cfs, within a range of 1.4 to 5 cfs, but the table in paragraph (a) appears to require minimum flows ranging up to 20.4 cfs. United explains that this reflects a clerical error in the chart that United initially submitted and staff repeated in the EA. United requests that the Commission correct the table to reflect the description of flows in the text of Article 403 and the intent of United and staff in requiring the flow releases.

126. United is correct that the intent of Article 403 is to provide a minimum flow below Santa Felicia Dam equivalent to the natural inflow to Lake Piru plus one cfs, with a minimum of 1.4 cfs and a maximum of 5 cfs. In the final EA, Commission staff found that this flow regime would support natural riparian habitat functions and would likely improve the habitat for the arroyo toad. In addition, flows that mimic the natural hydrograph (below 5 cfs) would reduce the habitat available for exotic aquatic species such as the bull frog that prey on the arroyo toad and the California red-legged frog, both of which are federally listed under the ESA. Therefore, the following flow calculation table shall replace the first flow calculation table in Article 403:

Natural Inflow Calcs	Range	Resulting Minimum Flow
$0.6Q_1 + 0.4$	$Q_1 < \mathbf{1}$ cfs	1.4 to 2.0
$1.02Q_1$	$\mathbf{1} \leq Q_1 \leq 4.9$ cfs	2.0 to 5.0
5 cfs	$Q_1 > 4.9$ cfs	5 cfs

The Commission orders:

(A) The request for rehearing filed in this proceeding by United Water Conservation District on October 14, 2008, is denied.

(B) The request for a trial-type evidentiary hearing filed by United Water Conservation District on October 14, 2008, is denied.

(C) The request to hold the rehearing order in abeyance, filed by United Water Conservation District on October 14, 2008, is dismissed as moot.

(D) The motion for leave to file a brief in response to United's rehearing request, filed by the National Marine Fisheries Service on October 29, 2008, is granted.

(E) The motion for leave to file comments in opposition to United's rehearing request, filed by California Trout on November 20, 2008, is denied.

(F) Article 201 is amended to provide that the effective date for payment of annual charges is September 1, 2008.

(G) Article 403 is amended to replace the first flow calculation table with the following table:

Natural Inflow Calcs	Range	Resulting Minimum Flow
$0.6Q_1 + 0.4$	$Q_1 < \mathbf{1}$ cfs	1.4 to 2.0
$1.02Q_1$	$\mathbf{1} \leq Q_1 \leq 4.9$ cfs	2.0 to 5.0
5 cfs	$Q_1 > 4.9$ cfs	5 cfs

By the Commission.

(S E A L)

Kimberly D. Bose,
Secretary.