

124 FERC ¶ 62,193
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

United Water Conservation District

Project No. 2153-012

ORDER ISSUING NEW LICENSE

(September 12, 2008)

INTRODUCTION

1. On April 30, 2002, United Water Conservation District (United) filed an application for a new minor license, pursuant to sections 4(e) and 15 of the Federal Power Act (FPA),¹ to continue operation and maintenance of the Santa Felicia Project No. 2153-012.² The project's authorized capacity is 1,420 kilowatts (kW). The project is

¹ 16 U.S.C. §§797(e) and 808 (2000).

² The Commission issued United a major license for a period of fifty years on December 20, 1954, effective as of May 1, 1954. However, the order deferred construction of the powerhouse and associated generation for an indeterminate period in the future. Determination of the capacity of the project was deferred until the completion of the plans for the powerhouse. *See United Water Conservation District*, 13 F.P.C. 1591 (1954). On May 29, 1984, the Commission amended the 1954 license and authorized United to construct and operate a powerhouse containing three generating units with a total rated capacity of 2,055 kW. *See United Water Conservation District*, 27 FERC ¶ 62,193 (1984). On June 22, 1992 an order was issued amending the license and authorizing the installation of two generating units; unit one rated at 218 kW and unit two at 1,216 kW for a total capacity of 1,434 kW. *See United Water Conservation District*, 59 FERC ¶ 62,303 (1992). Further, on July 29, 1996, the Commission amended the license to reflect the project's as-built capacity from 1,434 kW to 1,420 kW effective April 30, 1990, the first day the project began operating. *See United Water Conservation District*, 76 FERC ¶ 62,074 (1996). Accordingly, the notice accepting the application for filing referenced the application as an application for a new minor license. *See Notice of Application Accepted for Filing and Soliciting Motions to Intervene and Protests* (April 1, 2005).

located on Piru Creek, a tributary of the Santa Clara River, in Ventura County, California. The project occupies 174.5 acres of federal lands, administered by the U.S. Department of Agriculture, Forest Service (Forest Service).³ As discussed below, I am issuing a new minor license for the project.

BACKGROUND

2. The Commission issued the original license for the project for a period of fifty years, effective May 1, 1954. The license expired on April 30, 2004. Since then, United has operated the project under an annual license pending the disposition of its new license application.

3. Notice of the filing of the application for a new license was issued on May 15, 2002, and published in the *Federal Register* on May 22, 2002.⁴ The Commission, however, found United's application to be deficient, as it failed to conform to the Commission's regulations. After completing additional consultation and studies, United filed its response to the deficiencies on December 30, 2004. Notice of the application accepted for filing and ready for environmental analysis was issued on June 13, 2005, and published in the *Federal Register* on June 20, 2005.⁵ The Forest Service, American Whitewater Affiliation (American Whitewater), the Sierra Club River Touring Section, Angeles Chapter (Sierra Club), the California Department of Fish and Game (California Fish and Game), and the Environmental Coalition of Ventura County (Environmental Coalition) filed timely motions to intervene.⁶ California Trout, Inc. (California Trout), National Marine Fisheries Service (NMFS), and Rancho Temescal filed late motions to intervene. These late-filed motions were granted by notices issued November 2, 2005, January 12, 2006, and June 28, 2006, respectively. None of the intervenors oppose the project.

³ The federal lands are in the Los Padres and Angeles National Forests. FPA section 23(b) (1), 16 U.S.C. § 817(1) (2000) requires the project to be licensed because of its location on federal lands.

⁴ 67 Fed. Reg. 35,986 (2002).

⁵ 70 Fed. Reg. 35,423 (2005).

⁶ The motions to intervene were timely and unopposed and therefore they were automatically granted under Rule 214(c)(1) of the Commission's Rules of Practice and Procedure. 18 C.F.R. § 385.214(c)(1) (2005).

4. On June 13, 2005, the Commission issued public notice that the project was ready for environmental analysis and solicited comments, recommendations, terms and conditions, and prescriptions.⁷ In response, comments and recommendations were filed by Rick Norman, the Forest Service, and California Fish and Game.

5. On November 28, 2005, Commission staff issued a draft Environmental Assessment (EA), as well as a notice inviting comments on the EA.⁸ Comments were filed by Friends of the Santa Clara River, the Santa Clara River Trustee Council and the Nature Conservancy, NMFS, the Environmental Coalition, United, California State Water Resources Control Board (Water Board), American Whitewater, Sierra Club, California Trout, California Fish and Game, and U.S. Department of Interior, Geological Survey. On January 23, 2007, Commission staff issued a final EA.

6. The motions to intervene, comments, and recommendations have been fully considered in determining whether, and under what conditions, to issue this license.

PROJECT DESCRIPTION

A. Project Area

7. 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 Dam⁹ approximately 15 river miles (RM) upstream of the Santa Felicia Project. Upon exiting Pyramid Lake, Piru Creek flows to Piru Lake, where it is impounded by the Santa Felicia dam. Lower Piru Creek, downstream of the Santa Felicia dam, continues for another six miles to its confluence with the Santa Clara River approximately 30 river miles from the Pacific Ocean.

⁷ 70 Fed. Reg. 35,423 (2005).

⁸ Staff also conducted a public meeting on January 5, 2006, in Santa Paula, California, for the purpose of receiving additional comments concerning the EA from resource agency personnel and other interested persons.

⁹ Pyramid Lake and Pyramid Dam are components of The California Aqueduct Project (FERC Project No. 2426), which carries water from Northern California to Southern California.

B. Project Facilities

8. The existing Santa Felicia Project consists of: (1) a 200-foot-high, 1,260-foot-long earth-filled dam with a 30-foot-wide roadway across the crest at an elevation of 1075-feet mean sea level (msl); (2) a 450-foot-long, separate, ungated spillway adjacent to and west of the dam with a crest elevation of 1,055-feet msl; (3) an 87,187 acre-foot reservoir, with a useable storage capacity of 67,669 acre-feet and a surface area of 1,213 acres at elevation 1,055 feet msl; (4) a powerhouse located at the base of the dam and containing two generating units, with a total installed capacity of 1,420 kW; (5) a 150-foot-long generator lead to a step-up transformer; and (6) appurtenant facilities. The project has no primary transmission line. Power that is generated at the site is conveyed by transmission lines owned and operated by the Southern California Edison Company. A more detailed project description is contained in Ordering Paragraph (B)(2).

9. The project occupies 174.5 acres of land within the Los Padres and Angeles National Forests, of which about 121 acres are inundated by Lake Piru at maximum water surface elevation. About 53.5 acres are above the normal maximum water surface elevation of 1,055 feet msl, but included within the project boundary. Included in these 53.5 acres are the dam, powerhouse, and associated facilities as well as several recreational facilities.

C. Water Supply Operation

10. The Santa Felicia Project was designed and constructed by United in 1955; hydroelectric facilities were added to the Santa Felicia dam in 1986. The project is an integral part of United's 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 downstream groundwater basins are at their fullest level. Utilizing the stored water, United makes 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.

D. Hydroelectric Power Operation

11. Typically, the project 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. Power also is generated in anticipation of or during reservoir spill periods. The Santa Felicia powerhouse is operated manually. United proposes to continue operating the project in this manner and proposes no increased capacity or new facilities.

E. Project Boundary

12. The Santa Felicia Project boundary follows elevation 1,078.3 feet msl around the shoreline of Lake Piru and near the Santa Felicia dam, the project boundary expands to include the dam, powerhouse, and associated facilities. Several existing recreational facilities also are located within the project boundary, including the Lake Piru Marina Area, the Juan Fernandez Boat Launch Area, and the Reasoner Canyon Picnic Area and Overflow Area. The Lower Oaks and Oak Lane campgrounds are partially enclosed within the project boundary.

13. While the current project boundary includes most project facilities, it does not include all of the existing recreation facilities. The Lower Oaks and Oak Lane campgrounds currently provide opportunities to meet recreational demand; however, only portions of the Lower Oaks and Oak Lane campgrounds are currently located within the project boundary. In addition, the existing whitewater boating take-out on the upper end of Lake Piru, near the Forest Service closure gate, provides whitewater boating access to project waters, but is not currently located within the project boundary. Based on staff's analysis in the final EA,¹⁰ I conclude that these facilities are necessary for project purposes and therefore must be brought within the project boundary. Article 203 requires the applicant to file revised exhibit G drawings that include a project boundary that encompasses the existing project recreation facilities in their entirety, including the entire Lower Oaks and Oak Lane campgrounds and the existing whitewater boating take-out.

WATER QUALITY CERTIFICATION

14. Under section 401(a)(1) of the Clean Water Act (CWA),¹¹ the Commission may not issue a license authorizing the construction or operation of a hydroelectric project unless the state water quality certifying agency has either issued water quality certification for the project or has waived certification by failing to act on a request for a certification within a reasonable period of time, not to exceed 1 year. Section 401(d) of

¹⁰ Final EA, p. 204.

¹¹ 33 U.S.C. § 1341(a)(1) (2000).

the CWA provides that the certification shall become a condition of any federal license that authorizes construction or operation of the project.¹²

15. On April 24, 2002, United applied to the Water Board for a Water Quality Certificate (WQC) for the Santa Felicia Project as required by section 401 of the CWA. At United's request, this application was withdrawn in March 2003, and refiled in a letter dated April 29, 2004. In a letter dated April 7, 2005, United again withdrew its WQC request, requesting a new WQC in the same letter. Water Board received the request on April 11, 2005 and did not act on the application within 1 year.¹³ Therefore, certification is deemed waived.

SECTION 4(e) FINDINGS AND CONDITIONS

16. Section 4(e) of the FPA,¹⁴ provides that the Commission can issue a license for a project located within any reservation only if it finds that the license will not interfere or be inconsistent with the purpose for which such reservation was created or acquired.

17. I have reviewed the Organic Administration Act of 1897,¹⁵ which established the purposes for forest reservations, and the presidential proclamations and executive orders that created and expanded the Los Padres National Forest and created the Angeles

¹² 33 U.S.C. § 1341(d) (2000).

¹³ See letter filed May 17, 2005, from Mr. Jim Canaday, Water Board to Ms. Dana Wischart, General Manager, United.

¹⁴ 16 U.S.C. § 797(e) (2000).

¹⁵ 16 U.S.C. § 473 (2000) et seq.

National Forest.¹⁶ There is no evidence or allegation in this proceeding to indicate that relicensing of the Santa Felicia Project would interfere with the purposes of the Los Padres or Angeles National Forests within which the project is located. Therefore, I find that this license, as conditioned, will not interfere or be inconsistent with the purposes for which the Los Padres and Angeles National Forests were created.

18. FPA section 4(e) further requires that Commission licenses for projects located within federal reservations must include all conditions that the Secretary of the department under whose supervision the reservation falls shall deem necessary for the adequate protection and utilization of such reservation. The Santa Felicia project is located in the Los Padres and Angeles National Forests which are under the Forest Service's supervision.

19. The Forest Service filed its final section 4(e) conditions on January 24, 2006. The final terms and conditions are set forth in Appendix A of this order and incorporated into this license and summarized below.

20. The Forest Service 4(e) conditions require United to: (1) obtain written approval from the Forest Service prior to making changes on or affecting National Forest System lands; (2) consult with the Forest Service between January 10 and March 15 of each year in regard to measures needed to ensure protection and utilization of National Forest System lands; (3) maintain all of its improvements and premises on or affecting National Forest System lands to standards of repair, orderliness, neatness, sanitation, and safety acceptable to the Forest Service; (4) be subjected to all valid rights and claims of third parties and the United States is not liable to United for the exercise of any such right or

¹⁶ The Santa Barbara National Forest was established on December 22, 1903, by consolidating the Pine Mountain and Zaca Lake and Santa Ynez National Forests (Proclamation 33, Stat 2327). On July 1, 1908, portions of the San Gabriel and San Luis Obispo National Forests were added (Executive Order 852). On July 1, 1910, San Luis National forest was added (Executive Order 1209). On August 18, 1919, Monterey National Forest was added (Executive Order 3153). On December 3, 1936, the name was changed to the Los Padres National Forest (Executive Order 7501, 1 FR 2141). The Angeles National Forest was created on July 1, 1908, by combining the entire San Bernardino National Forest and portions of the Santa Barbara and San Gabriel National Forests (Executive Order 846). See, *Encyclopedia of American Forest and Conservation History*, Volume 2, Appendix 1 (Richard C. Davis ed., MacMillian Publishing Co. 1983). The Organic Administration Act of 1897, 16 U.S.C. §475 (2000), stipulated that all national forest lands were established and administered only for watershed protection and timber production.

claim; (5) comply with the regulations of the Department of Agriculture for activities on National Forest System lands, as well as all applicable federal, state, county, and municipal laws in regard to the area or operations affecting National Forest System lands, to the extent federal law does not preempt ordinances or regulations; (6) exercise diligence in protecting from damage the land and property of the United States covered by and used in connection with this license; (7) prior to any surrender or transfer of this license restore National Forest System lands to a condition satisfactory to the Forest Service; (8) indemnify, defend, and hold the United States harmless for any violations incurred under any applicable laws and regulations or for judgments, claims, or demands assessed against the United States in connection with the construction, maintenance, or operation of the project; (9) protect the land, property, and interests of the United States from damage arising from United's construction, maintenance, or operation of the project; (10) identify and report all known or observed hazardous conditions on or affecting National Forest System lands; (11) obtain written approval for the use of any pesticides on Forest Service land; (12) give the United States unrestricted use of any road over which United has control, constructed within the project area for all purposes deemed necessary or desirable in connection with the protection, administration, management, and utilization of federal lands or resources; (13) reserve the right of the Forest Service to modify final section 4(e) conditions submitted to the Commission for inclusion in the new license for the Santa Felicia Hydroelectric Project; (14) before taking actions to construct new project features on National Forest System lands that may affect Forest Service special status species or their habitat, prepare a biological evaluation evaluating the potential impact of the action on the species or its habitat and submit it to the Forest Service for approval; (15) prepare a plan to address sediment management activities affecting National Forest System lands; (16) file with the Commission an Arroyo Toad Protection Plan that is approved by the Forest Service, and developed in consultation with appropriate federal and state resource agencies; (17) in consultation with applicable federal and state agencies, file with the Commission Land Resource Plans that are approved by the Forest Service, as they relate to resource management on the National Forest; (18) prepare and file a terrestrial wildlife mitigation and monitoring plan and a vegetation and noxious weed management plan; (19) prepare and file a Cultural Resources Management Plan for the purpose of protecting and interpreting heritage resources; and (20) prepare and file a Roads and Transportation Facilities Management Plan incorporating Forest Service standards for design, construction, operation, and maintenance.

SECTION 18 FISHWAY PRESCRIPTIONS

21. Section 18 of the FPA¹⁷ provides that the Commission shall require the construction, maintenance, and operation by a licensee of such fishways as may be prescribed by the Secretary of the Interior or the Secretary of Commerce, as appropriate.
22. By letter filed December 18, 2006, the Secretary of Commerce requested that the Commission reserve authority to prescribe fishways. Consistent with the Commission's policy, Article 402 of this license reserves the Commission's authority to require fishways that may be prescribed by Commerce for the Santa Felicia Project.

THREATENED AND ENDANGERED SPECIES

23. Section 7(a)(2) of the Endangered Species Act of 1973,¹⁸ (ESA) requires federal agencies to ensure that their actions are not likely to jeopardize the continued existence of federally listed threatened and endangered species, or result in the destruction or adverse modification of designated critical habitat.
24. There are seven federally listed aquatic and wildlife species that could occur in the project vicinity: Southern California steelhead,¹⁹ Arroyo toad, California red-legged frog, mountain yellow-legged frog, California condor, Southwestern willow flycatcher, and least Bell's vireo. Although there are four federally listed plant species that could occur in the project vicinity: Nevin's barberry, slender-horned spineflower, California orcutt grass, and Lyon's pentachaeta, they were not located during rare plant surveys that United conducted in 2004.
25. The Commission's November 2005 draft EA and January 2007 final EA served as our draft and final Biological Assessments (BA), respectively, for ESA consultation. In these documents we concluded that relicensing the project with our recommended measures would have no effect on mountain yellow-legged frog, California condor, southwestern willow flycatcher, and the least Bell's vireo, and would be not likely to adversely affect the Arroyo toad and California red-legged frog. FWS concurred with this finding on February 22, 2007.

¹⁷ 16 U.S.C. § 811 (2000).

¹⁸ 16 U.S.C. § 1536(a) (2000).

¹⁹ Designated critical habitat for southern California steelhead includes areas of the Santa Clara watershed including lower Piru Creek downstream of Santa Felicia dam.

26. Our BAs also found that the project would be likely to adversely affect the Southern California steelhead Distinct Population Segment (DPS) and its designated critical habitat.²⁰ Although NMFS did not challenge this finding, it filed comments on the draft BA, filed on February 15, 2006, indicating that the draft BA did not contain an adequate description of the manner in which the proposed action may affect endangered steelhead, with particular emphasis on staff's analysis of cumulative effects on steelhead within the Santa Clara River's watershed.

27. Following further consultation, NMFS issued a draft Biological Opinion (BO) on November 8, 2007, on the endangered Southern California steelhead DPS and its designated critical habitat. On January 11, 2008, staff provided comments on the draft BO.²¹

28. On May 5, 2008, NMFS issued its final BO for the Santa Felicia Hydroelectric Project, stating that the Commission's recommended alternative was likely to jeopardize the continued existence of the DPS and was likely to destroy or adversely modify its critical habitat. The final BO provided a three-element Reasonable and Prudent Alternative (RPA) for inclusion in the license. These elements included: (1) assessing the feasibility of fish passage at Santa Felicia dam; (2) a geomorphic effects minimization plan to determine the geomorphic effects of the project downstream of the dam as a result of downstream sediment transport blockage and to identify habitat improvements to minimize those effects; and (3) a water release schedule to provide unimpeded migration of adult and juvenile steelhead in Piru Creek downstream of Santa Felicia dam and in the Santa Clara River, and to preserve and form freshwater spawning and rearing sites for steelhead.

29. In addition to the RPA, the final BO included the following terms and conditions.

- The licensee shall implement a water-release ramping rate of 2 inches/hour to guide increases and decreases of water releases from Santa Felicia Dam to Piru Creek for the purpose of minimizing the likelihood of displacing and stranding steelhead in Piru Creek downstream of Santa Felicia Dam.

²⁰ On September 2, 2005, NMFS designated critical habitat for southern California steelhead, which includes occupied areas of the Santa Clara watershed including lower Piru Creek downstream of Santa Felicia dam.

²¹ United also filed comments on the draft BO on January 11, 2008.

- The water-release ramping rate specified in the above term and condition shall be based on an empirical relationship between discharge and water depth and velocity representing Piru Creek downstream of Santa Felicia Dam. To this end, the licensee shall prepare a draft plan for developing this empirical relationship for Piru Creek and provide it to NMFS' Southwest Regional Office for review and potential agreement within 120 days from the date of the Commission's issuance of the project license.
- The licensee shall prepare and implement a plan to evaluate the effectiveness of the ramping rate specified in the above term and condition for minimizing displacement and stranding of steelhead in Piru Creek downstream of Santa Felicia Dam and the Santa Clara River downstream of the confluence with Piru Creek.

The final BO's RPA and its related terms and conditions are attached to this license as Appendix B, and incorporated into this license by Ordering Paragraph (E).

30. The RPA includes provisions for the implementation of a fish passage feasibility study. However, staff's final EA analyzed the need for fish passage and found that providing fish passage around Santa Felicia dam was not justified, given the small number of adult steelhead observed passing the downstream Freeman Diversion dam,²² the engineering challenges, and cost.²³ While I question the need for such a provision based on staff's analysis, I am including the provision in the license to ensure complete implementation of the RPA.

31. Further, the RPA includes provisions for the development of a water release schedule that would be determined in consultation with NMFS and subject to its approval.²⁴ We note however, that the RPA fails to provide for "interim" minimum flows

²² No more than two adult steelhead have been observed passing the Freeman Diversion dam in any given year since its fish ladder became operational in 1991.

²³ The final EA reported that providing fish passage at Santa Felicia dam would exceed \$5 million in cost. See Final EA, p. 199-200.

²⁴ Using United's alternative flow regime (as identified in its comments on the draft BO and which seems to be acceptable to the NMFS as indicated in the final BO) as a surrogate, we estimate that flows required by the final BO will cost about \$1,050,930 annually.

while United and NMFS conduct this consultation. Article 403, therefore, requires that the minimum flow regime proposed by United and recommended by staff in its final EA be implemented until NMFS and United complete their water release schedule consultation and file a license amendment request, for Commission approval, that would alter the minimum flows required by Article 403.

32. Minimum flows would affect ESA listed amphibians as well as listed steelhead. In the final EA, staff found that providing United's proposed minimum flow, the natural inflow to Lake Piru plus 1 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 listed Arroyo toad downstream of Santa Felicia dam. Additionally, mimicking the natural hydrograph (below 5 cfs) would reduce the habitat available for exotic aquatic species such as the bullfrog that prey upon Arroyo toad and the listed California red-legged frog.

33. Because we consulted with and received the concurrence of the FWS on the staff recommended minimum flow identified in the final EA, and its effects on the listed terrestrial species such as the Arroyo toad, we may need to consult with the 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' RPA.

34. On August 22, 2008, United filed a request that the Commission defer issuance of a new license for the Santa Felicia Project at least until September 30, 2008, in order to enable United to attempt to work out its disagreements on the RPA with NMFS. In a September 2, 2008, filing, NMFS concurred with United's request, stating that they believe deferring issuance of the new license until September 30, 2008, may allow United sufficient time to reach a mutual understanding with NMFS on certain requirements of the RPA. While Commission staff acknowledges the efforts United is making to achieve resolution of the disputed measures with NMFS, the time frame of such efforts is uncertain and it is important to continue moving forward with the issuance of this license to allow for implementation of environmental measures. Should the parties reach concurrence on the RPA, any agreed upon approaches can be addressed after license issuance.

NATIONAL HISTORIC PRESERVATION ACT

35. Under section 106 of the National Historic Preservation Act (NHPA)²⁵ and its implementing regulations,²⁶ federal agencies must take into account the effect of any proposed undertaking on properties listed or eligible for listing in the National Register (defined as historic properties) and afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on the undertaking. This generally requires the Commission to consult with the State Historic Preservation Officer (SHPO) to determine whether and how a proposed action may affect historic properties, and to seek ways to avoid or minimize any adverse effects.

36. To satisfy these responsibilities, staff issued a final Programmatic Agreement (PA) on November 17, 2005, for signature by the California SHPO and invited the United Water Conservation District, Los Padres National Forest, Santa Ynez Band of Chumash Indians, and three members of the local Chumash Indian community to concur with the stipulations of the PA.²⁷

37. After repeated attempts to seek a response from the SHPO, staff sought, on July 20, 2006, participation of the Advisory Council on Historic Preservation (Council) in a final attempt to resolve the impasse.²⁸ The Commission did not, however, receive a response from the Council and the SHPO neither signed the PA, nor provided an explanation for its refusal to sign.

38. Because the Council and the SHPO declined to participate in the execution of a PA, the Commission exercised its right to terminate NHPA section 106 consultation.²⁹ By letter dated September 26, 2006, staff informed the Council, the California SHPO, and all parties involved that consultation was terminated. No comments were received. Although a PA was never executed, Article 414 incorporates measures required in the PA to protect historic properties, including consultation with the California SHPO, Los

²⁵ 16 U.S.C. § 470 *et seq* (2000).

²⁶ 36 C.F.R. Part 800 (2007).

²⁷ We received signature pages from the Forest Service and Pat Tumkait (Chumash Indians).

²⁸ 36 CFR 800.6(b)(1)(v).

²⁹ 36 CFR 800.7(a)(1).

Padres National Forest, Angeles National Forest, Santa Ynez Band of Chumash Indians, and the Chumash Indian community, and development and implementation of a Historic Properties Management Plan.³⁰ This satisfies the Commission's obligations under section 106.

RECOMMENDATIONS OF FEDERAL AND STATE FISH AND WILDLIFE AGENCIES

A. Recommendations Pursuant to Section 10(j) of the FPA

39. Section 10(j)(1) of the FPA,³¹ requires the Commission, when issuing a license, to include conditions, based on recommendations by federal and state fish and wildlife agencies submitted pursuant to the Fish and Wildlife Coordination Act,³² to "adequately and equitably protect, mitigate damages to, and enhance fish and wildlife (including related spawning grounds and habitat)" affected by the project.

40. In response to the June 13, 2005, public notice that the project was ready for environmental analysis, California Fish and Game filed 12 recommendations. Two recommendations were determined to be outside the scope of section 10(j) and are discussed in the next section. This license includes conditions consistent with nine of the remaining 10 recommendations that are within the scope of section 10(j). Five of these recommendations are included in NMFS's BO and are incorporated into this license by ordering paragraph (E). These include recommendations to: develop and implement sediment flush criteria; monitor water quality; implement a water release regime, including ramping schedule and release schedule that would provide conditions most conducive to the species present and to maintain and/or improve the species habitat; conduct macroinvertebrate surveys to determine the quality of the stream in terms of

³⁰ The HPMP is equivalent to the Cultural Resource Management Plan referred to by the Forest Service in final 4(e) condition 19. The Commission and the Advisory Council on Historic Preservation, in the "Guidelines for the Development of Historic Properties Management Plans for FERC Hydroelectric Projects" that went into effect on January 11, 2002, have agreed to use the term "HPMP" to denote such management plans intended for the purposes of preserving, protecting, or mitigating the effects to historic properties.

³¹ 16 U.S.C. §803(j)(1) (2000).

³² 16 U.S.C. §§ 661 (2000) et seq.

steelhead suitability; and conduct annual surveys each spring and prior to conservation and pre-storm releases to determine the presence of steelhead.

41. The remaining four recommendations: conduct annual surveys to determine the presence of California red-legged frog and Arroyo toad below Santa Felicia dam; develop and implement a herpetological monitoring plan to monitor the location of Southwestern pond turtles and the effects of flows on Southwestern pond turtle habitat; monitor riparian habitat and evaluate the effects of flow alterations on sensitive riparian habitats, yellow-breasted chat, and yellow warblers; and develop and implement an exotic species removal program below Santa Felicia dam and within Lake Piru, are required by Articles 404 and 405. We are not adopting one recommendation from California Fish and Game which is to develop a pilot sediment management plan.

42. If the Commission believes that any such recommendation may be inconsistent with the purposes and requirements of Part I of the FPA or other applicable law, section 10(j)(2) requires the Commission and the agencies to attempt to resolve any such inconsistency, giving due weight to the recommendations, expertise, and statutory responsibilities of such agencies.³³ If the Commission still does not adopt a recommendation, it must explain how the recommendation is inconsistent with part I of the FPA or other applicable law and how the conditions imposed by the Commission adequately and equitably protect, mitigate damages to, and enhance fish and wildlife resources.

43. In its draft EA, Commission staff did not adopt California Fish and Game's recommendation to develop and implement a pilot sediment management plan for the following three reasons: (1) extracting sediments from Lake Piru and transferring them to lower Piru Creek would be a very costly undertaking that would cause short-term adverse effects such as increased turbidity and may cause adverse effects on riparian and instream habitat when sediments are deposited; (2) benefits to steelhead, Arroyo toad, and California red-legged frog are uncertain given that these species have not recently been documented to occur in Piru Creek downstream of Santa Felicia dam; and (3) the potential for usage of much of lower Piru Creek by rearing steelhead may be limited by high water temperatures downstream of Santa Felicia dam, and migration of steelhead to the reach with suitable water temperatures in the 1 or 2 mile reach immediately downstream of the dam may be precluded by one of several potential downstream barriers, including two water diversions and a box culvert bridge.

³³ 16 U.S.C. §803(j)(2) (2000).

44. Commission staff therefore made a preliminary determination that this measure may be inconsistent with the comprehensive planning standard of section 10(j) of the FPA, including the equal consideration provision of section 4(e) of the FPA, because the estimated cost of implementing this pilot program, about \$45,000 in capital and one-time costs and \$14,960 annually, would not result in any clear benefit to fish and wildlife.

45. In a November 30, 2005 letter to California Fish and Game, Commission staff advised California Fish and Game of its preliminary determination and asked to resolve the apparent inconsistency by a meeting, telephone or video conference, or other additional procedure. While California Fish and Game did not request a 10(j) meeting, it commented on staff's preliminary determination. In its January 12, 2006, comments on the draft EA, California Fish and Game disagreed with the Commission staff's finding on the pilot sediment management plan and noted that the EA did not identify a specific mitigation measure to offset the significant and cumulative adverse impacts to geomorphology in lower Piru Creek, as a result of downstream sediment transport blockage. We note that the BO's RPA includes a provision for a geomorphic effects minimalization plan and subsequent downstream habitat improvements (if deemed appropriate). Staff assumes that gravel augmentation, utilizing gravel from Lake Piru, could be a component of these enhancements. Because I am requiring the implementation of the RPA in this license, I now find this inconsistency to be resolved.

B. Recommendations Pursuant to Section 10(a)(1) of the FPA

46. California Fish and Game made recommendations to conduct: (1) periodic reviews of new technology for fish passage; and (2) a fish passage feasibility study that includes an assessment of alternatives, opportunities, and constraints. These recommendations do not fall within the scope of 10(j) because they are not specific measures for the protection of fish or wildlife species. Both recommendations are studies that could have been conducted prior to licensing. Instead, I consider these recommendations under the broad public-interest standard of FPA section 10(a)(1).³⁴

³⁴ 16 U.S.C. § 803(a)(1) (2000). Section 10(a)(1) requires that any project for which the Commission issues a license shall be best adapted to a comprehensive plan for improving or developing a waterway or waterways for the use or benefit of interstate or foreign commerce; for the improvement and utilization of waterpower development; for the adequate protection, mitigation, and enhancement of fish and wildlife; and for other beneficial public uses, including irrigation, flood control, water supply, recreation, and other purposes.

47. This license requires implementation of NMFS' final BO, which includes an analysis of fish passage feasibility and may result in a review of new fish passage technology that California Fish and Game is seeking.

OTHER ISSUES

A. Calculation of Inflow to Lake Piru

48. As discussed above, this license requires the licensee to release an interim minimum flow from the Santa Felicia dam into lower Piru Creek until a more permanent flow release schedule is developed by the licensee and NMFS and approved by the Commission. Because the interim minimum flow releases will mimic the natural hydrograph flows into Lake Piru, I have identified how these flow releases will be calculated. Additionally, because how natural inflow to Lake Piru is calculated is greatly influenced by the water releases being made by the upstream California Aqueduct Project (FERC No. P-2426), Article 403 provides two formulas to be used to calculate inflow to Lake Piru.³⁵ The first formula provided is to be used when the California Aqueduct Project is operating on an inflow equals outflow basis, while the second formula is to be used when the California Aqueduct Project's releases differ from inflow to its reservoir, Pyramid Lake (e.g. the project is either storing water or releasing water from storage and is not operating on an inflow equals outflow basis).

B. Herpetological Management Plan

49. Condition No. 16 of the Forest Service's final 4(e) conditions states that within one year of license issuance, United shall file with the Commission an Arroyo Toad Protection Plan which details United's responsibility for the protection of federally listed Arroyo toads and Arroyo toad critical habitat.

³⁵ To mimic the natural hydrograph, the California Department of Water Resources (California DWR) currently operates the project in a manner where outflow equals inflow most of the time; however, this operating regime may change in the future. Order 111 FERC ¶62,040, issued April 12, 2005, provided a waiver of article 52 of the California DWR's license for the California Aqueduct Project. This temporary waiver permits the California DWR to operate its project on an inflow equals outflow basis. The Commission is presently reviewing California DWR's amendment application in which the California DWR proposes to make this change permanent.

50. In its license application, United proposed to develop and implement an aquatic exotic species management program that would directly remove or eradicate aquatic exotic species (i.e., bullfrog). The program would focus on the Santa Felicia dam spillway pool and the upper 1 mile of lower Piru Creek. In the final EA, staff recommended this environmental measure be included in any license issued for the project.³⁶

51. Also in the final EA, staff found that it would be valuable to monitor the health of riparian communities near the Santa Felicia project as they become established to ensure that they are not negatively affected by the potential variation in flow regime, thus resulting in impacts to southwestern pond turtle, Arroyo toad, California red-legged frog, and their associated habitats.

52. Article 404 requires United to file a herpetological monitoring plan that incorporates the provisions of final 4(e) Condition 16 and adds provisions for annual monitoring for Arroyo toad, California red-legged frog, southwestern pond turtle, and mapping of their habitats in lower Piru Creek, an aquatic exotic species management program for the removal or eradication of aquatic species, protocol for measuring the abundance of bullfrogs and other non-gamefish aquatic exotic species, and an effectiveness evaluation and report of the aquatic exotic species management program.

C. Vegetation and Noxious Weed Management Plan

53. Condition No. 18(b) of the Forest Service's final 4(e) conditions states that United shall file with the Commission a vegetation and noxious weed management plan that includes those weeds defined in the California Food and Agriculture code, and other species identified by the Forest Service.

54. In the final EA, staff recommended implementation of a noxious weed management plan to help maintain native plant diversity and habitat quality and compliance with federal and state laws. In addition, it would help to determine the extent and type of noxious weeds that occur on other lands within the project boundary and determine which project-related activities may be causing establishment or spread of these species.

55. Article 405 requires United to file a vegetation and noxious weed management plan that includes all lands, both federal and non-federal, within the project boundary and

³⁶ Final EA, p. 187

incorporates the provisions of final 4(e) Condition 18(b), documentation of agency consultation, copies of comments and recommendations made in connection with the plan, and a description of how the plan accommodates the comments and recommendations.

56. The Forest Service's provision in Condition 18(b)(2) that the plan include an element for the establishment and/or revegetation of culturally significant plant populations (plants important to Native Americans) shall not apply for project lands not located on National Forest System Lands as there are no Native American lands within the project area, and no tribes have expressed concern about culturally significant plants in the project area.

D. Recreation and Land Use Resources

57. Recreation facilities at the Santa Felicia Project are concentrated on the western side of the lake and recreation facilities located within the project boundary include the Lake Piru Marina Area, the Juan Fernandez Boat Launch Area, and the Reasoner Canyon Picnic Area and Overflow Area. The Lower Oaks and Oak Lane campgrounds also are project facilities located on the western side of the lake, but are only partially enclosed within the project boundary. Currently, these recreational facilities provide sufficient recreational opportunities and public access to meet existing recreation needs.³⁷ In order to ensure that these facilities are provided and maintained for public use throughout the term of the new license, Article 406 requires the applicant to continue to operate and maintain all the recreation facilities included within the project boundary.

58. To ensure that one of the project recreation sites, Reasoner Canyon Picnic Area, is properly maintained for public enjoyment, the final EA recommends measures to stabilize the shorelines. Project recreation has caused shoreline instability in the area of the Reasoner Canyon Picnic area and implementation of soil erosion and control measures at the picnic area would ensure impacted areas are stabilized. The applicant proposed to use rip-rap to protect against erosion, but the alternative use of natural plant materials for erosion control (bioengineering) would stabilize the shoreline while also enhancing riparian habitat for fish and wildlife over that afforded by rip-rap.³⁸ Article 407, therefore, requires the applicant to utilize bioengineering methods for shoreline

³⁷ *Id.*, p. 154.

³⁸ *Id.*, p. 154.

stabilization at the Reasoner Canyon Picnic Area, as appropriate, and file a report indicating that these measures have been completed.

59. In addition to land-based recreation opportunities, the project also offers several whitewater opportunities which are best enjoyed when flows from the project exceed 200 cfs. Taking advantage of these opportunities, however, is hampered by a lack of information dissemination regarding scheduled flow releases. Providing notification of the annual fall conservation flow releases by August 15, including the release schedule and estimated flow rates, and notification of any additional spill events above 200 cfs, would enable boaters to take advantage of whitewater boating opportunities at the project.³⁹ Article 408, therefore, requires the licensee to provide this notification via postings on the company website⁴⁰ and through an e-mail list serve established and maintained by the licensee and made up of American Whitewater and interested members of the boating community. Notification would include bi-weekly updates of lower Piru Creek flow conditions and e-mail notification of spill events with flows exceeding 200 cfs.

60. Further, while the project offers several whitewater boating opportunities, boaters cannot fully take advantage of these opportunities due to limited access.⁴¹ Providing a portage trail around Santa Felicia dam and permanent whitewater access downstream of Santa Felicia dam located near the upstream Piru Canyon bridge crossing would increase access to the project and enable whitewater boaters to take advantage of project-related boating opportunities. Establishing a portage route for boaters around the Santa Felicia dam would enable boaters to launch in the middle of Piru Creek or at recreational sites on Lake Piru, paddle to the vicinity of the dam, portage around the dam, and then proceed down through lower Piru Creek. Permanent access directly downstream of the dam would provide enhanced boating access to lower Piru Creek during conservation releases and sediment flushing flows. While the final EA recommended a study to determine if providing portage and downstream whitewater boating access was feasible, I see no compelling reason why United cannot move forward with actual development of these access measures considering the increase in demand for recreation activities at the project. Article 410, therefore, requires the licensee to develop a plan for providing a portage trail around Santa Felicia dam and permanent whitewater boating enhancements on lower Piru Creek within three years of license issuance and completing construction

³⁹ *Id.*, p. 156.

⁴⁰ www.unitedwater.org

⁴¹ Final EA, pp. 155-157.

within five years. This article also requires the licensee to consider safety and security measures, such as the installation of gates and fencing, to ensure public safety around project facilities located near the whitewater access points.

61. Until permanent whitewater boating access can be established at an ideal location below Santa Felicia dam, the necessity for access to the boating opportunities on Piru Creek still exists. Article 409, therefore, requires the licensee to provide interim whitewater boating access downstream of Santa Felicia dam in order to provide the means for whitewater boaters to access sections of lower Piru Creek until permanent access can be provided.

62. The existing recreational facilities at the project are predominantly located on the west side of Lake Piru and limited access exists to the east side of the lake. As demand for recreation opportunities at the project grows, access to the east side can provide additional recreation opportunities to meet these demands. Formalizing existing trails and connecting existing Forest Service trails in the area would enhance recreation access by providing an around-the-lake connection. 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. The trail access would develop existing informal trail sections on the east side of the lake and provide the missing 1.5-mile link between existing trails along the Forest Service roads in order to meet future recreational demand over the next 10 years.⁴² Article 411, therefore, requires the licensee to file a plan for providing the formalized trail segments within five years of license issuance and complete construction on the trails within 10 years of license issuance.

63. While recreation demand currently is met through existing project facilities, recreation use at the project is expected to increase over the next 40 years and in the near future many of the facilities within the project area are expected to experience increasingly high levels of demand.⁴³ While the Juan Fernandez Boat Launch and Swim Area is used informally by visitors to the project, the demand for formalized parking and swimming areas is expected to grow in the near future. United proposes to develop the informal day-use area between the northern swim beach and the Texaco knoll within 10 years, in order to meet these expected demands. Developing the Juan Fernandez Boat Launch and Swim Area would formalize an undeveloped recreation site currently enjoyed by the public and would provide enhanced day-use access at the project to help

⁴² *Id.*, p. 154.

⁴³ *Id.*, pp. 145-146.

meet the anticipated increase in recreational demand for public day-use access over the next 10 years.⁴⁴ Article 412, therefore, requires the licensee to prepare and file a plan within 8 years of license issuance to develop the area, including the addition of picnic tables, a vault restroom, and a parking area. The article also requires construction to be completed within 10 years of license issuance.

64. Forest Service conditions 17 and 20 require the licensee to develop land resource plans for the use and protection of federal lands at the project. These plans, which include a fire management plan, a visual resource plan, a sign plan, and a road and facilities management plan, would require Commission approval and provide means for identifying and coordinating fire management measures at the project, protecting aesthetic resources, providing and maintaining appropriate signs, and establishing a forum for coordination of road maintenance and rehabilitation at the project.⁴⁵ The Forest Service requires four separate plans, however, that relate to same general goal of protecting project land resources, while the consolidation of these plans into a single, land management plan would make consultation and implementation of the plans more efficient. Article 413, therefore, includes a requirement for the licensee to develop the plans required by Forest Service conditions 17 and 20 into a single land management plan to be filed for Commission approval. In addition, the Forest Service conditions only pertain to land resource management as it relates to National Forest system lands, but Article 413 requires that the plans be developed to include all lands within the project boundary.

ADMINISTRATIVE CONDITIONS

A. Annual Charges

65. The Commission collects annual charges from licensees for administration of the FPA and for the use, occupancy, and enjoyment of federal lands. Article 201 provides for the collection of funds for administration of the FPA and for recompensing the United States for the use of its lands. Under the regulations currently in effect, projects with authorized installed capacity of less than or equal to 1,500 kW, like this project, will not be assessed an annual charge.

⁴⁴ *Id.*, p. 154.

⁴⁵ *Id.*, pp. 161-165.

B. Exhibit F Drawings

66. The Commission requires licensees to file sets of approved project drawings on microfilm and in electronic file format. Article 202 requires the filing of revised exhibit F drawings.

C. Exhibit G Drawings

67. The exhibit G drawings filed with United's license application on December 28, 2004 do not meet Commission standards because they do not contain all project works necessary for project operation. Article 203 requires the licensee to file for Commission approval revised exhibit G drawings that comply with the Commission's regulations and enclose within the project boundary all principal project works necessary for operation and maintenance of the project, including the entire Lower Oaks and Oak Lane campgrounds and the existing whitewater boating take-out on the upper end of Lake Piru.

D. Headwater Benefits

68. Some projects directly benefit from headwater improvements that were constructed by other licensees, the United States, or permittees. Article 204 requires the licensee to reimburse such entities for these benefits if they were not previously assessed and reimbursed.

E. Review of Final Plans and Specifications

69. Article 301 requires the licensee to provide the Commission and the Commission's Division of Dam Safety and Inspection San Francisco Regional Office (D2SI-SFO) with final contract drawings and specification – together with a supporting design report consistent with the Commission's engineering guidelines. Where new construction or modifications to the project are involved, the Commission requires licensees to file revised drawings of project features as-built. Article 302 provides for the filing of these drawings. Article 303 requires the licensee to provide the Commission and the Commission's D2SI-SFO with an updated Emergency Action Plan. Article 304 requires the licensee to provide the Commission and the Commission's D2SI-SFO with an updated Public Safety Plan.

F. Use and Occupancy of Project Lands

70. Requiring a licensee to obtain prior Commission approval for every use or occupancy of project land would be unduly burdensome. Therefore, Article 415 allows the licensee to grant permission, without prior Commission approval, for the use and

occupancy of project lands for minor activities such as landscape planting. Such use must be consistent with the purposes of protecting and enhancing the scenic, recreational, and environmental values of the project.

STATE AND FEDERAL COMPREHENSIVE PLANS

71. Section 10(a)(2)(A) of the FPA⁴⁶ requires the Commission to consider the extent to which a project is consistent with federal or state comprehensive plans for improving, developing, or conserving a waterway or waterways affected by the project.⁴⁷ Under section 10(a)(2)(A), federal and state agencies filed 55 comprehensive plans that address various resources in California. Of these, the staff identified and reviewed 12 plans that are relevant to this project.⁴⁸ No conflicts were found.

APPLICANT'S PLANS AND CAPABILITIES

72. In accordance with sections 10(a)(2)(C) and 15(a) of the FPA,⁴⁹ Commission staff has evaluated United's record as a major project licensee for these areas: (1) conservation efforts; (2) compliance history and ability to comply with the new license; (3) safe management, operation, and maintenance of the project; (4) ability to provide efficient and reliable electric service; (5) need for power; (6) transmission services; (7) cost effectiveness of plans; and (8) actions affecting the public. While I am now issuing a new minor license for the project and waiving sections 14 and 15 of the FPA, I conclude that it is in the public interest to make findings regarding United's plans and capabilities with regards to its previous major project license. I accept the staff's findings in each of the following areas.

A. Conservation Efforts

73. Section 10(a)(2)(C) of the FPA requires the Commission to consider the extent of electric consumption efficiency programs in the case of license applicants primarily engaged in the generation or sale of electric power. In this case, however, the production

⁴⁶ 16 U.S.C. § 803(a)(2)(A) (2000).

⁴⁷ Comprehensive plans for this purpose are defined at 18 C.F.R. § 2.19.

⁴⁸ The list of applicable plans can be found in section IX of the environmental assessment for the project.

⁴⁹ 16 U.S.C. §§803(a)(2)(C) and 808(a) (2000).

of electricity (with no retail customers) from its small hydropower facility at Santa Felicia dam is a subordinate benefit for United. The main purpose of the project is to store water to provide recharge via conservation releases in September and October to groundwater basins downstream of the project that are heavily used for water supply. Therefore, we have determined this section of the FPA does not apply to United.

B. Compliance History and Ability to Comply with the New License

74. Based on a review of United's compliance with the terms and conditions of the existing license, Commission staff found that United's overall record of making timely filings and compliance with its license is satisfactory. Therefore, United can satisfy the conditions of a new license.

C. Safe Management, Operation, and Maintenance of the Project

75. Commission staff reviewed United's management, operation, and maintenance of the Santa Felicia Project pursuant to the requirements of 18 C.F.R. Part 12 and the Commission's Engineering Guidelines and periodic Independent Consultant's Safety Inspection Reports. Staff concluded that the dams and other project works are safe, and that there is no reason to believe that United cannot continue to safely manage, operate, and maintain these facilities under a new license.

D. Ability to Provide Efficient and Reliable Electric Service

76. Commission staff reviewed United's plans and its ability to operate and maintain the project in a manner most likely to provide efficient and reliable electric service. United has been operating the project in an efficient manner within the constraints of the existing license. Staff concludes that United is capable of operating the project to provide efficient and reliable electric service in the future.

E. Need for Power

77. The Santa Felicia Project is owned and operated by United Water Conservation District, a public agency responsible for the conservation and supply of water to users within its district in Ventura County, California. Power that is generated at the site is conveyed to a step-up transformer owned and operated by the Southern California Edison Company. The power is metered for bulk purchase via the Southern California Edison Company's transmission and distribution system. United estimates that the average annual generation of the project is 1,300 MWh, and the peak annual generation is 3,415 MWh. Due to the limited operation of the project, the project has no dependable capacity.

78. The Santa Felicia Project is in the California-Mexico Power Area (CA/MX) of the Western Electricity Coordinating Council (WECC) within the North American Electric Reliability Council. WECC annually forecasts electrical supply and demand regionally for a 10-year period. Over the 10-year forecast, WSCC predicts the need to add over 4,900 MW to the CA/MX area (WECC 2006) to meet summer peak loads and to offset the retirement of 1,743 MW of existing resources.

79. Commission staff concluded that power from the Santa Felicia Project would continue to meet a small part of both short and long-term needs for power in the CA/MX region.

F. Transmission Services

80. The project has no primary transmission line. Power that is generated at the site is conveyed by a 150-foot step-up transformer to transmission lines owned and operated by the Southern California Edison Company. Southern California Edison also owns and operates the existing transmission line from this transformer and United is proposing no changes that would affect transmission services in the region.

G. Cost Effectiveness of Plans

81. United is not proposing any capacity expansion of the Santa Felicia Project. Based on the available flow, staff would not expect additional capacity to be cost effective at this site. Staff concludes that the project, as presently configured and as operated according to this order, is consistent with environmental considerations, and fully develops the economical hydropower potential of the site in a cost-effective manner.

H. Actions Affecting the Public

82. United provided extensive opportunity for public involvement in the development of its application for a new license for the Santa Felicia Project. During the previous license period, United provided facilities to enhance the public use of project lands and facilities. United uses proceeds from the electrical generation at this project to partially offset the cost of operating the project to supply water.

PROJECT ECONOMICS

83. In determining whether to issue a new license for an existing hydroelectric project, the Commission considers a number of public interest factors, including the economic benefits of project power. Under the Commission's approach to evaluating the

economics of hydropower projects, as articulated in *Mead Corp.*,⁵⁰ the Commission uses current costs to compare the costs of the project and likely alternative power with no forecasts concerning potential future inflation, escalation, or deflation beyond the license issuance date. The basic purpose of the Commission's economic analysis is to provide a general estimate of the potential power benefits and the costs of a project, and of reasonable alternatives to project power. The estimate helps to support an informed decision concerning what is in the public interest with respect to a proposed license.

84. In applying this analysis to the Santa Felicia Project, we have considered two options: United's original proposal and the project as licensed herein. As proposed by United, the levelized annual cost of operating the Santa Felicia Project is \$1,645,590 or \$1,266/MWh. The project has two developmental values: (1) to release water to recharge downstream aquifers and (2) to generate hydroelectric power. Considering just the power value of the hydroelectric project, staff estimated the benefits of the project by comparing the total cost of operating the project to the value of the project's power.⁵¹

85. As proposed, the project would generate an estimated average of 1,300 MWh of energy annually. When we multiply our estimate of average generation by the alternative power cost of \$53.90/MWh,⁵² we get a total value of the project's power of \$70,070 in 2005 dollars. To determine whether the proposed project is currently economically beneficial, staff subtracts the project's cost from the total value of the project's power and

⁵⁰ 72 FERC ¶61,027 (1995).

⁵¹ Given the small amount of power the project generates, the \$70,070 value of the project's power alone can not support much of the \$1,645,590 in annual operating cost of the proposed project. In the final EA, staff estimated the benefits of the project by comparing the total cost of the project facilities to the total of both the power and water conservation benefits.

As proposed, the project would have an annual water conservation value of \$25,725,000. Adding both the water conservation value and the power value, in the first years of operation the proposed project would cost \$24,149,480 less than the total water and power value. As licensed herein, the project's water conservation value would be \$26,250,000 annually and, when added to the project's power value, the project would cost \$24,611,480 less than the combined water and power value.

⁵² The alternative power cost of \$53.90 per MWh is based on information from United on their average rate for power sales.

water benefit.⁵³ Therefore, in the first year of operation, the project would cost \$1,575,520 or 1,212 MWh more than the total power value.

86. As licensed herein with the mandatory conditions and staff measures, the levelized annual cost of operating the project would be about \$1,572,050 or \$1,209/MWh. As licensed, project would continue to generate an estimated average of 1,300 MWh of energy annually. The project, therefore, would produce power valued at \$70,070 when we multiplied by the \$53.90/MWh value of the project's power. Therefore, in the first year of operation, the project would cost \$1,575,520 or 1212 MWh, more than the total power value.

COMPREHENSIVE DEVELOPMENT

87. Sections 4(e) and 10(a)(1) of the FPA⁵⁴ require the Commission to give equal consideration to the power development purposes and to the purposes of energy conservation, the protection, mitigation of damage to, and enhancement of fish and wildlife, the protection of recreational opportunities, and the preservation of other aspects of environmental quality. Any license issued shall be such as in the Commission's judgment will be best adapted to a comprehensive plan for improving or developing a waterway or waterways for all beneficial public uses. The decision to license this project, and the terms and conditions included herein, reflect such consideration.

88. The EA for the Santa Felicia Project contains background information, analysis of effects, and support for related license articles. I conclude based on the record of this proceeding, including the EA and the comments thereon, that licensing the Santa Felicia Project, as described in this order, would not constitute a major federal action significantly affecting the quality of the human environment. The project will be safe if operated and maintained in accordance with the requirements of this license.

89. Based on staff's independent review and evaluation of the project, recommendations from the resource agencies and other stakeholders, and the no-action alternative, as documented in the EA, I have selected the proposed project, with staff's recommended measures. I find the staff alternative is best adapted to a comprehensive plan for improving or developing Piru Creek.

⁵³ Details of staff's economic analysis for the project as licensed herein and for various alternatives are included in the FEA issued January 2007.

⁵⁴ 16 U.S.C. §§ 797(e) and 803(a)(1) (2000), respectively.

90. I have selected this alternative because: (1) issuance of a new license will serve to maintain a beneficial and dependable source of electric energy; (2) the required measures will protect and enhance fisheries resources, water quality, recreational resources, and historic properties; and (3) the 1,420 kW of electric energy generated from renewable resource may offset the use of fossil-fueled, steam-electric generating plants, thereby conserving nonrenewable resources and reducing atmospheric pollution.

LICENSE TERM

91. Section 15(e) of the FPA⁵⁵ provides that any new license issued shall be for a term that the Commission determines to be in the public interest, but not less than 30 years or more than 50 years. The Commission's general policy is to establish 30-year terms for projects with little or no redevelopment, new construction, new capacity, or environmental mitigation or enhancement; 40-year terms for projects with a moderate amount of such activities; and 50-year terms for projects with extensive measures.⁵⁶ This license authorizes no new construction or new capacity. However, this license does require a moderate amount of new environmental enhancement measures including interim flow releases, the addition of existing and new recreation facilities into the project boundary, interim whitewater boating access, addition of a portage around the dam and permanent whitewater boating access below the dam, trail access to the east side of Lake Piru, the improvement of an informal recreation area, downstream habitat improvements, erosion and sediment control, Arroyo toad protection, monitoring of herpetological species, management of vegetation and noxious weeds, management of land resources, and management of historic properties. Consequently, a 40-year license term for the Santa Felicia Hydroelectric Project is appropriate.

The Director orders:

(A) This license is issued to United (licensee), for a period of 40 years, effective the first day of the month in which this order is issued, to operate and maintain the Santa Felicia Hydroelectric Project. This license is subject to the terms and conditions of the Federal Power Act (FPA), which is incorporated by reference as part of this license, and subject to the regulations the Commission issues under the provisions of the FPA.

⁵⁵ 16 U.S.C. § 808(c) (2000).

⁵⁶ See *Consumers Power Company*, 68 FERC ¶ 61,077 at 61,383-84 (1994).

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(B) The project consists of:

(1) All lands, to the extent of the licensee's interests in these lands, described in the project description and the project boundary discussion of this order.

(2) Project works consisting of: The existing Santa Felicia Project consists of: (1) a 200-foot-high, 1,260-foot-long earth-filled dam with a 30-foot-wide roadway across the crest at an elevation of 1075-feet msl; (2) a 450-foot-long, separate, ungated spillway adjacent to and west of the dam with a crest elevation of 1,055-feet msl; (3) an 87,187 acre-foot reservoir, with a useable storage capacity of 67,669 acre-feet and a surface area of 1,213 acres at elevation 1,055 feet msl; (4) a powerhouse located at the base of the dam and containing two generating units, with a total installed capacity of 1,420 kW; (5) a 150-foot-long generator lead to a step-up transformer; and (6) appurtenant facilities. The project has no primary transmission line.

The project works generally described above are more specifically shown and described by those portions of exhibits A and F of the Santa Felicia Hydroelectric Project No. 2153 license application, filed April 30, 2002, shown below:

Exhibit A: The following sections of exhibit A:

Pages 1 through 6.

Exhibit F: The following sections of exhibit F filed April 30, 2002:

Exhibit F Drawing	FERC No. 2153-012	Title
F-1	1002	Santa Felicia Hydroelectric Project; Location Plan
F-2	1003	Santa Felicia Hydroelectric Project; Site Plan
F-3	1004	Santa Felicia Hydroelectric Project; Sections

(3) All of the structures, fixtures, equipment or facilities used to operate or maintain the project, all portable property that may be employed in connection with the project, and all riparian or other rights that are necessary or appropriate in the operation or maintenance of the project.

(C) The Exhibits A and F described above are approved and made part of this license. The Exhibit G drawings filed as part of the application for license do not conform to Commission regulations and are not approved.

(D) The following sections of the FPA are waived and excluded from the license for this minor project: 4(b), except the second sentence; 4(e), insofar as it relates to approval of plans by the Chief of Engineers and the Secretary of the Army; 6, insofar as it relates to public notice and to the acceptance and expression in the license of terms and conditions of the Act that are waived here; 10(c), insofar as it relates to depreciation reserves; 10(d); 10(f); 14, except insofar as the power of condemnation is reserved; 15; 16; 19; 20; and 22.

(E) This license is subject to the Reasonable and Prudent Alternative and incidental take terms and conditions of the Biological Opinion submitted by NMFS under section 7 of the Endangered Species Act, as those conditions are set forth in Appendix B of this order.

(F) This license is subject to the conditions submitted by the U.S. Forest Service under section 4(e) of the FPA, as those conditions are set forth in Appendix A to this order.

(G) This license is also subject to the articles set forth in Form L-16 (Oct. 1975), entitled "Terms and Conditions of License for Constructed Minor Project Affecting Lands of the United States," 54 F.P.C. 1888 (October 31, 1975), and the following additional articles:

Article 201. Administrative Annual Charges. The licensee shall pay the United States annual charges, effective August 30, 2007, and as determined in accordance with provisions of the Commission's regulations in effect from time to time, for the purposes of:

(1) reimbursing the United States for the cost of administration of Part I of the Federal Power Act. The authorized installed capacity for that purpose is 1,420 kW. Under the regulations currently in effect, projects with authorized installed capacity of less than or equal to 1,500 kW will not be assessed an annual charge; and

(2) recompensing the United States for the use, occupancy, and enjoyment of 174.5 acres of lands that are subject to power site reservation pursuant to section 24 of the FPA.

Article 202. Exhibit F Drawings. Within 45 days of the date of issuance of this license, the licensee shall file the approved exhibit drawings in aperture card and electronic file formats.

a) Two sets of the approved exhibit drawings shall be reproduced on silver or gelatin 35mm microfilm. All microfilm shall be mounted on type D (3-1/4" X 7-3/8") aperture cards. Prior to microfilming, the FERC Drawing Number (e.g., P-2153-1001 through P-2153-1004) shall be shown in the margin below the title block of the approved drawing. After mounting, the FERC Drawing Number shall be typed on the upper right corner of each aperture card. Additionally, the Project Number, FERC Exhibit (e.g., F-1, etc.), Drawing Title, and date of this license shall be typed on the upper left corner of each aperture card.

One of the sets of aperture cards shall be filed with the Secretary of the Commission, ATTN: OEP/DHAC. The second set shall be filed with the Commission's Division of Dam Safety and Inspections San Francisco Regional Office.

b) The licensee shall file two separate sets of exhibit drawings in electronic format with the Secretary of the Commission, ATTN: OEP/DHAC. A third set shall be filed with the Commission's Division of Dam Safety and Inspections San Francisco Regional Office. The drawings must be identified as (CEII) material under 18 CFR §388.113(c). Each drawing must be a separate electronic file, and the file name shall include: FERC Project-Drawing Number, FERC Exhibit, Drawing Title, date of this license, and file extension [e.g., P-2153-###, F-1, Description, MM-DD-YYYY.TIF]. Electronic drawings shall meet the following format specification:

IMAGERY - black & white raster file
 FILE TYPE – Tagged Image File Format, (TIFF) CCITT Group 4
 RESOLUTION – 300 dpi desired, (200 dpi min)
 DRAWING SIZE FORMAT – 24” X 36” (min), 28” X 40” (max)
 FILE SIZE – less than 1 MB desired

Article 203. Exhibit G Drawings. Within 90 days of license issuance, the licensee shall file for Commission approval, revised exhibit G drawings enclosing within the project boundary the following recreational facilities: the existing Lower Oaks and Oak Lane campgrounds and the existing whitewater boating take-out on the upper end of Lake Piru, located near the U.S. Department of Agriculture – Forest Service’s closure gate. The revised exhibit G drawings shall clearly indicate the location of the project boundary and also shall indicate the location of the existing project recreation facilities, including the Lake Piru Marina Area, the Juan Fernandez Boat Launch Area, and the Reasoner Canyon Picnic Area and Overflow Area. The exhibit G drawings must comply with sections 4.39 and 4.41 of the Commission’s regulations.

Article 204. Headwater Benefits. If the licensee's project was directly benefitted by the construction work of another licensee, a permittee, or the United States on a storage reservoir or other headwater improvement during the term of the original license

(including extensions of the term by annual licenses), and if those headwater benefits were not previously assessed and reimbursed to the owner of the headwater improvement, the licensee shall reimburse the owner of the headwater improvement for those benefits, at such time as they are assessed, in the same manner as for benefits received during the term of this new license.

Article 301. Contract Plans and Specifications. At least 60 days prior to the start of any construction, the licensee shall submit one copy of its final plans and specifications and supporting design document to the Commission's Division of Dam Safety and Inspections (D2SI) – San Francisco Regional Engineer, and two copies to the Commission (one of these shall be a courtesy copy to the Director, D2SI). The submittal must also include as part of preconstruction requirements: a Quality Control and Inspection Program, Temporary Construction Emergency Action Plan, and Soil Erosion and Sediment Control Plan. The licensee may not begin construction until the D2SI – San Francisco Regional Engineer has reviewed and commented on the plans and specifications, determined that all preconstruction requirements have been satisfied, and authorized start of construction.

Article 302. As-built Drawings. Within 90 days of completion of construction of the facilities authorized by this license, the licensee shall file for Commission approval, revised exhibits A, F, and G, as applicable, to describe and show those project facilities as built. A courtesy copy shall be filed with the Commission's D2SI-San Francisco Regional Office, the Director, D2SI, and the Director, DHAC.

Article 303. Emergency Action Plan. Within 1 year of completion of construction of any new recreation facilities within the project boundary that would be impacted by a potential dam failure, these structures should be identified on the Licensee's Emergency Action Plan and managed appropriately. The Licensee should submit one copy to the Commission's Division of Dam Safety and Inspections (D2SI) – San Francisco Regional Engineer, and two copies to the Commission (one of these shall be a courtesy copy to the Director, D2SI).

Article 304. Public Safety Plan. Within 1 year of completion of construction of any new recreation facilities within the project boundary, the Project's Public Safety Plan should be updated. The Licensee should submit one copy to the Commission's Division of Dam Safety and Inspections (D2SI) – San Francisco Regional Engineer, and two copies to the Commission (one of these shall be a courtesy copy to the Director, D2SI).

Article 401. Commission Approval, Reporting, and Filing of Amendments.

- a) Requirement to File Plans for Commission Approval

Various conditions of this license found in National Marine Fisheries Service's (NMFS) final Biological Opinion (BO) (Appendix B) and the U.S. Department of Agriculture, Forest Service (Forest Service) final section 4(e) conditions (Appendix A) require the licensee to prepare plans after consultation with other entities for approval by NMFS or Forest Service. Each such plan shall include an implementation schedule and be submitted to the Commission for approval prior to its implementation. These plans are listed below.

Appendix	Condition(s)	Plan name	Due date
B	NMFS RPA 1(a)	Final Geomorphic Effects Plan	Within 9 months of license issuance
B	NMFS RPA 1(c)	Final Habitat Improvement Plan	Within 15 months of license issuance
B	NMFS RPA 2(a)	Final Water Release Plan	Within 5 months of license issuance
B	NMFS RPA 2(b)	Final Water Release Implementation and Effectiveness Monitoring Plan	Within 5 months of license issuance
B	NMFS RPA 2(c)	Final Adaptive Management Plan	Within 5 months of license issuance
B	NMFS RPA 3(a)	Steelhead Passage Feasibility Assessment Plan	Within 8 months of license issuance
B	NMFS T&C 1(B)	Ramping Rate Discharge, Depth, and Velocity Relationship Evaluation Plan	Within 7 months of license issuance
B	NMFS T&C 2(A)	Ramping Rate Effectiveness Evaluation Plan	Within 7 months of license issuance
A	4(e) 15	Spoil Management, Erosion, and Sediment Control Plan	Within 1 year of license issuance
A	4(e) 16	Arroyo Toad Protection Plan	Within 1 year of license issuance

The licensee shall submit to the Commission documentation of its consultation, copies of comments and recommendations made in connection with any plan, and a description of how the plan accommodates the comments and recommendations. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information. The Commission reserves the right to make

changes to any plan submitted. Upon Commission approval the plan becomes a requirement of the license, and the licensee shall implement the plan or changes in project operations or facilities, including any changes required by the Commission.

b) Requirement to File Amendment Applications

Certain elements found in NMFS' final BO in Appendix B contemplate unspecified long-term changes to project operations or facilities for the purpose of mitigating environmental impacts. These changes may not be implemented without prior Commission authorization after the filing of an application to amend the license. These conditions are listed below.

Appendix	Condition(s)	Modification
B	NMFS RPA 2(a), 2(b), and 2(c)	Modification to Interim minimum flow requirement (Article 403) and future water releases below Santa Felicia dam
B	NMFS RPA 3(e)	Implementation of Fish Passage Feasibility Assessment Preferred Alternative
B	NMFS T&C 2(A)(3)	Modification of ramping rate

Article 402. *Reservation of Authority to Prescribe Fishways.* Authority is reserved to the Commission to require the licensee to construct, operate, and maintain, or provide for the construction, operation, and maintenance of such fishways as may be prescribed by the Secretary of Commerce pursuant to section 18 of the Federal Power Act.

Article 403. *Interim Minimum Flow Releases.* Within 30 days of license issuance, the licensee shall release a minimum flow that equals the natural inflow to Lake Piru, plus 1 cubic foot per second (cfs), within a range of 1.4 to 5 cfs. The minimum flow shall be released from the base of Santa Felicia dam into lower Piru Creek.

The natural inflow to Lake Piru shall be calculated utilizing the appropriate following flow formula:

(a) If the California Department of Water Resources (California DWR) is operating the California Aqueduct Project on an inflow equal outflow basis the following formula shall be used:

Natural flow at Santa Felicia, $Q_N =$

$0.6Q_1 + 0.4$; $Q_1 < 2$ cfs
$1.02Q_1$; $2 \leq Q_1 \leq 20$ cfs
20.4 cfs	; $Q_1 > 20$ cfs

Where Q_1 represents either gaged inflow or the calculated natural Piru Creek inflow to Lake Piru as measured at USGS gage no. 11109600, Piru Creek above Lake Piru near Blue Point

(b) If the California DWR is operating the California Aqueduct Project in a manner in which the inflow to Pyramid Lake **does not** equal outflow, the following formula shall be used:

$$Q_1 = (Q_{BC} + 0.5 \text{ cfs}^*) + (Q_{BP}) - (Q_{FF}) + 0.0067[Q_{FF} - (Q_{BC} + 0.5 \text{ cfs})]**$$

* Canada de Los Alamos inflow to Pyramid

** ET loss Correction term

Where: Q_{BC} = Piru Creek below Buck Creek (USGS gage no 11109375); Q_{BP} = Piru Creek above Lake Piru near Blue Point (USGS gage no. 11109600); and Q_{FF} = Pyramid Release

The interim minimum flow may be temporarily modified if required by operating emergencies beyond the control of the licensee, or for short periods upon agreement between the licensee, the California Department of Fish and Game (California Fish and Game), National Marine Fisheries Service (NMFS), and the Fish and Wildlife Service (FWS). If the required minimum flow is so modified, the licensee shall notify the Commission, California Fish and Game, NMFS, and the FWS as soon as possible, but not later than 10 days, after each such occurrence.

Article 404. Herpetological Monitoring Plan. Within 1 year of license issuance, the licensee shall file with the Commission for approval, a herpetological monitoring plan (plan). In addition to incorporating the provisions of final 4(e) condition 16 in

Appendix A, the plan shall at a minimum, include the following: (a) provisions for annual monitoring for Arroyo toad, California red-legged frog, and southwest pond turtle, and mapping of their habitats in lower Piru Creek, for an initial 5 year period, followed by monitoring at 3 year intervals (unless a species is found, in which case monitoring shall continue on an annual basis); (b) an aquatic exotic species management program for the removal or eradication of aquatic exotic species (i.e., bullfrog) in the Santa Felicia dam spillway pool and in the upper 1 mile of lower Piru Creek; (c) a protocol for measuring the abundance of bullfrogs and other non-gamefish aquatic exotic species; (d) effectiveness evaluation and report of the aquatic exotic species management program after three years of its implementation; and (e) a detailed schedule for implementation of the plan's components, and for reporting monitoring results and the effectiveness evaluation. All monitoring results, reports, and the effectiveness evaluation shall be provided to the Fish and Wildlife Service (FWS), California Department of Fish and Game (California Fish and Game), the United States Forest Service (Forest Service), the National Marine Fisheries Service (NMFS) and the Commission.

The monitoring results for Arroyo toad, California red-legged frog, and southwest pond turtle shall be considered when developing and implementing any future water release schedules.

The licensee shall develop the plan after consultation with the FWS, California Fish and Game, Forest Service, and NMFS. The licensee shall include with the plan documentation of agency consultation, copies of comments and recommendations made in connection with the plan, and a description of how the plan accommodates the comments and recommendations of the agencies. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. The plan shall not be implemented until the licensee is notified that it has been approved by the Commission. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

Article 405. Vegetation and Noxious Weed Management Plan. Within 2 years of license issuance, the licensee shall file with the Commission for approval, a vegetation and noxious weed management plan. The plan shall incorporate the provisions required by the United States Forest Service (Forest Service) final 4(e) Condition 18(b) (Appendix A). Implementation of the plan shall apply to all lands within the project boundary; not just National Forest System Lands. However, the Forest Service's provision in Condition 18(b)(2) that the plan include an element for the establishment

and/or revegetation of culturally significant plant populations shall not apply for project lands not located on National Forest System Lands.

The licensee shall develop the plan after consultation with the Forest Service, the California Department of Food and Agriculture, and the Ventura County Agricultural Commissioner. The licensee shall include with the plan documentation of agency consultation, copies of comments and recommendations made in connection with the plan, and a description of how the plan accommodates the comments and recommendations. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. The plan shall not be implemented until the licensee is notified that the plan is approved. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

Article 406. *Operate and Maintain Existing Recreation Facilities.* Throughout the term of the new license, the licensee shall continue to operate and maintain all project recreation facilities currently contained within the project boundary and those facilities required to be enclosed in the project by Article 203. These facilities include the Lake Piru Marina Area, the Juan Fernandez Boat Launch Area, the Reasoner Canyon Picnic Area and Overflow Area, and the Lower Oaks and Oak Lane campgrounds.

Article 407. *Recreational Site Improvements.* Within 1 year of license issuance, the licensee shall file with the Commission for approval, a report documenting the implementation of erosion control and landscaping measures at the Reasoner Canyon Picnic Area. During implementation of erosion control measures, the licensee shall employ bioengineering methods for shoreline stabilization and erosion control measures, as appropriate, and the report shall include documentation on which bioengineering methods the licensee utilized and why the utilized methods were deemed appropriate.

The licensee shall prepare the report after consultation with the United States Forest Service and the California Department of Parks and Recreation. The licensee shall include with the report documentation of consultation, copies of comments and recommendations on the completed measures after the report has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the report with the Commission. If

the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The Commission reserves the authority to require additional measures if the results contained within the report are deemed inadequate for the protection of recreation and aesthetic resources.

Article 408. Conservation Release Notification. Within 90 days of license issuance, the licensee shall provide bi-weekly updates of lower Piru Creek flow conditions and provide website and e-mail notification of any spill events above 200 cubic feet per second as soon as reasonably possible. In addition, by August 15 of each year, the licensee shall provide notification of proposed annual fall flow releases for conservation. All notifications shall include the release schedule and estimated flow rates and occur through postings on the licensee's website and e-mail list-serve. This e-mail list serve shall be established and maintained by the licensee and include members of American Whitewater and any other interested members of the boating community.

The licensee also shall consult with whitewater boating participants every ten years to discuss the implementation of new notification procedures. If the licensee is unable to release the publicized flow, they shall update the website and send notification via the e-mail list-serve no later than the day preceding the scheduled release.

Article 409. Interim Whitewater Boating Access. Within 1 year of license issuance, and until permanent whitewater boating access can be provided, as required by Article 410, the licensee shall implement interim whitewater boating access downstream of Santa Felicia dam by providing restricted, escorted access, via shuttle, to the put-in site at United States Geological Survey gage no. 11109800, Piru Creek below Santa Felicia dam. This escorted access shall be provided between 9:00 a.m. and 3:00 p.m. each weekend-day of the annual, fall flow releases above 200 cubic feet per second (cfs) and during other periods when flow releases exceed 200 cfs. In addition, the licensee shall maintain the existing whitewater boating take-out at the upper end of Lake Piru over the term of a new license. Also within 1 year of license issuance, the licensee shall post instructions for whitewater boating access, including the timing and location, on its website.

Article 410. Whitewater Boating Access Plan. Within 3 years of license issuance, the licensee shall file with the Commission for approval, a plan for providing a whitewater boating portage around Santa Felicia dam and providing permanent whitewater boating access downstream of Santa Felicia dam at a location near the upstream Piru Canyon bridge crossing. The plan shall: (1) consider measures, such as installation of fencing, gates, and signage, to control public access to project facilities for

appropriate safety and security purposes; (2) include measures for providing parking at the selected downstream access site for 20 vehicles, installing a spring-closing gate, and constructing a graded foot-trail from the parking area to the creek; and (3) include a schedule for implementing and completing development and construction of the sites within five years of license issuance.

The licensee shall file the plan after consultation with the United States Forest Service, the California Department of Parks and Recreation, American Whitewater, and the Sierra Club. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies and entities, and specific descriptions of how the agencies' and entities' comments are accommodated. The licensee shall allow a minimum of 30 days for the agencies and entities to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. No measures shall be implemented until the licensee is notified that the plan is approved by the Commission. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

Article 411. Recreation Trail Plan. Within 5 years of license issuance, the licensee shall file with the Commission for approval, a recreation trail plan for providing trail access to the east side of Lake Piru. The trail plan shall: (1) identify the location of the existing trail sections to be formalized along the east side of the lake; (2) the location and route for providing the missing 1.5-mile trail link between the Forest Service roads and other existing trails; and (3) a schedule for implementing and completing trail construction within 10 years of license issuance.

The licensee shall file the plan after consultation with the United States Forest Service and the California Department of Parks and Recreation. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. No measures shall be implemented until the licensee is notified that the plan is approved by the Commission. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

Article 412. *Juan Fernandez Day-Use Area.* Within 8 years of license issuance, the licensee shall file with the Commission for approval, 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. The improvements to be completed include the addition of 25 picnic tables, a vault-type restroom at the facility, and a vehicular parking lot for 50 vehicles within the vicinity of the day-use area to meet projected future demand. The plan also shall include a schedule for completing the improvements within 10 years of license issuance.

The licensee shall prepare the plan after consultation with the United States Forest Service and the California Department of Parks and Recreation. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. No measures shall be implemented until the licensee is notified that the plan is approved by the Commission. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

Article 413. *Land Resource Management Plan.* Within 1 year of license issuance, the licensee shall file with the Commission for approval, a Land Resource Management Plan incorporating and consolidating the land resource plans required by United States Forest Service (Forest Service) 4(e) conditions 17 and 20 (Appendix A), that relate to land resource management on National Forest System lands. This single plan shall include the Fire Management and Response Plan [Condition No. 17(a)], the Visual Management Plan [Condition No. 17(b)], the Sign Plan [Condition No. 17(c)], and the Roads and Facilities Management Plan (Condition No. 20). Also, in addition to addressing National Forest System lands at the Santa Felicia Project, the final Land Resource Management Plan shall include all Santa Felicia Project lands within the project boundary.

The Commission reserves the right to require changes to the plan. The plan shall not be implemented until the licensee is notified that the plan is approved. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

Article 414. Historic Properties Management Plan. Within 1 year of license issuance, the licensee shall file for Commission approval, a Historic Properties Management Plan (HPMP), consistent with United States Forest Service (Forest Service) 4(e) condition 19 (Appendix A), specifying how historic properties will be managed in the project's area of potential effect (APE) during the term of this license.

HPMP Contents: In addition to the requirements set forth in Forest Service condition 19, the final HPMP, at a minimum, shall include: (1) completion of identification of historic properties within the project's APE; (2) a description of project effects on historic properties, including traditional cultural properties; (3) consideration and implementation of appropriate methods to avoid, minimize, or mitigate adverse effects on historic properties; (4) an action plan for unanticipated discoveries during project construction, operation, and maintenance activities; (5) an action plan for the treatment and disposition of any human remains that may be discovered, taking into account applicable state laws, and the Native American Graves Protection and Repatriation Act (NAGPRA; section 3001 of 25 U.S.C.) on federal land; (6) consideration of public interpretation of the historic and archeological values of the project; and (7) a description of how each task will be carried out and when it will be completed.

HPMP Development: The licensee shall develop the HPMP consistent with the guidelines set forth in "Archeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines" (*Federal Register*, September 29, 1983, Vol. 48, No. 190, Part IV, pp. 44716-44740) and shall take into account the Commission's "Guidelines for the Development of Historic Properties Management Plans for FERC Hydroelectric Projects" (issued May 20, 2002). The final HPMP shall be developed by or developed under the direct supervision of a person or persons who meet, at a minimum, the professional qualifications standards for architectural history and archeology in the Secretary's Standards (48 *Federal Register* 44738-39).

HPMP Review: The licensee shall file the HPMP after consultation with the California State Historic Preservation Officer (SHPO), Los Padres National Forest, Angeles National Forest, the Santa Ynez Band of Chumash Indians, and the Chumash Indian community. The licensee shall include with the HPMP documentation of consultation, copies of comments and recommendations on the completed HPMP after it

has been prepared and provided to the consulting parties, and specific descriptions of how the consulting parties' comments are accommodated. The licensee shall allow a minimum of 30 days for the consulting parties to comment and to make recommendations before filing the HPMP with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the HPMP. No measures shall be implemented until the licensee is notified that the HPMP is approved by the Commission. Upon Commission approval, the licensee shall implement the HPMP, including any changes required by the Commission.

Annual Report: The licensee shall file, within 30 days of the anniversary of license issuance, an annual report of activities conducted under the implemented HPMP. The report shall be filed with the SHPO, the Los Padres National Forest, the Angeles National Forest, the Santa Ynez Band of Chumash Indians, and the local Chumash Indian community and contain a detailed summary of any cultural resources work conducted during the preceding year. The report also shall contain any comments received from the SHPO, the Los Padres National Forest, the Angeles National Forest, the Santa Ynez Band of Chumash Indians, and the local Chumash Indian community regarding that year's cultural resource work. If no work was completed, a letter from the licensee shall be prepared to that effect, and shall satisfy the intent of this stipulation.

Interim Treatment of Historic Properties: Prior to Commission approval of the HPMP, the licensee shall obtain approval from the Commission and the SHPO before engaging in any ground-disturbing activities or taking any other action that may affect any historic properties within the project's APE.

Article 415. Use and Occupancy. (a) In accordance with the provisions of this article, the licensee shall have the authority to grant permission for certain types of use and occupancy of project lands and waters and to convey certain interests in project lands and waters for certain types of use and occupancy, without prior Commission approval. The licensee may exercise the authority only if the proposed use and occupancy is consistent with the purposes of protecting and enhancing the scenic, recreational, and other environmental values of the project. For those purposes, the licensee shall also have continuing responsibility to supervise and control the use and occupancies for which it grants permission, and to monitor the use of, and ensure compliance with the covenants of the instrument of conveyance for, any interests that it has conveyed, under this article. If a permitted use and occupancy violates any condition of this article or any other condition imposed by the licensee for protection and enhancement of the project's scenic, recreational, or other environmental values, or if a covenant of a conveyance made under

the authority of this article is violated, the licensee shall take any lawful action necessary to correct the violation. For a permitted use or occupancy, that action includes, if necessary, canceling the permission to use and occupy the project lands and waters and requiring the removal of any non-complying structures and facilities.

(b) The type of use and occupancy of project lands and waters for which the licensee may grant permission without prior Commission approval are: (1) landscape plantings; (2) non-commercial piers, landings, boat docks, or similar structures and facilities that can accommodate no more than 10 water craft at a time and where said facility is intended to serve single-family type dwellings; (3) embankments, bulkheads, retaining walls, or similar structures for erosion control to protect the existing shoreline; and (4) food plots and other wildlife enhancement. To the extent feasible and desirable to protect and enhance the project's scenic, recreational, and other environmental values, the licensee shall require multiple use and occupancy of facilities for access to project lands or waters. The licensee shall also ensure, to the satisfaction of the Commission's authorized representative, that the use and occupancies for which it grants permission are maintained in good repair and comply with applicable state and local health and safety requirements. Before granting permission for construction of bulkheads or retaining walls, the licensee shall: (1) inspect the site of the proposed construction, (2) consider whether the planting of vegetation or the use of riprap would be adequate to control erosion at the site, and (3) determine that the proposed construction is needed and would not change the basic contour of the impoundment shoreline. To implement this paragraph (b), the licensee may, among other things, establish a program for issuing permits for the specified types of use and occupancy of project lands and waters, which may be subject to the payment of a reasonable fee to cover the licensee's costs of administering the permit program. The Commission reserves the right to require the licensee to file a description of its standards, guidelines, and procedures for implementing this paragraph (b) and to require modification of those standards, guidelines, or procedures.

(c) The licensee may convey easements or rights-of-way across, or leases of project lands for: (1) replacement, expansion, realignment, or maintenance of bridges or roads where all necessary state and federal approvals have been obtained; (2) storm drains and water mains; (3) sewers that do not discharge into project waters; (4) minor access roads; (5) telephone, gas, and electric utility distribution lines; (6) non-project overhead electric transmission lines that do not require erection of support structures within the project boundary; (7) submarine, overhead, or underground major telephone distribution cables or major electric distribution lines (69-kV or less); and (8) water intake or pumping facilities that do not extract more than one million gallons per day from a project impoundment. No later than January 31 of each year, the licensee shall file three copies of a report briefly describing for each conveyance made under this

paragraph (c) during the prior calendar year, the type of interest conveyed, the location of the lands subject to the conveyance, and the nature of the use for which the interest was conveyed. If no conveyance was made during the prior calendar year, the licensee shall so inform the Commission in writing no later than January 31 of each year.

(d) The licensee may convey fee title to, easements or rights-of-way across, or leases of project lands for: (1) construction of new bridges or roads for which all necessary state and federal approvals have been obtained; (2) sewer or effluent lines that discharge into project waters, for which all necessary federal and state water quality certification or permits have been obtained; (3) other pipelines that cross project lands or waters but do not discharge into project waters; (4) non-project overhead electric transmission lines that require erection of support structures within the project boundary, for which all necessary federal and state approvals have been obtained; (5) private or public marinas that can accommodate no more than 10 water craft at a time and are located at least one-half mile (measured over project waters) from any other private or public marina; (6) recreational development consistent with an approved report on recreational resources of an Exhibit E; and (7) other uses, if: (i) the amount of land conveyed for a particular use is five acres or less; (ii) all of the land conveyed is located at least 75 feet, measured horizontally, from project waters at normal surface elevation; and (iii) no more than 50 total acres of project lands for each project development are conveyed under this clause (d)(7) in any calendar year. At least 60 days before conveying any interest in project lands under this paragraph (d), the licensee must submit a letter to the Director, Office of Energy Projects, stating its intent to convey the interest and briefly describing the type of interest and location of the lands to be conveyed (a marked Exhibit G map may be used), the nature of the proposed use, the identity of any federal or state agency official consulted, and any federal or state approvals required for the proposed use. Unless the Director, within 45 days from the filing date, requires the licensee to file an application for prior approval, the licensee may convey the intended interest at the end of that period.

(e) The following additional conditions apply to any intended conveyance under paragraph (c) or (d) of this article:

(1) Before conveying the interest, the licensee shall consult with federal and state fish and wildlife or recreation agencies, as appropriate, and the State Historic Preservation Officer.

(2) Before conveying the interest, the licensee shall determine that the proposed use of the lands to be conveyed is not inconsistent with any approved report on recreational resources of an Exhibit E; or, if the project does not have an approved report on recreational resources, that the lands to be conveyed do not have recreational value.

(3) The instrument of conveyance must include the following covenants running with the land: (i) the use of the lands conveyed shall not endanger health, create a nuisance, or otherwise be incompatible with overall project recreational use; and (ii) the grantee shall take all reasonable precautions to ensure that the construction, operation, and maintenance of structures or facilities on the conveyed lands will occur in a manner that will protect the scenic, recreational, and environmental values of the project.

(4) The Commission reserves the right to require the licensee to take reasonable remedial action to correct any violation of the terms and conditions of this article, for the protection and enhancement of the project's scenic, recreational, and other environmental values.

(f) The conveyance of an interest in project lands under this article does not in itself change the project boundaries. The project boundaries may be changed to exclude land conveyed under this article only upon approval of revised Exhibit G drawings (project boundary maps) reflecting exclusion of that land. Lands conveyed under this article will be excluded from the project only upon a determination that the lands are not necessary for project purposes, such as operation and maintenance, flowage, recreation, public access, protection of environmental resources, and shoreline control, including shoreline aesthetic values. Absent extraordinary circumstances, proposals to exclude lands conveyed under this article from the project shall be consolidated for consideration when revised Exhibit G drawings would be filed for approval for other purposes.

(g) The authority granted to the licensee under this article shall not apply to any part of the public lands and reservations of the United States included within the project boundary.

(H) The licensee shall serve copies of any Commission filing required by this order on any entity specified in the order to be consulted on matters relating to that filing. Proof of service on these entities must accompany the filing with the Commission.

Project No. 2153-012

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(I) This order is final unless a request for rehearing is filed within 30 days from the date of its issuance, as provided in section 313(a) of the FPA. The filing of a request for rehearing does not operate as a stay of the effective date of this license or of any other date specified in this order, except as specifically ordered by the Commission. The licensee's failure to file a request for rehearing shall constitute acceptance of this order.

J. Mark Robinson
Director
Office of Energy Projects

Form L-16
(October, 1975)

FEDERAL ENERGY REGULATORY COMMISSION

TERMS AND CONDITIONS OF LICENSE
FOR CONSTRUCTED MINOR PROJECT AFFECTING
LANDS OF THE UNITED STATES

Article 1. The entire project, as described in this order of the Commission, shall be subject to all of the provisions, terms, and conditions of the license.

Article 2. No substantial change shall be made in the maps, plans, specifications, and statements described and designated as exhibits and approved by the Commission in its order as a part of the license until such change shall have been approved by the Commission: Provided, however, That if the Licensee or the Commission deems it necessary or desirable that said approved exhibits, or any of them, be changed, there shall be submitted to the Commission for approval a revised, or additional exhibit or exhibits covering the proposed changes which, upon approval by the Commission, shall become a part of the license and shall supersede, in whole or in part, such exhibit or exhibits theretofore made a part of the license as may be specified by the Commission.

Article 3. The project area and project works shall be in substantial conformity with the approved exhibits referred to in Article 2 herein or as changed in accordance with the provisions of said article. Except when emergency shall require for the protection of navigation, life, health, or property, there shall not be made without prior approval of the Commission any substantial alteration or addition not in conformity with the approved plans to any dam or other project works under the license or any substantial use of project lands and waters not authorized herein; and any emergency alteration, addition, or use so made shall thereafter be subject to such modification and change as the Commission may direct. Minor changes in project works, or in uses of project lands and waters, or divergence from such approved exhibits may be made if such changes will not result in a decrease in efficiency, in a material increase in cost, in an adverse environmental impact, or in impairment of the general scheme of development; but any of such minor changes made without the prior approval of the Commission, which in its judgment have produced or will produce any of such results, shall be subject to such alteration as the Commission may direct.

Article 4. The project, including its operation and maintenance and any work incidental to additions or alterations authorized by the Commission, whether or not conducted upon

lands of the United States, shall be subject to the inspection and supervision of the Regional Engineer, Federal Energy Regulatory Commission, in the region wherein the project is located, or of such other officer or agent as the Commission may designate, who shall be the authorized representative of the Commission for such purposes. The Licensee shall cooperate fully with said representative and shall furnish him such information as he may require concerning the operation and maintenance of the project, and any such alterations thereto, and shall notify him of the date upon which work with respect to any alteration will begin, as far in advance thereof as said representative may reasonably specify, and shall notify him promptly in writing of any suspension of work for a period of more than one week, and of its resumption and completion. The Licensee shall submit to said representative a detailed program of inspection by the Licensee that will provide for an adequate and qualified inspection force for construction of any such alterations to the project. Construction of said alterations or any feature thereof shall not be initiated until the program of inspection for the alterations or any feature thereof has been approved by said representative. The Licensee shall allow said representative and other officers or employees of the United States, showing proper credentials, free and unrestricted access to, through, and across the project lands and project works in the performance of their official duties. The Licensee shall comply with such rules and regulations of general or special applicability as the Commission may prescribe from time to time for the protection of life, health, or property.

Article 5. The Licensee, within five years from the date of issuance of the license, shall acquire title in fee or the right to use in perpetuity all lands, other than lands of the United States, necessary or appropriate for the construction maintenance, and operation of the project. The Licensee or its successors and assigns shall, during the period of the license, retain the possession of all project property covered by the license as issued or as later amended, including the project area, the project works, and all franchises, easements, water rights, and rights or occupancy and use; and none of such properties shall be voluntarily sold, leased, transferred, abandoned, or otherwise disposed of without the prior written approval of the Commission, except that the Licensee may lease or otherwise dispose of interests in project lands or property without specific written approval of the Commission pursuant to the then current regulations of the Commission. The provisions of this article are not intended to prevent the abandonment or the retirement from service of structures, equipment, or other project works in connection with replacements thereof when they become obsolete, inadequate, or inefficient for further service due to wear and tear; and mortgage or trust deeds or judicial sales made thereunder, or tax sales, shall not be deemed voluntary transfers within the meaning of this article.

Article 6. The Licensee shall install and thereafter maintain gages and stream-gaging stations for the purpose of determining the stage and flow of the stream or streams on

which the project is located, the amount of water held in and withdrawn from storage, and the effective head on the turbines; shall provide for the required reading of such gages and for the adequate rating of such stations; and shall install and maintain standard meters adequate for the determination of the amount of electric energy generated by the project works. The number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, shall at all times be satisfactory to the Commission or its authorized representative. The Commission reserves the right, after notice and opportunity for hearing, to require such alterations in the number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, as are necessary to secure adequate determinations. The installation of gages, the rating of said stream or streams, and the determination of the flow thereof, shall be under the supervision of, or in cooperation with, the District Engineer of the United States Geological Survey having charge of stream-gaging operations in the region of the project, and the Licensee shall advance to the United States Geological Survey the amount of funds estimated to be necessary for such supervision, or cooperation for such periods as may be mutually agreed upon. The Licensee shall keep accurate and sufficient records of the foregoing determinations to the satisfaction of the Commission, and shall make return of such records annually at such time and in such form as the Commission may prescribe.

Article 7. The Licensee shall, after notice and opportunity for hearing, install additional capacity or make other changes in the project as directed by the Commission, to the extent that it is economically sound and in the public interest to do so.

Article 8. The Licensee shall, after notice and opportunity for hearing, coordinate the operation of the project, electrically and hydraulically, with such other projects or power systems and in such manner as the Commission may direct in the interest of power and other beneficial public uses of water resources, and on such conditions concerning the equitable sharing of benefits by the Licensee as the Commission may order.

Article 9. The operations of the Licensee, so far as they affect the use, storage and discharge from storage of waters affected by the license, shall at all times be controlled by such reasonable rules and regulations as the Commission may prescribe for the protection of life, health, and property, and in the interest of the fullest practicable conservation and utilization of such waters for power purposes and for other beneficial public uses, including recreational purposes, and the Licensee shall release water from the project reservoir at such rate in cubic feet per second, or such volume in acre-feet per specified period of time, as the Commission may prescribe for the purposes hereinbefore mentioned.

Article 10. On the application of any person, association, corporation, Federal agency, State or municipality, the Licensee shall permit such reasonable use of its reservoir or other project properties, including works, lands and water rights, or parts thereof, as may

be ordered by the Commission, after notice and opportunity for hearing, in the interests of comprehensive development of the waterway or waterways involved and the conservation and utilization of the water resources of the region for water supply or for the purposes of steam-electric, irrigation, industrial, municipal or similar uses. The Licensee shall receive reasonable compensation for use of its reservoir or other project properties or parts thereof for such purposes, to include at least full reimbursement for any damages or expenses which the joint use causes the Licensee to incur. Any such compensation shall be fixed by the Commission either by approval of an agreement between the Licensee and the party or parties benefiting or after notice and opportunity for hearing. Applications shall contain information in sufficient detail to afford a full understanding of the proposed use, including satisfactory evidence that the applicant possesses necessary water rights pursuant to applicable State law, or a showing of cause why such evidence cannot concurrently be submitted, and a statement as to the relationship of the proposed use to any State or municipal plans or orders which may have been adopted with respect to the use of such waters.

Article 11. The Licensee shall, for the conservation and development of fish and wildlife resources, construct, maintain, and operate, or arrange for the construction, maintenance, and operation of such reasonable facilities, and comply with such reasonable modifications of the project structures and operation, as may be ordered by the Commission upon its own motion or upon the recommendation of the Secretary of the Interior or the fish and wildlife agency or agencies of any State in which the project or a part thereof is located, after notice and opportunity for hearing.

Article 12. Whenever the United States shall desire, in connection with the project, to construct fish and wildlife facilities or to improve the existing fish and wildlife facilities at its own expense, the Licensee shall permit the United States or its designated agency to use, free of cost, such of the Licensee's lands and interests in lands, reservoirs, waterways and project works as may be reasonably required to complete such facilities or such improvements thereof. In addition, after notice and opportunity for hearing, the Licensee shall modify the project operation as may be reasonably prescribed by the Commission in order to permit the maintenance and operation of the fish and wildlife facilities constructed or improved by the United States under the provisions of this article. This article shall not be interpreted to place any obligation on the United States to construct or improve fish and wildlife facilities or to relieve the Licensee of any obligation under this license.

Article 13. So far as is consistent with proper operation of the project, the Licensee shall allow the public free access, to a reasonable extent, to project waters and adjacent project lands owned by the Licensee for the purpose of full public utilization of such lands and waters for navigation and for outdoor recreational purposes, including fishing and

hunting: Provided, That the Licensee may reserve from public access such portions of the project waters, adjacent lands, and project facilities as may be necessary for the protection of life, health, and property.

Article 14. In the construction, maintenance, or operation of the project, the Licensee shall be responsible for, and shall take reasonable measures to prevent, soil erosion on lands adjacent to streams or other waters, stream sedimentation, and any form of water or air pollution. The Commission, upon the request or upon its own motion, may order the Licensee to take such measures as the Commission finds to be necessary for these purposes, after notice and opportunity for hearing.

Article 15. The Licensee shall clear and keep clear to an adequate width lands along open conduits and shall dispose of all temporary structures, unused timber, brush, refuse, or other material unnecessary for the purposes of the project which results from the clearing of lands or from the maintenance or alteration of the project works. In addition, all trees along the periphery of project reservoirs which may die during operations of the project shall be removed. All clearing of the lands and disposal of the unnecessary material shall be done with due diligence and to the satisfaction of the authorized representative of the Commission and in accordance with appropriate Federal, State, and local statutes and regulations.

Article 16. Timber on lands of the United State cut, used, or destroyed in the construction and maintenance of the project works, or in the clearing of said lands, shall be paid for, and the resulting slash and debris disposed of, in accordance with the requirements of the agency of the United States having jurisdiction over said lands. Payment for merchantable timber shall be at current stumpage rates, and payment for young growth timber below merchantable size shall be at current damage appraisal values. However, the agency of the United States having jurisdiction may sell or dispose of the merchantable timber to others than the Licensee: Provided, That timber so sold or disposed of shall be cut and removed from the area prior to, or without undue interference with, clearing operations of the Licensee and in coordination with the Licensee's project construction schedules. Such sale or disposal to others shall not relieve the Licensee of responsibility for the clearing and disposal of all slash and debris from project lands.

Article 17. The Licensee shall do everything reasonably within its power, and shall require its employees, contractors, and employees of contractors to do everything reasonably within their power, both independently and upon the request of officers of the agency concerned, to prevent, to make advance preparations for suppression of, and to suppress fires on the lands to be occupied or used under the license. The Licensee shall be liable for and shall pay the costs incurred by the United States in suppressing fires caused from the construction, operation, or maintenance of the project works or of the works appurtenant or accessory thereto under the license.

Article 18. The Licensee shall interpose no objection to, and shall in no way prevent, the use by the agency of the United States having jurisdiction over the lands of the United States affected, or by persons or corporations occupying lands of the United States under permit, of water for fire suppression from any stream, conduit, or body of water, natural or artificial, used by the Licensee in the operation of the project works covered by the license, or the use by said parties of water for sanitary and domestic purposes from any stream, conduit, or body of water, natural or artificial, used by the Licensee in the operation of the project works covered by the license.

Article 19. The Licensee shall be liable for injury to, or destruction of, any buildings, bridges, roads, trails, lands, or other property of the United States, occasioned by the construction, maintenance, or operation of the project works or of the works appurtenant or accessory thereto under the license. Arrangements to meet such liability, either by compensation for such injury or destruction, or by reconstruction or repair of damaged property, or otherwise, shall be made with the appropriate department or agency of the United States.

Article 20. The Licensee shall allow any agency of the United States, without charge, to construct or permit to be constructed on, through, and across those project lands which are lands of the United States such conduits, chutes, ditches, railroads, roads, trails, telephone and power lines, and other routes or means of transportation and communication as are not inconsistent with the enjoyment of said lands by the Licensee for the purposes of the license. This license shall not be construed as conferring upon the Licensee any right of use, occupancy, or enjoyment of the lands of the United States other than for the construction, operation, and maintenance of the project as stated in the license.

Article 21. In the construction and maintenance of the project, the location and standards of roads and trails on lands of the United States and other uses of lands of the United States, including the location and condition of quarries, borrow pits, and spoil disposal areas, shall be subject to the approval of the department or agency of the United States having supervision over the lands involved.

Article 22. The Licensee shall make provision, or shall bear the reasonable cost, as determined by the agency of the United States affected, of making provision for avoiding inductive interference between any project transmission line or other project facility constructed, operated, or maintained under the license, and any radio installation, telephone line, or other communication facility installed or constructed before or after construction of such project transmission line or other project facility and owned, operated, or used by such agency of the United States in administering the lands under its jurisdiction.

Article 23. The Licensee shall make use of the Commission's guidelines and other recognized guidelines for treatment of transmission line rights-of-way, and shall clear such portions of transmission line rights-of-way across lands of the United States as are designated by the officer of the United States in charge of the lands; shall keep the areas so designated clear of new growth, all refuse, and inflammable material to the satisfaction of such officer; shall trim all branches of trees in contact with or liable to contact the transmission lines; shall cut and remove all dead or leaning trees which might fall in contact with the transmission lines; and shall take such other precautions against fire as may be required by such officer. No fires for the burning of waste material shall be set except with the prior written consent of the officer of the United States in charge of the lands as to time and place.

Article 24. If the Licensee shall cause or suffer essential project property to be removed or destroyed or to become unfit for use, without adequate replacement, or shall abandon or discontinue good faith operation of the project or refuse or neglect to comply with the terms of the license and the lawful orders of the Commission mailed to the record address of the Licensee or its agent, the Commission will deem it to be the intent of the Licensee to surrender the license. The Commission, after notice and opportunity for hearing, may require the Licensee to remove any or all structures, equipment and power lines within the project boundary and to take any such other action necessary to restore the project waters, lands, and facilities remaining within the project boundary to a condition satisfactory to the United States agency having jurisdiction over its lands or the Commission's authorized representative, as appropriate, or to provide for the continued operation and maintenance of nonpower facilities and fulfill such other obligations under the license as the Commission may prescribe. In addition, the Commission in its discretion, after notice and opportunity for hearing, may also agree to the surrender of the license when the Commission, for the reasons recited herein, deems it to be the intent of the Licensee to surrender the license.

Article 25. The right of the Licensee and of its successors and assigns to use or occupy waters over which the United States has jurisdiction, or lands of the United States under the license, for the purpose of maintaining the project works or otherwise, shall absolutely cease at the end of the license period, unless the Licensee has obtained a new license pursuant to the then existing laws and regulations, or an annual license under the terms and conditions of this license.

Article 26. The terms and conditions expressly set forth in the license shall not be construed as impairing any terms and conditions of the Federal Power Act which are not expressly set forth herein.

Appendix A

**PACIFIC SOUTHWEST REGION, USDA FOREST SERVICE
FINAL SECTION 4(e) TERMS AND CONDITIONS
NECESSARY FOR THE PROTECTION AND UTILIZATION OF THE
LOS PADRES NATIONAL FOREST
SANTA FELICIA HYDROELECTRIC PROJECT,
FERC No. 2153**

General

The Forest Service (FS) provides the following Final Section 4(e) conditions for the Santa Felicia Hydroelectric Project, FERC No. 2153 in accordance with 18 CFR 4.34(b)(1)(i).

Section 4(e) of the Federal Power Act (FPA) states the Commission may issue a license for a project within a reservation only if it finds that the license will not interfere or be inconsistent with the purpose for which such reservation was created or acquired. This is an independent threshold determination made by FERC, with the purpose of the reservation defined by the authorizing legislation or proclamation (see *Rainsong v. FERC*, 106 F.3d 269 (9th Cir. 1977)). The FS, for its protection and utilization determination under Section 4(e) of the FPA may rely on broader purposes than those contained in the original authorizing statutes and proclamations in prescribing conditions (see *Southern California Edison v. FERC*, 116F.3d 507 (D.C. Cir. 1997)).

The following terms and conditions are based on those resource and management requirements enumerated in the Organic Administration Act of 1897 (30 Stat. 11), the Multiple-Use Sustained Yield Act of 1960 (74 Stat. 215), the National Forest Management Act of 1976 (90 Stat. 2949), and any other law specifically establishing a unit of the National Forest System or prescribing the management thereof (such as the Wilderness Act or the Wild and Scenic Rivers Act), as such laws may be amended from time to time, and as implemented by regulations and approved Land and Resource Management Plans prepared in accordance with the National Forest Management Act. Specifically, the 4(e) conditions are based on the Land and Resource Management Plan (as amended) for the Los Padres National Forest, as approved by the Regional Forester of the Pacific Southwest Region.

Pursuant to Section 4(e) of the Federal Power Act, the Secretary of Agriculture, acting by and through the Forest Service, considers the following conditions necessary for the adequate protection and utilization of the land and resources of the Los Padres National Forest. License articles contained in the Federal Energy Regulatory Commission's (Commission) Standard Form L-1 (revised October 1975) issued by Order No. 540, dated October 31, 1975, cover general requirements. This document includes both administrative conditions deemed necessary for the administration of National Forest System lands and specific resource requirements for protection and utilization of National Forest System lands and resources.

ADMINISTRATIVE CONDITIONS

Condition No. 1 - Approval of Changes After Initial Construction

Notwithstanding any license authorization to make changes to the project, the Licensee shall obtain written approval from the Forest Service prior to making changes on or affecting National Forest System lands:

- to any constructed project features or facilities,
- in the uses of project lands and waters,
- or any departure from the requirements of any approved exhibits filed with the Commission.

Following receipt of such approval from the Forest Service, and a minimum of 60-days prior to initiating any such changes, the Licensee shall file a report with the Commission describing the changes, the reasons for the changes, and showing the approval of the Forest Service for such changes. The Licensee shall file an exact copy of this report with the Forest Service at the same time it is filed with the Commission. This article does not relieve the Licensee from the requirement for license amendment or other requirements of Article 2 or Article 3 of this license. Any changes to the license made for any reason pursuant to Article 2 or Article 3 shall be made subject to any new terms and conditions the Secretary of Agriculture may make pursuant to section 4(e) of the Federal Power Act.

Condition No. 2 - Annual Consultation on Affected National Forest Resources

The Licensee shall consult with the Forest Service between January 10 and March 15 of each year in regard to measures needed to ensure protection and utilization of the National Forest System land and resources affected by the Project. Representatives from the U.S. Fish and Wildlife Service, California Department of Fish and Game, or other interested agency representatives concerned with operation of the project may request to attend the meeting. Consultation shall include, but not be limited to:

- A status report regarding implementation of license conditions;
- Results of any monitoring studies performed over the previous year in formats agreed to by the Forest Service and the Licensee during development of study plans;
- Review of any non-routine maintenance;
- Discussion of any foreseeable changes to project facilities or features;
- Discussion of any necessary revisions or modifications to plans approved as part of this license;
- Discussion of needed protection measures for species newly listed as threatened, endangered, or sensitive or, changes to existing management plans that may no longer be warranted due to delisting of species or, to incorporate new knowledge about a species requiring protection; and
- Discussion of elements of current year maintenance plans, e.g. road maintenance.

A record of the meeting shall be kept by the Licensee and shall include any recommendations made by the Forest Service for the protection of National Forest System lands (NFSL) and

resources. The Licensee shall file the meeting record with the Commission no later than 60 days following the meeting.

Copies of other reports related to project safety and non-compliance shall be submitted to the Forest Service concurrently with submittal to the FERC. These include, but are not limited to: any non-compliance report filed by the licensee, geologic or seismic reports, and structural safety reports for facilities located on or affecting NFSL.

The Forest Service reserves the right, after notice and opportunity for comment, to require changes in the project and its operation through revision of the 4(e) conditions to accomplish protection and utilization of National Forest lands and resources.

Condition No. 3 - Maintenance of Improvements on or Affecting NFSL

The Licensee shall maintain all its improvements and premises on or affecting National Forest System (NFS) lands to standards of repair, orderliness, neatness, sanitation, and safety acceptable to the Forest Service. Disposal will be at an approved existing location, except as otherwise agreed by the Forest Service.

Condition No. 4 - Valid Claims and Existing Rights

This license is subject to all valid rights and claims of third parties. The United States is not liable to the Licensee for the exercise of any such right or claim.

Condition No. 5 - Compliance with Regulations on NFSL

The Licensee shall comply with the regulations of the Department of Agriculture for activities on NFS lands, and all applicable Federal, State, county, and municipal laws, ordinances, or regulations in regard to the area or operations on or affecting NFS lands, to the extent federal law does not preempt ordinances or regulations.

Condition No. 6 - Protection of United States Property

The Licensee shall exercise diligence in protecting from damage the land and property of the United States covered by and used in connection with this license.

Condition No. 7 - Surrender of License or Transfer of Ownership

Prior to any surrender of this license, the Licensee shall provide assurance acceptable to the Forest Service that Licensee shall restore National Forest System resources to a condition satisfactory to the Forest Service upon or after surrender of the license, as appropriate. The restoration plan shall identify the measures to be taken to restore National Forest System resources and shall include adequate financial assurances such as a bond or letter of credit, to ensure performance of the restoration measures.

In the event of any transfer of the license or sale of the Project, the Licensee shall guarantee or assure that, in a manner satisfactory to the Forest Service, that the Licensee or transferee will provide for the costs of surrender and restoration. If deemed necessary by the Forest Service to assist it in evaluating the Licensee's proposal, the Licensee shall conduct an analysis, using experts approved by the Forest Service, to estimate the potential costs associated with surrender and restoration of the Project area on or affecting NFS lands to Forest Service specifications. In addition, the Forest Service may require the Licensee to pay for an independent audit of the transferee to assist the Forest Service in determining whether the transferee has the financial ability to fund the surrender and restoration work on or affecting NFS lands specified in the analysis.

Condition No. 8 - Indemnification

The Licensee shall indemnify, defend, and hold the United States harmless for any violations incurred under any applicable laws and regulations or for judgments, claims, or demands assessed against the United States in connection with the construction, maintenance, or operation of the project works or of the works appurtenant or accessory thereto under the license. The licensee's indemnification of the United States shall include any loss by personal injury, loss of life or damage to property in connection with the construction, maintenance, or operation of the project works or of the works appurtenant or accessory thereto under the license. Indemnification shall include, but is not limited to, the value of resources damaged or destroyed; the costs of restoration, cleanup, or other mitigation; fire suppression or other types of abatement costs; third party claims and judgments; and all administrative, interest, and other legal costs. Upon surrender, transfer, or termination of the license, the Licensee's obligation to indemnify the United States shall survive all valid claims for actions that occurred prior to such surrender, transfer or termination.

Condition No. 9 - Damage to Land, Property, and Interests of the United States

The Licensee has an affirmative duty to protect the land, property and interests of the United States from damage arising from the Licensee's construction, maintenance, or operation of the project works or of the works appurtenant or accessory thereto under the license.

In addition to the general requirements of the Commission Form L Articles, the Licensee is liable for and shall pay, after being afforded an opportunity to review Forest Service claimed costs, all damages, costs and expenses associated with damage to the land, property and interests of the United States occasioned by the construction, maintenance, or operation of the project works or of the works appurtenant or accessory thereto under the license, including but not limited to damages, costs and expenses resulting from fire. Such damages, costs and expenses shall include, but not be limited to:

1. Fire suppression costs
2. Rehabilitation and restoration costs
3. Value of lost resources
4. Abatement costs
5. Investigative and administrative expenses

6. Attorneys' fees

The Licensee's liability under this condition shall not extend to acts or omissions of third parties outside of the Licensee's control. Licensee's contractors or employees of contractors are not considered third parties. Damages will be determined by the value of the resources lost or impaired, as determined by the Forest Service. The basis for damages will be provided to the Licensee. The licensee shall accept transaction registers certified by the appropriate Forest Service official as evidence of costs and expenses. The Licensee shall have an opportunity to review the basis for the Forest Service's damages, costs and expenses, and to meet and confer with the Forest Service to resolve any questions or disputes regarding such damages, costs and expenses. After the opportunity for review, the Licensee shall promptly pay to the United States such damages, costs and expenses upon written demand by the United States.

Condition No. 10 - Risks and Hazards

As part of the occupancy and use of the license area, the Licensee has a continuing responsibility to identify and report all known or observed hazardous conditions on or affecting NFS lands within the project boundary that would affect the improvements, resources, or pose a risk of injury to individuals. Licensee will abate those conditions, except those caused by third parties not related to the occupancy and use authorized by the License. Any non-emergency actions to abate such hazards on National Forest System lands shall be performed after consultation with the Forest Service. In emergency situations, the Licensee shall notify the Forest Service of its actions as soon as possible, but not more than 48 hours, after such actions have been taken. Whether or not the Forest Service is notified or provides consultation; the Licensee shall remain solely responsible for all abatement measures performed. Other hazards should be reported to the appropriate agency as soon as possible.

Condition No. 11 - Pesticide-Use Restrictions on NFSL

Pesticides shall not be used on NFS lands or in areas affecting NFS lands to control undesirable woody and herbaceous vegetation, aquatic plants, insects, rodents, undesirable fish, etc., without the prior written approval of the Forest Service. The Licensee shall submit a request for approval of planned uses of pesticides. The request must cover annual planned use and be updated as required by the Forest Service. The Licensee shall provide information essential for review in the form specified by the Forest Service. Exceptions to this schedule may be allowed only when unexpected outbreaks of pests require control measures that were not anticipated at the time the report was submitted. In such an instance, an emergency request and approval may be made.

The Licensee shall use on National Forest System land only those materials registered by the U.S. Environmental Protection Agency for the specific purpose planned. The Licensee shall strictly follow label instructions in the preparation and application of pesticides and disposal of excess materials and containers.

Condition No. 12 - Access by the United States

The United States shall have unrestricted use of any road over which the licensee has control, constructed within the project area for all purposes deemed necessary or desirable in connection with the protection, administration, management, and utilization of Federal lands or resources. The United States shall have the right to extend rights and privileges for use, as negotiated between the licensee and the Forest Service, of the right-of-way and road thereon to States and local subdivisions thereof, as well as to other users, including members of the public, except contractors, agents and employees of the Licensee. The agency having jurisdiction shall control such use so as not to unreasonably interfere with the safety or security uses, or cause the Licensee to bear a share of the costs of maintenance disproportionate to the Licensee's use in comparison to the use of the road by others.

Condition No. 13 - Forest Service Reserves the Right to Revise Section 4(e) Conditions

The Forest Service reserves the right to modify final Section 4(e) conditions submitted to FERC for inclusion in the new license for the Santa Felicia Hydroelectric Project, FERC No.2153-012, to resolve any conflict between FS 4(e) conditions and 1) water quality certificate conditions issued by the State of California Department of Water Resources Control Board, or 2) new terms and conditions imposed by the existing or revised U.S. Fish and Wildlife Service Biological Opinion issued for the relicensing of the Project.

RESOURCE PROTECTION CONDITIONS

Condition No. 14 - Protection of Forest Service Special Status Species

Before taking actions to construct new project features on NFSL that may affect Forest Service special status species (i.e. Forest Service sensitive and/or management indicator species) or their habitat, the Licensee shall prepare a biological evaluation evaluating the potential impact of the action on the species or its habitat and submit it to the Forest Service for approval. In coordination with the Commission, the Forest Service may require mitigation measures for the protection of the affected species.

The biological evaluation shall

- Include procedures to minimize adverse effects to special status species;
- Ensure project-related activities shall meet restrictions included in site management plans for special status species; and
- Develop implementation and effectiveness monitoring of measures taken or employed to reduce effects to special status species.

Condition No. 15 - Spoil Management, Erosion, and Sediment Control

Within one year of license issuance, the Licensee shall prepare a plan to address sediment management activities affecting NFS lands. At a minimum the plan shall include the following:

- Location of proposed or existing disposal sites on NFS lands;

- Potential Erosion and/or stabilization measures, including Best Management Practices and the use of certified weed free straw;
- Revegetation measures;
- Noxious weed management; and
- Foreign material treatment, including removal of visible non-native materials.

Forest Service approval will be required before implementation of any sediment removal operation that affects NFS lands or resources. Documentation of correspondence with the Forest Service shall also be filed with the Commission prior to implementation of any sediment removal activity. For any non-emergency remedial or removal action the licensee shall submit a site specific plan for the Forest Service's approval which includes:

- Description of the material to be removed,
- Reason for removal,
- Approximate quantities of material,
- Selected method of removal along with alternatives considered,
- Schedule of removal or remedial activities,
- Water quality monitoring including adherence to Forest Service, Region 5, Best Management Practices,
- Consideration of visual quality,
- Utilization of material, and
- Mitigation measures and disposal site stabilization plans for material placed on NFS lands.

In addition the Licensee shall consult with the California Department of Fish and Game, State Water Resources Control Board, U.S. Fish and Wildlife Service, and U.S. Army Corps of Engineers and obtain any necessary approvals before proceeding.

During the Annual Consultation Meeting required by Condition 2, the Forest Service will review any monitoring results and discuss any needed changes to the Plan.

Emergency Notification:

The Licensee shall notify the Forest Service within 3 days in the event a project facility requires, or a project-related activity results in the need for emergency site stabilization, erosion protection, or sediment management and affects National Forest System lands or resources. Any temporary measures necessary to stabilize the condition shall be implemented as soon as practicable and the Forest Service shall be informed of the steps taken. Long term stabilization shall follow the site specific plan requirements listed above.

Condition No. 16 - Arroyo Toad Protection Plan

Within one year of license issuance the Licensee shall file with the Commission an Arroyo Toad Protection Plan that is approved by the Forest Service, and developed in consultation with

appropriate Federal and State resources agencies. The plan shall set forth in detail the Licensee's responsibility for the protection of federally listed Arroyo toads and Arroyo toad critical habitat.

The Arroyo Toad Protection Plan shall:

- Include procedures to minimize adverse effects to Arroyo toads and Arroyo toad critical habitat;
- Ensure project-related activities shall meet restrictions included in site management plans for Arroyo toads and Arroyo toad critical habitat; and
- Develop implementation and effectiveness monitoring of measures taken or employed to reduce effects to Arroyo toads and Arroyo toad critical habitat.

Condition No. 17 - Land Resource Plans for Mitigating Project Effects on or affecting NFS Resources

Within the timeframes described below, and in consultation with applicable Federal and State agencies, the Licensee shall file with the Commission Land Resource Plans that are approved by the Forest Service, as they relate to resource management on the National Forest. The plans shall include:

- a. Fire Management And Response Plan
- b. Visual Management Plan
- c. Sign Plan

a. Fire Management and Response Plan

Within one year of license issuance the Licensee shall file with the Commission a Fire Prevention and Response Plan that is approved by the Forest Service, and developed in consultation with appropriate State and local fire agencies. The plan shall set forth in detail the Licensee's responsibility for the prevention, reporting, control, and extinguishing of fires in the vicinity of the Project.

At a minimum the plan shall address the following categories:

1. Fuels Treatment/Vegetation Management
 - Identification of fire hazard reduction measures to prevent the escape of project-induced fires.
2. Prevention
 - Availability of fire access roads, community road escape routes, helispots to allow aerial firefighting assistance in the steep canyon, water drafting sites and other fire suppression strategies.
 - Address fire danger and public safety associated with project induced recreation, including fire danger associated with dispersed camping, existing and proposed developed recreation sites, trails, and vehicle access.
3. Emergency Response Preparedness
 - Analyze fire prevention needs including equipment and personnel availability.

4. Reporting
 - Licensee shall report any project related fires to the Forest Service within 24 hours.
5. Fire Control/Extinguishing
 - Provide the Forest Service with a list of the locations of available fire suppression equipment and the location and availability of fire suppression personnel.

Assure fire prevention measures will conform to water quality protection practices as enumerated in USDA, Forest Service, Pacific Southwest Region, Water Quality Management for National Forest System Lands in California-Best Management Practices.

Investigation of Project Related Fires

The Licensee agrees to fully cooperate with the Forest Service on all fire investigations. The Licensee shall produce upon request all material and witnesses, not subject to attorney client or attorney work product privilege, over which the Licensee has control, related to the fire and its investigation including:

- All investigation reports
- All witness statements
- All photographs
- All drawings
- All analysis of cause and origin
- All other, similar materials and documents regardless of how collected or maintained

The Licensee shall preserve all physical evidence, and give custody to the Forest Service of all physical evidence requested. The Forest Service shall provide the Licensee with reasonable access to the physical evidence and documents the Licensee requires in order to defend any and all claims, which may arise from a fire within the Project boundaries, to the extent such access is not precluded by ongoing criminal or civil litigation.

b. Visual Management Plan

Within 1 year of license issuance, the Licensee shall file with the Commission a Visual Management Plan that is approved by the Forest Service for any NFS lands that are visually affected by the Project. As a minimum the Plan shall address:

- Clearings, spoil piles, and project facilities, such as diversion structures, penstocks, pipes, ditches, powerhouses, other buildings, transmission lines, corridors, and access roads.
- Facility configurations, alignments, building materials, colors, landscaping, and screening.
- An Implementation schedule to bring the project facilities into compliance with applicable National Forest Land and Resource Management Plan direction.
- Mitigation measures that shall include, but are not limited to:
 - Surface treatments with colors and materials that are in harmony with the surrounding landscape.
 - Use of native plant species to screen facilities from view, where appropriate.

- Reshaping and revegetating disturbed areas to blend with surrounding scenic characteristics.
- Development of scenic overlooks along scenic routes.
- Removal of project induced debris piles, which detract from the visual quality.
- General maintenance and upkeep of facilities.

Upon Commission approval, the Licensee shall implement the plan.

c. Sign Plan

The Licensee shall prepare in consultation with the Forest Service, and other interested parties, within one year of license issuance, a Sign Plan that shall conform to the Manual of Uniform Traffic Control Devices, Forest Service sign handbook, and other applicable standards. As a minimum the Plan is to include the location, design, size, color, and message for the following types of signs:

- Information and education signs
- Fire Prevention signs
- Regulatory and warning signs
- Project license signs
- Road signs
- Recreation signs
- Directional signs to assist non-local visitors
- Safety signs
- Sign format/consistency throughout project

The Plan shall also address maintenance standards so that all signs are maintained in a neat and presentable condition. Signs which are to be placed on National Forest System lands shall be approved by the Forest Service. The Licensee shall not be required to consult or obtain the prior approval of the Forest Service for signs on Licensee owned land that are not visible from National Forest System lands.

Upon Commission approval, the Licensee shall implement the plan.

Condition No. 18 - Biological Resources Management Plans for Mitigating Project Effects on or affecting NFS Resources

a. Terrestrial Wildlife Mitigation & Monitoring plan:

Within one year of designation of a Forest Service special status species (i.e. Forest Service sensitive and management indicator species) the Licensee shall prepare in consultation with the Forest Service, U.S. Fish and Wildlife Service, and California Department of Fish and Game, a wildlife mitigation and monitoring plan to monitor project affected terrestrial Forest Service special status species. At a minimum, the plan shall include and address the following monitoring elements:

- Periodic monitoring throughout the period of the license to determine if special status species utilize Project facilities.
- Reporting of survey & monitoring results.

Mitigation measures to be implemented by the Licensee include pre-construction surveys for Forest Service special status species. The surveys shall follow standard approved protocols or protocols approved by the Forest Service if no standard protocol exist at the time. The results of the surveys shall be utilized to determine mitigation measures necessary to protect Forest Service sensitive species.

Upon Commission approval, the Licensee shall implement the Plan.

b. Vegetation & Noxious Weed Management Plan

Within two years of license issuance, the Licensee shall file with the Commission vegetation and noxious weed management plan developed in consultation with the Forest Service, Ventura County Agricultural Commissioner and California Department of Food and Agriculture. At a minimum, the plan should include two components: a Noxious Weed Plan and a Vegetation Management Plan. Noxious weeds will be those weeds defined in the California Food and Agriculture code, and other species identified by the Forest Service.

1) The Noxious Weed Plan will include and address the following elements:

- Noxious weed treatment (aquatic and terrestrial) within the project boundary and adjacent to project features including recreation facilities, roads, and distribution and transmission lines.
- Inventory and mapping of new populations of noxious weeds using a Forest Service compatible database and GIS software. The Noxious weed GIS data layer will be updated periodically and shared with resource agencies.
- Action and/or strategies to prevent and control spread of known populations or introductions of new populations, such as vehicle/equipment wash stations.
- Develop a schedule for eradication of all A, B, Q and selected other rated invasive weed species, designated by resource agencies.
- New infestations of A& B rated weeds shall be eradicated within 12 months of detection. (A, B, C, & Q ratings refer to the California Department of Food & Agriculture Action Oriented Pest Rating System).
- At specific sites where other objectives need to be met (e.g. recreational use) all classes of noxious weeds may be required to be treated.
- On-going annual monitoring of known populations of noxious weeds for the life of the license in locations tied to Project actions or effects, such as road maintenance, at project facilities, O&M activities, recreational areas, new construction sites, etc. to evaluate the effectiveness of re-vegetation and noxious weed control measures.
- Monitoring will be done in conjunction with other project maintenance and resource surveys, so as not to require separate travel and personnel. Monitoring information, in database and GIS formats, will be provided to the Forest Service as part of the

- annual consultation on affected National Forest resources (Condition No. 2). To assist with this monitoring requirement, training in invasive plant identification will be provided to Project employees and contractors by the Forest Service.
- Licensee shall restore/revegetate areas where treatment has eliminated noxious weeds in an effort to eliminate the reintroduction of noxious weed species.
 - Project-induced ground disturbing activities shall be monitored annually for the first 3 years after disturbance to detect and map new populations of noxious weeds.
 - The plan will include an adaptive management element to implement methods for prevention of aquatic noxious weeds, as necessary. These actions may include, but may not be limited to: 1) public education and signing of public boat access, 2) preparation of an Aquatic Plant Management Plan approved by the Forest Service, and in consultation with other agencies, and 3) boat cleaning stations at boat ramps for the removal of aquatic noxious weeds.
- 2) The Vegetation Management plan shall include and/or address the following elements:
- Hazard tree removal and trimming;
 - Powerline/transmission line clearing;
 - Vegetation management for habitat improvement
 - Revegetation of disturbed sites;
 - Soil protection and erosion control, including use of certified weed free straw;
 - Establishment of and/or revegetation with culturally important plant populations; and
 - Use clean, weed free seed with a preference for locally collected seed.

Upon Commission approval, the Licensee shall implement the plan.

Condition No. 19 - Cultural Resources Management Plan

The Licensee shall file with the Commission, within one year following license issuance, a Cultural Resources Management Plan (CRMP), approved by the Forest Service, for the purpose of protecting and interpreting heritage resources. The CRMP is tiered to a Programmatic Agreement, to which the Forest Service will be a signatory, as defined by 36 CFR 800, and implements regulations of the National Historic Preservation Act. The Licensee shall consult with the State Historic Preservation Officer, Native American Tribes, Forest Service, and other applicable agencies and communities during the preparation of the Plan. The CRMP shall accurately define the area of potential effects, including effects of implementing Section 4(e) conditions, Native American traditional cultural values, and Project-induced recreational impacts to archaeological properties on or affecting National Forest System lands. The CRMP shall also provide measures to mitigate the identified impacts, including a monitoring program, a patrolling program, and management protocols for the ongoing protection of archaeological properties.

If, prior to or during ground-disturbing activities or as a result of project operations, items of potential cultural, historical, archaeological, or paleontological value are reported or discovered, or a known deposit of such items is disturbed on National Forest System lands, the Licensee shall immediately cease work in the area affected. The Licensee shall then: (1) consult with the

California State Historic Preservation Officer (SHPO) and the Forest Service about the discovery; (2) prepare a site-specific plan, including a schedule, to evaluate the significance of the find and to avoid or mitigate any impacts to sites found eligible for inclusion in the National Register of Historic Places; (3) base the site-specific plan on recommendations of the SHPO, the Forest Service, and Secretary of the Interior's Standards and guidelines for Archaeology and Historic Preservation; (4) file the site specific plan for Commission approval, together with the written comments of the SHPO and the Forest Service; and (5) take the necessary steps to protect the sites from further impact until informed by the Commission that the requirements have been fulfilled.

Upon Commission approval, the Licensee shall implement the plan.

Condition No. 20 - Roads and Facilities Management Plan

For National Forest system roads affected by the Project or Project roads affecting NFS resources, within one year of license issuance the Licensee shall file with the Commission a "Roads and Transportation Facilities Management Plan". The plan shall incorporate Forest Service standards (i.e. FS manuals and handbooks) for design, construction, operation, and maintenance and be approved by the Forest Service. Upon Commission approval, the Licensee shall implement the Plan and actions specified therein. At a minimum the Roads and Transportation Facilities Management Plan shall address the following:

a. Road Planning:

- A map(s) compatible with the FS Travel Routes database identifying both project and non-project roads affecting NFS resources, culverts, bridges, drainages, watering sources, disposal sites for organic materials, and disposal sites for surplus rock and soil from road maintenance within and adjacent to the project boundary including designation of use, season of operation, and public use.
- Identification of the uses (i.e. recreation, facility access) of the roads, and season of operation.
- An inventory of road and road facilities conditions including any construction or maintenance needs.
- Description of the types of materials allowed to be disposed of in spoil piles.
- Description of how organic materials will be treated.
- Soil protection and erosion control measures including revegetation of disturbed sites and spoil piles to avoid noxious weed infestation and erosion (using only certified weed-free straw).
- A Water Quality Monitoring Plan that includes runoff management.
- A Traffic Safety plan.
- An adaptive management component to allow changes should use or standards necessitate.

b. Project Road Rehabilitation.

General Items:

- Include limited operating periods (LOPs) for identified Forest Service special status wildlife species when planning rehabilitation projects as well as provisions to prevent the infestation and spread of noxious weeds (reference items in Condition No. 18).
- Develop a road rehabilitation implementation schedule to bring existing roads and associated facilities (i.e. culverts, gates, bridges, crossings, crib walls, etc.) into compliance with Forest Service standards that achieve the Forest Service's Road Management Objectives (RMOs). The schedule shall bring existing roads into compliance over the term of the license. Health and safety items shall be completed within the first year of implementation. Road surfacing items shall be completed within five years of implementation. All lower priority projects shall be completed as soon as practicable after license issuance.
- The following items should be considered during road rehabilitation:
 - Crossings are constructed and maintained to prevent diversion of streamflow out of the channel and down the road in the event of crossing failure.
 - Prevent chronic erosion to stream channels by installing proper drainage such as French drains, outsloping, rolling dips, water bars, etc.
 - Fish passage and proper stream function is provided for at all stream crossings that are identified as fish habitat areas.
 - All intermittent and perennial stream crossings shall accommodate a 100-year storm event and associated bedload and debris. Provide hydrologic information to verify calculations if requested by Forest Service.
 - All bridges when replaced or reconstructed shall conform to American Association of State Highway and Transportation Officials (AASHTO) Standard specifications for Highway Bridges (latest edition) including guardrails. All bridge approaches must be appropriately surfaced.
 - Gates on NFS lands shall comply with FS standards for construction and signing.
 - Rotting log parking barriers are replaced with standard parking barrier devices, e.g. guardrails, concrete stops, etc.
 - Remove all project related road spoil piles not currently located in approved areas on NFS lands to a location either off the Forest, or to a Forest Service approved disposal site. Removal area shall be revegetated with approved native (locally collected) seed to reduce invasion of noxious weeds. Monitor and eradicate noxious weeds as specified in the "Noxious Weeds Management Plan" (License Condition No. 18).
 - Project roads when reconstructed meet Forest Service road standards consistent with "Road Management Objectives", including shoulders, installing additional turnouts (with material matching that of the main roadbed), reconstructing sharp curves to meet standards for clearance and sight distance, and stabilizing cutbanks/fillslopes with crib walls and other retaining structures to prevent road failure and excessive sedimentation to waterways.

c. Road Operation & Maintenance (O&M):

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- Develop an annual road operation and maintenance schedule for on-going needs to maintain Project roads on NFSL to comply with Forest Service standards and RMOs.
- Complete normal maintenance activities on an annual basis including: repair and replacement of damaged culverts identified in road logs, removal of existing vegetation to allow adequate sight distances, etc.
- Include any required LOPs for wildlife species and noxious weed prevention provisions in planning and performing maintenance activities.

Appendix B

REASONABLE AND PRUDENT ALTERNATIVE

Regulations (50 CFR §402.02) implementing section 7 of the ESA define reasonable and prudent alternatives as alternative actions, identified during formal consultation, that: (1) can be implemented in a manner consistent with the intended purpose of the action; (2) can be implemented consistent with the scope of the action agency's legal authority and jurisdiction; (3) are economically and technically feasible; and (4) would, NMFS believes, avoid the likelihood of jeopardizing the continued existence of a listed species or resulting in the destruction or adverse modification of critical habitat. NMFS believes the following reasonable and prudent alternative is necessary and appropriate to avoid the likelihood of jeopardizing the continued existence of the Southern California steelhead DPS or resulting in the destruction or adverse modification of critical habitat:

Implement a Santa Felicia Dam operations plan that requires establishing and preserving essential features of critical habitat for the endangered Southern California DPS of steelhead in Piru Creek and the Santa Clara River, and restoring anadromy of steelhead to the Piru Creek drainage. This reasonable and prudent alternative has three sub-elements and all three elements must be implemented to avoid jeopardizing the continued existence of the Federally endangered Southern California steelhead DPS, and destroying or adversely modifying critical habitat for this species. The presentation of the three sub-elements is followed by a brief discussion of how the reasonable and prudent alternative is expected to avoid jeopardizing the continued existence of the Federally endangered Southern California steelhead DPS, and destroying or adversely modifying critical habitat for this species. The sub-elements are as follows:

1. The Licensee shall implement a plan after receiving written NMFS agreement on the plan to minimize the geomorphic effects (e.g., effects to channel-bed morphology, substrate characteristics and condition) of Santa Felicia Dam and its operations on the quality and quantity of habitat for steelhead in Piru Creek downstream of the dam. The approach to minimize the geomorphic effects shall involve three principal steps: preparation of a study plan to quantify the geomorphic effects, implementation of the study plan, and subsequent preparation of a habitat-improvement plan and implementation of the habitat-improvement measures as identified in this habitat-improvement plan. These steps are described more fully as follows.

(a) Preparation of a study plan to quantify the geomorphic effects. The Licensee shall prepare a study plan to quantify the geomorphic effects and submit this study plan to NMFS' Southwest Regional Office (501 W. Ocean Blvd., Suite 4200, Long Beach, California 90802) for review and potential agreement no later than 180 days from the date of the Commission's issuance of the project license to the Licensee. The purpose of this study plan is to quantify the type (sorts of effects), amount (quantity, e.g., surficial area), and extent (distribution or area over which effects extend) of geomorphic effects of Santa Felicia Dam and its operations on the quality and quantity of steelhead habitat in Piru Creek downstream of the dam. This study plan shall include: (1) a clear statement of the study objectives, (2) a description of the specific field methods that are based on scientifically valid and accepted protocols that will be used to quantify the type, amount, and extent of geomorphic effects, (3) a description of the methods that will be used to condense, analyze, and interpret the

collected field data, (4) a description of the elements of a findings report that will describe and present the results obtained from implementing the study plan, and (5) schedules to guide the field sampling task, the data analysis task, and preparation of the findings report. Specific details of various elements of this study plan, including schedules, will be developed by the Licensee in cooperation with and agreement from NMFS prior to implementation of this plan. The Licensee shall be responsible for funding and completing this study and the findings report. No later than 60 days following the date of NMFS' letter commenting on the draft study plan, the Licensee shall submit to NMFS (at the foregoing address) for review a final study plan that addresses NMFS' comments. The Licensee must receive final NMFS' written agreement for this plan prior to implementing the plan. Upon receipt of final NMFS agreement, the Licensee shall commence implementation of the NMFS-agreed study plan.

- (b) Execution of the study plan.** The Licensee shall fund, conduct and complete this element in strict conformity as set forth in the plan developed in accordance with reasonable and prudent alternative element 1(a). The Licensee shall submit a draft findings report to NMFS (at the address provided above) and revise the report based on NMFS' comments (no later than 60 days after receiving NMFS' comments on the draft report) as necessary to receive final NMFS' written agreement on the findings report.
- (c) Preparation of a habitat-improvement plan and implementation of the habitat-improvement measures as identified in this plan.** The Licensee shall prepare a draft habitat-improvement plan and submit this plan to NMFS' Southwest Regional Office (501 W. Ocean Blvd., Suite 4200, Long Beach, California 90802) for review and potential agreement within one year from the date of the Commission's issuance of the project license to the Licensee. This plan shall: (1) identify the specific geomorphic effects determined from implementation of the study plan as defined in reasonable and prudent alternative element 1(a) (note that the findings report can be included in an appendix to this plan), (2) identify the specific habitat-improvement measures that will be undertaken to minimize each individual geomorphic effect, (3) describe the specific methods that will be undertaken to install each habitat-improvement measure, (4) detail the environmental and regulatory permits and approvals that will be needed prior to implementing the suite of habitat-improvement measures, and maintain the measures over time, (5) define effectiveness and performance criteria for each habitat-improvement measure, (6) describe the field methods that will be undertaken to monitor the long-term effectiveness (e.g., the attainment of management goals or objectives) and performance (e.g., function and longevity of the measures over time) of the habitat-improvement measures, (7) describe the specific field methods that will be used to maintain the habitat-improvement measures over time, (8) detail the decision criteria that will be used to judge effectiveness and performance of the habitat-improvement measures in the context of the long-term monitoring, (9) define schedules to guide implementation of the habitat-improvement measures and the conduct of the long-term effectiveness and performance monitoring, and (10) provide cost and engineering analyses, and detailed

(engineered) design drawings for the habitat-improvement measures. Specific details of various elements of this plan, including schedules, will be developed by the Licensee in cooperation with and agreement from NMFS prior to implementation of this plan. The Licensee shall be responsible for funding and implementing the habitat-improvement plan. No later than 60 days following the date of NMFS' letter commenting on the draft habitat-improvement plan, the Licensee shall submit to NMFS (at the foregoing address) for review and potential agreement a final habitat-improvement plan that addresses NMFS' comments. The Licensee must receive final NMFS agreement for the final habitat-improvement plan prior to implementing the habitat-improvement plan. Upon receipt of final NMFS agreement on the plan, the Licensee shall commence implementation of the final plan as agreed upon by NMFS in accordance with the schedules provided therein.

2. The Licensee shall implement a plan after receiving written NMFS agreement on the plan to ensure 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, formation and preservation of freshwater rearing sites for steelhead throughout Piru Creek downstream of Santa Felicia Dam, and creation and maintenance of freshwater spawning sites (including incubation and emergence life stages of steelhead) for steelhead throughout Piru Creek downstream of Santa Felicia Dam. The plan shall include three principal components: water-release schedules to provide essential habitat functions to support steelhead life history and habitat requirements, implementation and effectiveness monitoring, and adaptive management (note that the Licensee may present and detail these three components in three separate documents or plans). These components are described more fully as follows, which includes consideration of flow-related information recently provided in Exhibit A of United's January 11, 2008, comment letter. The Commission's January 17, 2008, letter requested that NMFS consider in the biological opinion the measures outlined in Exhibit A as part of a reasonable and prudent alternative.

(a) Water-release schedules to provide essential habitat functions to support steelhead life history and habitat requirements. The Licensee shall prepare a draft plan that details the water releases necessary to support unimpeded migration of adult and juvenile steelhead, and sites of rearing and spawning for steelhead throughout Piru Creek downstream of Santa Felicia Dam and the Santa Clara River downstream of the confluence with Piru Creek, and submit this plan to NMFS' Southwest Regional Office (501 W. Ocean Blvd., Suite 4200, Long Beach, California 90802) for review and potential agreement no later than 90 days after the Commission's issuance of the project license to the Licensee. This plan⁵⁷ shall: (1) clearly define the

⁵⁷ Although Exhibit A of United's January 11, 2008, letter could hypothetically be viewed as a "plan" for purposes of reasonable and prudent alternative 2(a), thereby rendering moot the need to prepare a plan as required under reasonable and prudent alternative 2(a), NMFS has carefully reviewed Exhibit A and concluded that the

biological goals and objectives of the plan (i.e., water-release schedules to provide essential habitat functions to support steelhead life history and habitat requirements throughout Piru Creek downstream of the dam to the confluence with the Santa Clara River and throughout the Santa Clara River downstream of the confluence with Piru Creek. Note that riparian vegetation is an essential feature of steelhead critical habitat), (2) identify water-release schedules based on the habitat requirements of adult and juvenile steelhead, (3) describe the specific science-based methods used to develop the water-release schedules for migration of adult and juvenile steelhead, steelhead spawning, and steelhead rearing, and (4) identify the daily- or monthly-specific quantities of water (in units of ft³/s) that will be released from Santa Felicia Dam for providing migration of adult and juvenile steelhead, freshwater spawning sites, and freshwater rearing sites (NMFS expects that water releases from the dam for steelhead life history and habitat requirements will range from 7 to 25 cfs for baseflow conditions during “dry” and “wet-normal” water-year types, and at least 200 cfs for attraction and migration conditions, as is proposed in Table 1 within Exhibit A, of United’s January 11, 2008, comment letter⁵⁸). Specific details of various aspects of this plan, including schedules and triggering criteria for certain water releases and water-year types (e.g., Exhibit A, of United’s January 11, 2008, comment letter), will be developed by the Licensee in cooperation with and agreement from NMFS prior to implementation of this plan. The Licensee shall be responsible for funding and implementing this plan. No later than 30 days following the date of NMFS’ letter commenting on the water-release schedules and plan, the Licensee shall submit to NMFS (at the foregoing address) for review and potential agreement the final water-release schedules and plan that address NMFS’ comments. The Licensee must receive final NMFS agreement for the final water-release schedules and plan prior to implementing the final water-release schedules and plan. Upon receipt of final NMFS agreement on the water-release schedules and plan, the

exhibit, by itself, generally does not ensure essential habitat functions to satisfy the life history and habitat requirements of endangered steelhead downstream of Santa Felicia Dam in Piru Creek and the Santa Clara River downstream of the confluence with Piru Creek. Therefore, NMFS continues to believe that a plan as required under reasonable and prudent alternative 2(a) is warranted, though NMFS acknowledges that aspects of Exhibit A may be included in the plan that is prepared as required by reasonable and prudent alternative 2(a).

⁵⁸ Exhibit A of United’s January 11, 2008, letter indicates water releases would be provided for 10 years, and at the end of the 10-year period United would submit to the Commission a recommendation to continue, alter, or abandon the water-release requirement. NMFS assumes in this reasonable and prudent alternative that the water releases would continue beyond the 10 years proposed by United because there is currently no information from which to determine that the water releases would not be necessary to avoid jeopardy or destruction or adverse modification of the species’ critical habitat at the end of 10 years. Therefore, NMFS assumes that the water releases would be required throughout the term of the license the Commission issues to the Licensee, but the adequacy of and necessity for the water releases may be reviewed by NMFS depending in part on the future status of listed steelhead and future findings obtained from effectiveness monitoring required in reasonable and prudent alternative 2(b).

Licensee shall commence implementation of the approved final water-release schedules and plan.

(b) Implementation and effectiveness monitoring. The Licensee shall prepare a draft plan that details the implementation of the water-releases schedules (as defined in accordance with reasonable and prudent alternative 2a) and the field monitoring that will be conducted to assess the effectiveness of the water releases for migration of adult and juvenile steelhead, and steelhead spawning and rearing, and submit this plan to NMFS' Southwest Regional Office (501 W. Ocean Blvd., Suite 4200, Long Beach, California 90802) for review and potential agreement no later than 90 days after the Commission's issuance of the project license to the Licensee. This plan shall include: (1) description of the specific methods that operators of Santa Felicia Dam (operators) will follow to ensure the water-release schedules are maintained, (2) a description of the specific precautionary measures that operators will undertake to ensure that no water-release lapse occurs, (3) a description of the contingency measures that operators and the Licensee will implement should an accidental lapse in water release occur, (4) a description of the specific triggers and procedures that will be used to transition from one type of water release to another (e.g., water releases for steelhead migration versus water releases for steelhead rearing), (5) a description of the specific ramping rates and procedures that operators will institute to minimize stranding and related effects on steelhead, (6) biological goals and objectives (including criteria) of the effectiveness monitoring, (7) a description of the specific hypotheses that will be evaluated as part of the effectiveness monitoring, (8) a description of the biological, physical, and physicochemical response variables that will be quantified to assess the effectiveness of the water releases for providing essential habitat functions to support migration of adult and juvenile steelhead, and steelhead spawning and rearing, (9) a description of the specific field methods that will be used to quantify the response variables and evaluate the identified hypotheses, (10) a description of the field-sampling schedules for each of the response variables and specific hypotheses, and (11) the analytical methods and inferential models that will be used to evaluate or test specific hypotheses. Specific details of various aspects of this plan, including schedules, shall be developed by the Licensee in cooperation with and agreement from NMFS prior to implementation of this plan. The Licensee shall be responsible for funding and implementing this plan. No later than 30 days following the date of NMFS' letter commenting on the implementation and draft effectiveness-monitoring plan, the Licensee shall submit to NMFS (at the foregoing address) for review and potential agreement a final effectiveness-monitoring plan that addresses NMFS' comments. The Licensee must receive final NMFS agreement for the final effectiveness-monitoring plan prior to implementing the final effectiveness-monitoring plan. Upon receipt of final NMFS agreement on the plan, the Licensee shall commence implementing the final effectiveness-monitoring plan as agreed upon by NMFS in accordance with the schedules provided therein. The Licensee shall provide to NMFS (at the foregoing address) all raw data (in electronic and hardcopy formats) that is collected as part of the effectiveness-monitoring task. The Licensee

shall prepare and submit to NMFS (at the foregoing address) annual reports that detail the findings from the effectiveness monitoring.

- (c) **Adaptive management.** The Licensee shall prepare a draft plan that details an adaptive-management plan for the water releases necessary to provide essential habitat functions to support unimpeded migration of adult and juvenile steelhead, and sites of rearing and spawning for steelhead, and submit this plan to NMFS' Southwest Regional Office (501 W. Ocean Blvd., Suite 4200, Long Beach, California 90802) for review and potential agreement no later than 90 days after the Commission's issuance of the project license to the Licensee. The Licensee shall develop this adaptive management plan for operation of Santa Felicia Dam and all related appurtenances for the principal purpose of addressing uncertainties related to the water-release schedules. The uncertainties are expected to generally involve the appropriateness of the water-release schedules for providing essential habitat functions for growth and survival of steelhead in Piru Creek downstream of Santa Felicia Dam, creating and maintaining suitable spawning habitat in the creek downstream of the dam, attracting adult steelhead into Piru Creek downstream of Santa Felicia Dam, and facilitating migration of adult and juvenile steelhead through the mainstem Santa Clara River (downstream of the confluence with Piru Creek) and Piru Creek downstream of Santa Felicia Dam. To address these uncertainties, the Licensee's adaptive-management plan shall: (1) identify all of the uncertainties and the questions that need to be addressed to resolve each uncertainty, (2) identify biological goals and objectives for each uncertainty, (3) define and require the implementation of a monitoring program that is able to detect the necessary information to answer questions related to resolving uncertainty (note that aspects of the effectiveness-monitoring task may satisfy this specific requirement), and (4) define and implement a protocol that will respond to new information or changing conditions, detect and reconcile deficiencies or problems in a timely manner, and incorporate feedback loops that link implementation and monitoring to a decision-making process that results in appropriate changes in operations to benefit steelhead and their habitat. Specific details of various aspects of this plan, including schedules, shall be developed by the Licensee in cooperation with and agreement from NMFS prior to implementation of this plan. The Licensee shall be responsible for funding and implementing this plan. No later than 30 days following the date of NMFS' letter commenting on this plan, the Licensee shall submit to NMFS (at the foregoing address) for review and potential agreement a final plan that addresses NMFS' comments. The Licensee must receive final NMFS agreement for the final plan prior to implementing the final plan. Upon receipt of final NMFS agreement, the Licensee shall commence implementation of the final plan as agreed upon by NMFS in accordance with the schedules provided therein.
3. The Licensee shall provide passage of steelhead at or around Santa Felicia Dam, or other suitable alternative to passage. Prior to implementing this action, the Licensee shall implement a plan after receiving written agreement on the plan from NMFS to assess the feasibility of providing passage of adult and juvenile steelhead around or over Santa Felicia Dam. The approach to assess feasibility and implement a preferred alternative

shall involve five principal steps: preparation and implementation of a plan that will guide the conduct of the steelhead-passage feasibility assessment, implementation of the assessment of steelhead-passage feasibility according to the plan, preparation of a steelhead-passage feasibility report, development of criteria to guide implementation timing of the preferred alternative, and implementation of the preferred alternative. These steps are described more fully as follows.

(a) Preparation and implementation of a plan that will guide the conduct of the steelhead-passage feasibility assessment. The Licensee shall fund and prepare a plan that will guide the conduct of the steelhead-passage feasibility assessment and submit this plan to NMFS' Southwest Regional Office (501 W. Ocean Blvd., Suite 4200, Long Beach, California 90802) for review no later than 8 months after the Commission's issuance of the license to the Licensee. The Licensee must receive written NMFS agreement for this plan prior to implementing the plan. The purpose of this plan is to describe the methods and schedules that will be used to guide the conduct and completion of the assessment of the steelhead-passage feasibility. To develop the plan, the Licensee shall comply with the following: (1) no later than 60 days after the Commission's issuance of the license to the Licensee, the Licensee shall convene at least one meeting with NMFS and the California Department of Fish and Game (interagency meeting) for the purposes of outlining the details and elements that will form the basis of the plan, and defining schedules, including a schedule for submitting the draft steelhead-passage feasibility report to NMFS in accordance with reasonable and prudent alternative 3(c); (2) the Licensee shall assemble and develop the information obtained from the interagency meeting to produce the draft plan for guiding the conduct of the steelhead-passage feasibility assessment; and (3) this plan shall include (A) a clear statement of objectives to guide the conduct of the assessment of the steelhead-passage feasibility, (B) a clear description of science-based investigations of steelhead behavior, ecology, and habitat requirements (to inform the assessment of steelhead-passage feasibility) as well as an analysis of the full range of physical steelhead-passage alternatives (volitional and non-volitional) and alternatives to steelhead passage, and engineering and cost analyses, (C) the requirement to convene a panel of professional technical fishery biologists, fish-passage biologists, and fish-passage engineers with expertise in the evaluation and design of fish passage at dams, who will participate in the assessment of steelhead-passage feasibility at Santa Felicia Dam, (D) a clear description of the specific methods that will be used to perform the various tasks related to the assessment of the steelhead-passage feasibility, including objective decision criteria for judging *feasibility*⁵⁹ in accordance with the information obtained

⁵⁹ Because United recently expressed concern regarding "the lack of sideboards" to guide the economic aspect of the feasibility study (pers. comm., J. Dickenson, United Water Conservation District, April 15, 2008), we here reiterate that regulations (50 CFR §402.02) implementing section 7 of the ESA in part define reasonable and prudent alternatives as alternative actions identified during formal consultation that "...are economically and technically feasible." We therefore expect that economic consideration will be included in the feasibility study that is required in this reasonable and prudent alternative.

through reasonable and prudent alternative 3(a)(3)(B), (E) task schedules and milestones to monitor and track performance of the assessment of the steelhead-passage feasibility over time, and (F) a contingency program to effectively address and resolve unforeseen circumstances in a timely manner.

- (b) Implementation of the assessment of steelhead-passage feasibility.** Upon receipt of NMFS' written agreement of the plan as provided in reasonable and prudent alternative 3(a), the Licensee shall conduct and complete the agreed-upon assessment of steelhead-passage feasibility in strict conformity as set forth in the plan developed in accordance with reasonable and prudent alternative 3(a). The Licensee shall be responsible for funding and completing the assessment of steelhead-passage feasibility.
- (c) Preparation of a steelhead-passage feasibility report.** Within three years and eight months from the date of the Commission's issuance of the project license to the Licensee, the Licensee shall prepare and submit a draft feasibility report to NMFS' Southwest Regional Office (501 W. Ocean Blvd., Suite 4200, Long Beach, California 90802) for review and potential written agreement from NMFS. The steelhead-passage feasibility report shall (1) describe the findings obtained from the assessment of the steelhead-passage feasibility and all related studies (see reasonable and prudent alternative 3a and 3b), (2) identify the preferred long-term solution to restore steelhead access to and from historical steelhead spawning and rearing habitats upstream of Santa Felicia Dam (if volitional steelhead passage is determined to be infeasible, then the study shall consider non-volitional steelhead passage; if non-volitional passage is determined to be infeasible, then the Licensee shall consult with NMFS to develop an alternative to steelhead passage [such as an habitat-compensation plan based on measurable biological criteria to minimize the effects of the loss of habitat upstream of Santa Felicia Dam on steelhead], which will be presented in the report), (3) include a plan and define schedules for implementing and completing the executable element(s) of the feasibility report, including the preferred long-term fish-passage solution once criteria are triggered under reasonable and prudent alternative 3(d) or alternative to steelhead passage, and (4) describe the environmental and regulatory permits and approvals that will be needed to implement the executable elements of the feasibility report. No later than 60 days following the date of NMFS' letter commenting on the draft feasibility report, the Licensee shall submit to NMFS (at the foregoing address) for review a final feasibility report and the selection of any preferred alternative, with a final engineering and cost analyses, that addresses NMFS' comments. The Licensee must receive written final NMFS agreement for the final feasibility report (including the preferred alternative) prior to implementation of any long-term passage solution, or alternative to steelhead passage. Upon receipt of written final NMFS agreement on the steelhead-passage feasibility report, and if the preferred alternative is an alternative to steelhead passage, the Licensee shall commence implementation of the preferred alternative in accordance with the schedules(s) defined in the feasibility report as agreed upon by NMFS (i.e., the Licensee shall skip reasonable and prudent alternative 3(d)). Upon receipt of written final NMFS agreement on the steelhead-feasibility report, and if the preferred

alternative involves steelhead passage, the Licensee shall commence development of criteria in accordance with reasonable and prudent alternative 3(d).

- (d) Development of criteria to guide implementation timing of the preferred alternative.** If steelhead passage is identified as the preferred alternative in the final steelhead-passage feasibility report agreed upon by NMFS, the Licensee shall develop in coordination with NMFS and the California Department of Fish and Game measurable biological criteria to trigger implementation of the preferred alternative. The Licensee shall submit Licensee's draft criteria to NMFS (at the foregoing address) no later than 6 months of the date on which the Licensee receives written final NMFS agreement on the steelhead-passage feasibility report. No later than 30 days following the date of NMFS' letter commenting on the draft trigger criteria (initial letter), the Licensee shall submit to NMFS (at the foregoing address) for review the final trigger criteria that addresses NMFS' comments. Upon receipt of written final NMFS agreement on the final trigger criteria, the Licensee shall commence implementation of the preferred alternative in accordance with reasonable and prudent alternative 3(e).
- (e) Implementation of the preferred alternative.** Upon receipt of written final NMFS agreement on the steelhead-passage feasibility report, and if the preferred alternative is an alternative to steelhead passage, the Licensee shall commence and proceed with implementation of the preferred alternative in accordance with the schedule(s) defined in the feasibility report as agreed upon by NMFS. If steelhead passage is identified as the preferred alternative in the final steelhead-passage feasibility report agreed upon by NMFS, the Licensee shall commence implementation of the preferred alternative when the triggers identified in reasonable and prudent alternative 3(d) above are reached, and proceed with implementation in accordance with the schedule(s) defined in the feasibility report as agreed upon by NMFS. The Licensee shall be responsible for funding and implementing the preferred alternative whether it involves steelhead passage or an alternative to steelhead passage.

The elements of the reasonable and prudent alternative can be implemented in a manner consistent with the intended purpose of the action. NMFS' approach to collaborating with United on development of the water-release schedules (and water quantities specified therein) is not expected to result in water-release schedules that preclude United from storing and subsequently releasing water for groundwater recharge and agricultural users, or from generating power. With the proper consideration that is expected to result from development of the plan under reasonable and prudent alternative 2(a), aspects of the proposed water releases of Exhibit A of United's January 11, 2008, letter are expected to serve as a meaningful basis for ensuring essential habitat functions for endangered steelhead in Piru Creek and the Santa Clara River downstream of Santa Felicia Dam.

The elements can be implemented consistent with the scope of the action agency's legal authority and jurisdiction. Under the FPA, and when issuing the new license for the proposed action, the Commission must ensure the proposed action is best adapted to a comprehensive plan for, among other reasons, the adequate protection, mitigation, and enhancement of fish and wildlife, including related spawning grounds and habitat. In addition, the FPA requires that the

license include conditions for adequately and equitably protecting, mitigating damages to and enhancing fish and wildlife, including related spawning grounds and habitat. The proposed action is inadequate for the protection, mitigation of damages to and enhancement of the endangered Southern California steelhead DPS, including related spawning grounds and habitat, for the same reasons that this biological opinion has concluded that the proposed action is likely to jeopardize the continued existence of the endangered Southern California DPS of steelhead, and is likely to destroy or adversely modify critical habitat for this species.

The elements of the reasonable and prudent alternative are expected to be economically and technically feasible because, in part, water releases are often undertaken at dams for the protection and conservation of fish species and dams are commonly made passable for fish (e.g., Colt and White 1991, Cada and Sale 1993, Smith *et al.* 2000). As part of the steelhead-passage feasibility study, which is a required sub-element of this reasonable and prudent alternative, further consideration will be given to the economic and technical feasibility of restoring steelhead access to historical spawning and rearing habitats upstream of Santa Felicia Dam. Therefore, the feasibility study will include more specific information regarding the economic and technical feasibility of the reasonable and prudent alternative.

The elements of the reasonable and prudent alternative 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 this species. Chief among these aspects are the adverse effects of habitat loss and fragmentation due to Santa Felicia Dam and its continued operation, habitat degradation (e.g., geomorphic effects) owing to operation of Santa Felicia Dam, and the lack of water releases from the dam to provide essential habitat functions for adult and juvenile steelhead in Piru Creek and the Santa Clara River. A summary of how the three sub-elements contribute to avoiding jeopardy of endangered steelhead and adverse modification or destruction of critical habitat for this species is as follows:

1. The first sub-element of the reasonable and prudent alternative is essential to address the degraded condition and characteristics of Piru Creek downstream of Santa Felicia Dam through remediation of habitat damages caused by the continued operation of Santa Felicia Dam. The reasonable and prudent alternative requires that the effects of the proposed action on channel-bed morphology, and substrate characteristics and condition would be remedied, resulting in increased habitat quality and quantity in Piru Creek for endangered steelhead. The anticipated ecological benefits of the physical improvements to the channel bed and banks in Piru Creek downstream of Santa Felicia Dam cannot be fully realized without ecologically meaningful water releases from the dam into Piru Creek.
2. The second sub-element of the reasonable and prudent alternative is essential to address the lack of water releases that provide essential habitat features necessary to sustain steelhead life history and habitat requirements downstream of Santa Felicia Dam in Piru Creek and the Santa Clara River downstream of the confluence with Piru Creek. The reasonable and prudent alternative requires implementation and maintenance of meaningful water releases to support unimpeded migration of adult and juvenile steelhead, and sites of rearing and spawning for steelhead throughout Piru Creek and the Santa Clara River downstream of the confluence with Piru Creek. The first and second

sub-elements of the reasonable and prudent alternative (i.e., geomorphic effects and water releases) are insufficient by themselves to fully avoid jeopardy to the species until passage to historical habitats is granted because, for example, these specific sub-elements cannot account for the major ecological effects on the species that are related to habitat fragmentation and loss, which the proposed action is projected to perpetuate for the term of the license when implemented.

3. Therefore, the third sub-element of the reasonable and prudent alternative is essential to address the adverse effects of habitat loss and fragmentation due to continued operation of Santa Felicia Dam under the proposed action. This sub-element requires migration of adult and juvenile steelhead to and from historical spawning and rearing habitats upstream of Santa Felicia Dam and the Pacific Ocean, or compensation for the lost and fragmented habitat if passage is determined to be infeasible. The reasonable and prudent alternative requires the conduct of a reliable steelhead-passage feasibility study, and requires implementation of one or more alternatives if volitional passage of steelhead is determined to be infeasible. While the biological opinion makes clear that migration of adult and juvenile steelhead to and from historical spawning and rearing habitats upstream of Santa Felicia Dam is necessary to fully avoid jeopardy to the species, NMFS concludes the principal benefits of restoring steelhead migration, specifically migration of *adult* steelhead, to and from historical spawning habitat and the ocean will be realized when adult steelhead once again begin accessing Piru Creek from the Santa Clara River. Implementation of the second sub-element of the reasonable and prudent alternative will be necessary to provide for such migration of adult steelhead to Piru Creek, though we envision that some time will pass before steelhead “respond” to the water releases and begin returning to Piru Creek. Therefore, we conclude that the amount of time for implementing the preferred alternative would not result in jeopardy to the species.

Overall, the elements of the reasonable and prudent alternatives are expected to promote an increase in the amount and extent of suitable habitat for adult and juvenile steelhead, improve the functional value of habitat for steelhead, and lead to increased numbers of steelhead in the Piru Creek sub-basin and the Santa Clara River watershed. Accordingly, NMFS believes the elements of the reasonable and prudent alternative would avoid the likelihood of jeopardizing the continued existence of a listed species or resulting in the destruction or adverse modification of critical habitat. Because this biological opinion has determined the proposed action is likely to jeopardize the continued existence of the endangered Southern California steelhead DPS, and is likely to destroy or adversely modify critical habitat for this species, the Commission is required to notify NMFS of its final decision on the implementation of the reasonable and prudent alternative.

In their comments on the draft biological opinion, the Commission stated that NMFS’ reasonable and prudent alternative closely resembles the Commission’s recommended alternative (Federal Energy Regulatory Commission 2008). Consequently, the Commission questioned the basis for NMFS’ conclusion that the proposed action is likely to jeopardize the continued existence of the endangered Southern California steelhead DPS, and is likely to destroy or adversely modify critical habitat for this species. In consideration of the Commission’s recommended alternative, NMFS recognized that the Commission made an effort to minimize effects of the proposed

action on endangered steelhead and critical habitat for this species. Upon careful consideration of the details of the recommended alternative, however, NMFS concluded the alternative did not possess specific elements that would be reasonably certain to lead to either avoidance or a reduction of adverse effects, and in many instances the recommended alternative would not preclude the proposed action from perpetuating certain existing conditions, which are clearly not favorable for the long-term survival or recovery of this endangered species (see Table 9-1 for a comparison of certain aspects of the Commission's recommended alternative and the reasonable and prudent alternative).

Table 9-1.—Summary comparison of NMFS' reasonable and prudent alternative with the Commission's recommended alternative. Additional NMFS comments on the Commission's recommended alternative are presented in the section "Effects of the Proposed Action" of this biological opinion.

Subject	NMFS' reasonable and prudent alternative	Commission's recommended alternative
Geomorphic effects	Ensures that effects of the proposed action on the channel-bed morphology, and substrate characteristics and condition would be effectively minimized. Requires identification and implementation of those specific habitat improvements that are necessary to minimize effects of the proposed action on the physical creek environment, monitoring performance of the improvements over time, and further improvements should the monitoring results indicate such improvements are warranted.	The flushing flow trigger plan lacks the ability to minimize several of the geomorphic effects that are expected from the proposed action. The plan is intended to only address accumulations of fine sediment, not minimize the effects of the coarsening of the channel bed, channel incision, and habitat simplification that have been noted and are expected to extend into the future under the proposed action.
Water releases	Requires implementation of water releases necessary to support unimpeded migration of adult and juvenile steelhead, and sites of rearing and spawning for steelhead in Piru Creek downstream of Santa Felicia Dam and in the Santa Clara River downstream of the confluence with Piru Creek. Monitoring is required to assess the ecological effectiveness of the water releases, and an adaptive management plan is required to address uncertainty related to the appropriateness of the water-release schedules for providing essential habitat functions for steelhead.	The fish-passage corridor connectivity study, the groundwater and surface water flow monitoring program, and the flow-management and enhancement plan generally propose to "identify" and "evaluate" those measures that <i>could</i> be implemented. No meaningful water release is proposed that would be expected to restore and maintain essential habitat functions for the life history and habitat requirements of endangered steelhead in Piru Creek or the Santa Clara River downstream of the confluence with Piru Creek.
Fish passage	Ensures that ecological effects related to habitat loss and fragmentation, and blocking steelhead from historical spawning and rearing habitat upstream of the dam, would be effectively minimized. Outlines the provisions and incremental steps for conducting a reliable fish-passage feasibility study, and requires the identification and implementation of alternatives to volitional fish passage if such passage is determined to be infeasible. Alternatives to volitional fish passage involve non-volitional passage and habitat compensation for the amount of habitat that is lost due to the continued impassable presence of Santa Felicia Dam due to the proposed action.	The fish passage corridor connectivity study (a) focuses only on habitats downstream of Santa Felicia Dam, and (b) only proposes to "assess" fish-passage alternatives, opportunities, and constraints relative to the migration corridor, but does nothing to address the ecological effects due to habitat loss and fragmentation owing to the proposed action. The final EA does not constitute a reliable fish-passage feasibility study, and there is no information to indicate a reliable study was in fact performed. NMFS believes a reliable fish-passage feasibility study should include: (a) an outline of an overall course of study at the beginning of the investigation, (b) acquisition of primary data, (c) familiarize staff with project site, (d) identify possible alternatives, (e) analyze and rank top alternatives, (f) preliminary design of top alternatives, and (g) peer review project after critical decision steps.

INCIDENTAL TAKE STATEMENT

Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or to attempt to engage in any such conduct. Harm is further defined by NMFS to include significant habitat modification or degradation which actually kills or injures fish or wildlife by significantly impairing essential behavioral patterns, including breeding, spawning, rearing, migrating, feeding, or sheltering. Incidental take is defined as take of listed animal species that results from, but is not the purpose of, carrying out an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not the purpose of the agency action is not considered a prohibited taking provided that such taking is in compliance with the terms and conditions of this incidental take statement.

The measures described below are non-discretionary, must be undertaken by the Commission for the exemption in section 7(o)(2) to apply, and assume the reasonable and prudent alternative will be implemented. The Commission has a continuing duty to regulate the activity covered by this incidental take statement. If the Commission (1) fails to assume and implement the terms and conditions or (2) fails to adhere to the terms and conditions of this incidental take statement through enforceable terms that are added to the license, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, the Commission must report the progress of the action and its impact on the species to NMFS as specified in the incidental take statement (50 CFR §402.14(i)(3)).

A. Amount and Extent of Take

With implementation of the reasonable and prudent alternative, NMFS expects execution of the proposed action on Piru Creek, Los Angeles County, California, will result in the incidental take of the endangered Southern California DPS of steelhead. The future plans that are required by the reasonable and prudent alternative to guide implementation of the sub-elements, and which once implemented are expected to cause take of steelhead, will be prepared after the Commission issues the license to the Licensee. While we do anticipate that take would result from implementation of such future plans, we do not know the specifics of the plans and therefore NMFS does not currently have available the information needed to reliably estimate the amount or extent of take of adult and juvenile steelhead. When such information becomes available, NMFS will amend this incidental take statement to specifically identify the amount and extent of take and any additional reasonable and prudent measures and terms and conditions that may be necessary to minimize and monitor incidental take of steelhead. We do not expect that injury or death of steelhead is likely to result from implementation of these plans because these plans will include precautionary measures to reduce the likelihood that steelhead injury and death would occur, and the expected methods for collecting and relocating steelhead possess a low risk of injuring or killing steelhead, particularly when precautionary measures are integrated with such methods. NMFS anticipates the following type of incidental take:

1. Collect adult and juvenile steelhead in Piru Creek and the Santa Clara River downstream of Santa Felicia Dam as part of monitoring the effectiveness of the water releases on the this species (reasonable and prudent alternative 2b);

2. Collect and then relocate juvenile steelhead as part of construction activities to minimize geomorphic effects of operation of Santa Felicia Dam on Piru Creek and improve habitat quality and quantity in Piru Creek downstream of Santa Felicia Dam (reasonable and prudent alternative 1c);
3. Collect and then relocate adult and juvenile steelhead in the Piru Creek sub-basin and the Santa Clara River as part of field investigations into the ecology and behavior of steelhead for informing the fish-passage feasibility study (reasonable and prudent alternative 3a); and,
4. If non-volitional steelhead passage is identified as the preferred alternative as required in reasonable and prudent alternative 3c, collect and then relocate adult and juvenile steelhead in the Piru Creek sub-basin and the Santa Clara River to restore steelhead passage to historical spawning or rearing habitat upstream of Santa Felicia Dam.

NMFS has enough information available to indicate that the proposed action with implementation of the reasonable and prudent alternative is likely to displace and strand steelhead. NMFS anticipates the proposed action may result in the injury or death of 10 adult steelhead and 1000 juvenile steelhead in Piru Creek downstream of Santa Felicia Dam and in the Santa Clara River downstream of the confluence with Piru Creek. This level of take was estimated from the information available to NMFS, expectations for the action area and effects of the proposed action, and knowledge of the ecology and behavior of steelhead. We recognize that this take estimate may be revised in the future, depending on the findings obtained from the monitoring that is required in this incidental take statement and the reasonable and prudent alternative. Given the expected frequency of take during the life of the proposed action, as well as the expectation that implementation of all the sub-elements of the reasonable and prudent alternative will result in increased abundance of this species and habitat, including critical habitat, in the Santa Clara River watershed, NMFS determined the amount of estimated incidental take is not likely to result in jeopardy to the species or destruction or adverse modification of critical habitat for this species. Reasonable and prudent measures to minimize the number of displaced and stranded steelhead due to the proposed action are appropriate.

B. Effect of Take

In the accompanying Biological Opinion, NMFS concludes the anticipated level of take associated with the proposed action is not likely to jeopardize the continued existence of the endangered Southern California DPS of steelhead when all the sub-elements of the reasonable and prudent alternative are implemented.

C. Reasonable and Prudent Measures

NMFS believes the following reasonable and prudent measures are necessary and appropriate to minimize and monitor incidental take of steelhead.

1. Implement a water-release ramping rate for the purpose of minimizing steelhead stranding in Piru Creek downstream of Santa Felicia Dam.
2. Monitor the effectiveness of the ramping rate and number, size, and disposition of steelhead displaced and stranded in Piru Creek downstream of Santa Felicia Dam and in the Santa Clara River downstream of the confluence with Piru Creek.

We note that because operation of Santa Felicia Dam affects discharge in the Santa Clara River, NMFS believes that operational criteria deliberately crafted to minimize steelhead displacement and stranding in Piru Creek would as well minimize steelhead displacement and stranding in the Santa Clara River downstream of the confluence with Piru Creek. This is why the reasonable and prudent measure pertains solely to Piru Creek downstream of Santa Felicia Dam.

D. Terms and Conditions

In order to be exempt from the take prohibitions of the ESA, the Commission must comply with the following terms and conditions, which implement the reasonable and prudent measures described above. These terms and conditions are non-discretionary:

1. The following terms and conditions implement reasonable and prudent measure No. 1.
 - A. The Licensee shall implement a water-release ramping rate of 2 inches/hour to guide increases and decreases of water releases from Santa Felicia Dam to Piru Creek for the purpose of minimizing the likelihood of displacing and stranding steelhead in Piru Creek downstream of Santa Felicia Dam.
 - B. The water-release ramping rate specified in term and condition 1A shall be based on an empirical relationship between discharge and water depth and velocity representing Piru Creek downstream of Santa Felicia Dam. To this end, the Licensee shall prepare a draft plan for developing this empirical relationship for Piru Creek to NMFS' Southwest Regional Office (501 W. Ocean Blvd., Suite 4200, Long Beach, California 90802) for review and potential agreement within 120 days from the date of the Commission's issuance of the project license to the Licensee. This plan shall include: (1) a description of the field sampling methods that will be used to collect the necessary field data for developing the discharge-depth (and water velocity) relationship, (2) the number of sampling locations and number of samples representing each location in Piru Creek, and the different magnitudes of creek discharge the collected data will represent, (3) the requirement that the sampling locations will be selected randomly, (4) a description of the sampling schedule, (5) a description of the analytical methods that will be used to develop the discharge-depth relationship, and (6) a requirement that the findings obtained from implementation of the plan that is required of this term and condition shall be provided to NMFS (at the foregoing address). Specific details of various elements of the plan that is required of this term and condition, including schedules, will be developed by the Licensee in cooperation with and agreement from NMFS prior to implementation of the plan. The Licensee shall be responsible for funding and implementing the plan. No later than 60 days following the date of NMFS' letter commenting on the draft plan as required in this term and condition, the Licensee shall submit to NMFS (at the foregoing address) for review and potential agreement a final plan that addresses NMFS' comments. The Licensee must receive final NMFS agreement for the plan prior to implementing the plan. Upon receipt of final NMFS agreement on the plan, the Licensee shall commence implementation of the final

plan as agreed upon by NMFS in accordance with the schedules and methods provided therein.

2. The following term and condition implement reasonable and prudent measure No. 2.
 - A. The Licensee shall prepare and implement a plan to evaluate the effectiveness of the ramping rate specified in term and condition 1A for minimizing displacement and stranding of steelhead in Piru Creek downstream of Santa Felicia Dam and the Santa Clara River downstream of the confluence with Piru Creek. This plan shall: (1) specify the field sampling program, including specific methods and sampling schedules, to evaluate the effectiveness of the ramping rate for minimizing the likelihood of stranding and displacing steelhead, (2) describe the methods to monitor the number, size, and disposition of displaced and stranded steelhead, (3) require that the ramping rate shall be modified in collaboration with NMFS should the findings of the field sampling program indicate the ramping rate is not minimizing steelhead stranding or displacement, and (4) require the preparation and submittal of reports to NMFS that detail the findings obtained from monitoring the effectiveness of the ramping rate and steelhead stranding and displacement. Specific details of various elements of this plan, including schedules and content of monitoring or findings reports, will be developed by the Licensee in cooperation with and agreement from NMFS prior to implementation of this plan. The Licensee shall be responsible for funding and implementing the plan. No later than 60 days following the date of NMFS' letter commenting on the draft plan, the Licensee shall submit to NMFS (at the foregoing address) for review and potential agreement a final plan that addresses NMFS' comments. The Licensee must receive final NMFS agreement for the plan prior to implementing the plan. Upon receipt of final NMFS agreement on the plan, the Licensee shall commence implementation of the final plan as agreed upon by NMFS in accordance with the schedules provided therein.

REINITIATION OF FORMAL CONSULTATION

As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded, (2) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered in this opinion, (3) the action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion, or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, formal consultation shall be reinitiated immediately.

Document Content(s)

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