

UNITED STATES OF AMERICA 114 FERC ¶62,162
FEDERAL ENERGY REGULATORY COMMISSION

South San Joaquin Irrigation and Oakdale Irrigation Districts

Project No. 2067-020

ORDER ISSUING NEW LICENSE
February 16, 2006

INTRODUCTION

1. On December 23, 2002, South San Joaquin Irrigation District and Oakdale Irrigation District, cooperatively operating as the Tri-Dam Project (Tri-Dam or licensee) filed an application for a new license, pursuant to sections 4(e) and 15 of the Federal Power Act (FPA),¹ to continue operation and maintenance of the Tulloch Hydroelectric Project No. 2067. The project's authorized capacity being licensed is 24.1 megawatts (MW). The Tulloch Hydroelectric Project is located on the mainstem of the Stanislaus River in Tuolumne and Calaveras Counties, California.² The project occupies 108 acres of lands of the United States, of which 80 acres are managed by the U.S. Bureau of Reclamation (Reclamation) and 28 acres are managed by the U.S. Bureau of Land Management (BLM). As discussed below, I am issuing a new license for the project.

BACKGROUND

2. The current license for the project, issued on August 28, 1951,³ expired on December 31, 2004. Since then, Tri-Dam has operated the project under an annual license pending the disposition of its new license application.

3. On January 2, 2004, the Commission issued a public notice accepting the application and requesting motions to intervene, protests, comments, recommendations, terms and conditions, and prescriptions. The following entities filed timely, unopposed motions to intervene: California State Water Resources Control Board (Water Board), Friends of the River, Central Sierra Environmental Resources Center, Trout Unlimited,

¹ 16 U.S.C §§ 797(e) and 808, respectively.

² The Tulloch Project is located on the Stanislaus River, a tributary to the San Joaquin River, a stretch of the river the Commission found to be a navigable waterway of the United States. 10 FPC 1278 (1951).

³ 10 FPC 1278 (1951) and 14 FPC 567 (1955).

County of Tuolumne, Tuolumne Public Power Agency, Tuolumne Utilities District, and Pacific Gas and Electric Company (PG&E).⁴ Untimely motions to intervene were filed by Calaveras Public Power Agency and County of Calaveras. These late interventions were granted in a notice issued July 18, 2005. None of the intervenors oppose the project. Comments in response to the Commission's notice were filed by the U.S. Department of the Interior (Interior) and Michael J. Gamerl.

4. On September 30, 2004, Commission staff issued for comment a multi-project draft environmental impact statement (EIS)⁵ that included the evaluation of the environmental effects from Tri-Dam's proposal and alternatives for relicensing the Tulloch Project. Comments were due by December 7, 2004. In addition, the Commission accepted oral testimony on the draft EIS at two meetings held on November 16, 2004, in Sonora, California. Commission staff considered all oral and written comments received in preparing the final EIS, which was issued on March 1, 2005. All motions to intervene, comments, and recommendations have been fully considered in determining whether, and under what conditions to issue this license.

PROJECT DESCRIPTION

5. The existing Tulloch Project is composed of a single development and has an installed capacity of 17.1 MW. The Tulloch Project includes: (1) the 1,260-acre Tulloch reservoir, with a gross storage capacity of 66,968 acre-feet at a normal maximum elevation of 510 feet (USGS datum)⁶ and a usable storage capacity of 52,139 acre-feet; (2) the Tulloch dam, a 200-foot-high, 1,600-foot-long concrete gravity dam with a 325-foot-long spillway controlled by seven 40-foot by 30-foot radial gates and two 66-inch-diameter low-level outlets; (3) two 114-inch-diameter, 157-foot-long riveted steel penstocks embedded in concrete with a total maximum hydraulic capacity of 1,780 cubic feet per second (cfs); (4) the Tulloch powerhouse, a 100-foot by 52-foot concrete structure; (6) two generating units with a total capacity of 17.1 MW, each driven by a vertical-axis Francis turbine with a total maximum hydraulic capacity of 1,800 cfs; (7) the Tulloch switchyard; and (8) other appurtenant facilities. There is no associated transmission line. The Tulloch Project is connected to PG&E's Melones-Riverbank 115 kilovolt (kV) line.

⁴ Timely unopposed motions to intervene are granted by operation of Rule 214 of the Commission's Rules of Practice and Procedure. 18 C.F.R. § 385.214 (2005).

⁵ EIS for the Stanislaus River Projects, FERC Nos. 2130, 2005, 2118, and 2067.

⁶ All water surface elevations are in USGS vertical datum.

6. The Tulloch Project is located on the main stem of the Stanislaus River in the foothills of the Sierra Nevada Mountain Range within the counties of Tuolumne and Calaveras, California. The Tulloch reservoir is immediately downstream of Reclamation's New Melones storage reservoir⁷ and acts as an afterbay for the much larger New Melones reservoir. Releases from Tulloch reservoir flow immediately into the Goodwin reservoir.⁸ Substantial water diversions for irrigation and other uses are made at Goodwin dam.

7. An agreement between Reclamation and Tri-Dam, dated August 30, 1988, drives the operation of the Tulloch Project so that Reclamation can meet its downstream flow requirements. The Tulloch Project operates primarily in a run-of-the-river mode, with inflow to and releases from the project controlled by Reclamation. As a result, seasonal operation is limited to maintaining a maximum reservoir level of 509.5 feet between March 20 and November 1, and a level of 501.5 feet between November 2 and March 19. Operational demands imposed by Reclamation generally allow Tulloch reservoir to remain at full or nearly full pool for much of the year, although substantial drawdowns have occasionally occurred.

8. The project boundary incorporates lands occupied by project structures and access roads.⁹ There are 1,638 acres of land within the project boundary, the majority of which is privately owned. There are 108 acres of federally owned land: 80 acres managed by Reclamation and 28 acres managed by BLM. Tri-Dam owns 419 acres. Land within the project boundary generally includes all land within five vertical feet of the normal maximum water surface elevation of 510 feet. This includes virtually no horizontal distance from the normal full pool elevation in some areas, where landowners have installed bulkheads, but more typically provides from about 10 to 30 feet of horizontal distance from the waters edge.

⁷ The New Melones reservoir is a part of Reclamation's Federal Central Valley Project and discharges directly into Tulloch reservoir.

⁸ The Goodwin reservoir is used solely for irrigation purposes and is owned and operated by Tri-Dam and the Stockton East Water District.

⁹ Included within the project boundary are four privately owned non-project recreational facilities that provide public access to Lake Tulloch: (1) the South Shore Campground; (2) Lake Tulloch Resort; (3) Drifters Reef; and (4) Holman Marina.

9. Two new project facilities are proposed. A new 7.0-MW turbine/generator and powerhouse would be located on a low-level outlet of Tulloch dam, and a new recreational day-use area would be located at a site to be determined.

10. Tri-Dam proposes to continue to operate the project as it has historically been operated, but with additional environmental measures. As part of these measures, Tri-Dam will monitor shoreline erosion (and take necessary corrective actions), establish a reservoir management group, and implement numerous environmental management plans. When the new 7.0-MW generator is completed, a slight operational modification would occur; some of the water that now spills over the Tulloch dam would pass through the new turbine/generator.

WATER QUALITY CERTIFICATION

11. Under section 401(a)(1) of the Clean Water Act (CWA),¹⁰ the Commission may not issue a license for a hydroelectric project unless the state water quality certifying agency either has issued water quality certification (WQC) for the project or has waived certification by failing to act on a request for certification within a reasonable period of time, not to exceed one year. Section 401(d) of the CWA provides that the certification shall become a condition on any federal license that authorizes construction or operation of the project.¹¹

12. On December 10, 2002, Tri-Dam applied to the Water Board for certification for the Tulloch Project. Each year since that date, Tri-Dam has withdrawn and refiled its application. On September 16, 2005, the Water Board issued certification for the Tulloch Project that includes 17 conditions, which are set forth in Appendix A of this order and incorporated into the license (see ordering paragraph D). This certification includes requirements for erosion control, protection of water quality during construction activities, and water surface elevation. Article 401 requires the licensee to file, for Commission approval, plans required by the certification conditions.

FISHWAY PRESCRIPTIONS

¹⁰ 33 U.S.C. § 1341(a)(1).

¹¹ 33 U.S.C. § 1341(d).

13. Section 18 of the FPA,¹² 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.

14. By letter dated March 1, 2004, Interior requested that the Commission reserve authority to prescribe fish passage facilities for the project. Consistent with the Commission's policy, Article 404 of this license reserves the Commission's authority to require fishways that may be prescribed by Interior for the project.

THREATENED AND ENDANGERED SPECIES

15. Section 7(a)(2) of the Endangered Species Act of 1973 (ESA)¹³ requires federal agencies to ensure 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 their designated critical habitat.

16. The project could potentially affect five federally listed threatened species: Chinese Camp brodiaea, Layne's ragwort, California vervain, valley elderberry longhorn beetle, and bald eagle. No critical habitat would be affected. In the draft EIS, staff concluded that relicensing the project, with our recommended measures, is not likely to adversely affect the beetle and would have no effect on Chinese Camp brodiaea, Layne's ragwort, California vervain, or the bald eagle. We sought concurrence with our findings from the U.S. Fish and Wildlife Service (FWS) by letter dated October 5, 2004. The FWS concurred with our findings regarding the beetle, Chinese Camp brodiaea, Layne's ragwort, and California vervain by letter dated December 13, 2004.

17. The FWS did not concur with our finding of no effect for the bald eagle because they believe that eagles would be likely to use Tulloch reservoir during the winter. However, the FWS did conclude that the project is unlikely to adversely affect the bald eagle, and no further consultation under section 7 of the ESA was required.

18. To protect the beetle, Article 408 requires Tri-Dam to incorporate a protocol that would be consistent with current FWS conservation guidelines into regular operations and maintenance programs, and into the proposed vegetation, recreation, and standard management practices. The protocol would address the need for surveys of potential beetle

¹² 16 U.S.C. § 811.

¹³ 16 U.S.C. § 1536(a).

habitat prior to conducting or permitting ground-disturbing activities and establishment of buffer zones around potential habitat to prevent impacts.

NATIONAL HISTORIC PRESERVATION ACT ISSUES

19. The National Historic Preservation Act (NHPA), 16 U.S.C. § 470 et seq., requires federal agencies to manage cultural resources under their jurisdiction and authorizes the Secretary of Interior to maintain the National Register. Section 106 of the NHPA and its implementing regulations, 36 C.F.R. Part 800 (2004), require federal agencies to 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 to afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on the undertaking.

20. To satisfy these responsibilities, the Commission executed a Programmatic Agreement (PA) with the California State Historic Preservation Officer executed on September 21, 2005. The PA requires the licensee to prepare and implement a Historic Properties Management Plan (HPMP) for the term of any new license issued for this project. Execution of the PA demonstrates the Commission's compliance with section 106 of the NHPA. Article 412 requires the licensee to implement the PA.

RECOMMENDATIONS OF FEDERAL AND STATE FISH AND WILDLIFE AGENCIES

21. Section 10(j)(1) of the FPA,¹⁴ 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,¹⁵ to "adequately and equitably protect, mitigate damages to, and enhance fish and wildlife (including related spawning grounds and habitat)" affected by the project. Neither the FWS nor Cal Fish and Game filed section 10(j) recommendations for the Tulloch Project.

OTHER ISSUES

¹⁴ 16 U.S.C. §803(j)(1).

¹⁵ 16 U.S.C. §§ 661, *et seq.*

Project Operations Agreement

22. Operation of the Tulloch Project is driven by an agreement between Reclamation and Tri-Dam, dated August 30, 1988 (Agreement). The Agreement defines project operations for the Tulloch Project including: (1) water surface elevation of Tulloch reservoir; (2) required outflow from the project to meet Reclamation's downstream water requirements; and (3) operations necessary for flood control purposes. The Agreement also has provisions for modifying and updating any specific terms in the Agreement and dispute resolution procedures if necessary. The Agreement does not expire, alternatively it states that the Agreement will be reviewed periodically. I note that, if such a review results in changes to the Agreement, the Commission's regulations require the licensee to file an amendment application. To assure continued coordination of the Tulloch Project with Reclamations' New Melones Project throughout the term of this license, Article 402 requires Tri-Dam to operate the Tulloch Project in accordance with the terms of the Agreement.

Shoreline Erosion Monitoring Plan

23. Although WQC condition no. 1 requires Tri-Dam to submit a shoreline erosion monitoring plan, the condition only specifies a schedule for monitoring, guidelines for determining the entity responsible for corrective actions, and plans for corrective actions.

24. Tri-Dam estimates that approximately one-third of the shoreline can be characterized as erosive, and therefore subject to future erosion. Tri-Dam proposed to monitor the shoreline for erosion and take appropriate corrective actions when necessary, but did not specify that a plan would be developed. Because much of the project shoreline is privately owned, coordination of shoreline stabilization initiatives with the landowners is important to avoid conflicts. Therefore, the final EIS recommended a shoreline erosion monitoring plan be developed in consultation with the Water Board, Central Valley Regional Water Quality Control Board, Cal Fish and Game, Reclamation, Tuolumne County, and Calaveras County. In addition to the WQC requirements, the final EIS recommended that such a plan include specific implementation protocols, reporting guidelines, proposed measures to coordinate Tri-Dam's shoreline stabilization actions with affected shoreline property owners, and follow-up monitoring. Article 403 requires a shoreline erosion monitoring plan.

Vegetation Management Plan

25. The final EIS recommended that Tri-Dam develop a comprehensive vegetation management plan for management of aquatic, riparian, and terrestrial resources within the

project boundary and influenced by project operations. The final EIS concluded that this plan was necessary for protection of natural resources in a setting where rapid development has the potential to directly or indirectly degrade native plant communities and wildlife habitat. The plan addresses identification, mapping, management, and monitoring of wetlands, important wildlife areas, and noxious terrestrial and aquatic weeds. Article 405 requires a vegetation management plan.

Western Pond Turtle Management Plan

26. The final EIS supported Tri-Dam's proposal to develop a western pond turtle management plan in consultation with Cal Fish and Game. This plan would identify potential long-term monitoring and enhancement measures and help to improve habitat for turtles, despite continued reservoir fluctuations. Article 406 requires a western pond turtle management plan.

Wildlife Management Plan

27. The final EIS supported Tri-Dam's proposal to develop a wildlife management plan in consultation with Cal Fish and Game, Reclamation, BLM, Water Board, Calaveras County, Tuolumne County, and Central Sierra Environmental Resource Center. This plan would provide protection for bats, great blue herons, egrets, and osprey. Article 407 requires a wildlife management plan.

Reservoir Recreation Plan

28. The final EIS supported Tri-Dam's proposal to develop a reservoir recreation plan that provides for public day use at Tulloch reservoir. This plan includes provisions for the development of a new public day-use recreation site to be constructed within five years of license issuance. Article 409 requires a reservoir recreation plan.

Public Notification of Drawdowns

29. The final EIS supported Tri-Dam's proposal to provide a two-week notice of any planned reservoir drawdown activities to local property homeowner's associations. Furthermore, the final EIS recommended that the notification be posted at publicly accessible locations and include an estimation of the drawdown duration. Article 410 requires public notification of planned reservoir drawdowns.

Shoreline Management Plan

30. The final EIS supported Tri-Dam's proposal to implement a shoreline management plan. However, the current shoreline management plan did not address how sensitive shoreline environmental resources (such as important aquatic spawning and nursery habitat, wetlands, and waterfowl breeding and foraging sites) would be identified and protected. Therefore, the final EIS recommended that a revised plan be developed in consultation with Cal Fish and Game, FWS, Tuolumne County, Calaveras County, and representatives of local homeowner's associations. The final EIS recommended that the revised plan include an inventory of sensitive environmental resources within the project boundary, strategies for protecting these sensitive resource areas, provisions for updating the plan if necessary, and provisions for notifying private shoreline landowners regarding the importance of protecting sensitive resource areas. Article 411 requires a shoreline management plan.

ADMINISTRATIVE CONDITIONS

A. Annual Charges

31. The Commission collects annual charges from licensees for administration of the FPA. Article 201 provides for the collection of funds for administration of the FPA.

B. Exhibit Drawings

32. The Commission requires licensees to file sets of approved project drawings on microfilm and in electronic file format. Articles 202 and 203 require the filing of these drawings.

C. Headwater Benefits

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

D. Use and Occupancy of Project Lands and Waters

34. Requiring a licensee to obtain prior Commission approval for every use or occupancy of the project would be unduly burdensome. Therefore, Article 413 allows the licensee to grant permission, without prior Commission approval, for the use and occupancy of project lands for such minor activities as landscape planting. Such uses must

be consistent with the purposes of protecting and enhancing the scenic, recreational, and environmental values of the project.

E. Review of Final Plans and Specifications

35. Article 301 requires the licensee to commence construction of the new powerhouse at the low-level outlet within two years from the issuance date of the license and complete construction of the project within five years from the issuance date of the license.

36. Article 302 requires the licensee to provide the Commission's Division of Dam Safety and Inspection San Francisco Regional Office (D2SI-SFRO) with final contract drawings and specifications—together with a supporting design report consistent with the Commission's engineering guidelines.

37. Article 303 requires the licensee to provide the Commission's D2SI-SFRO with cofferdam construction drawings.

38. Where new construction or modifications to the project are involved, the Commission requires licensees to file revised drawings of project features as-built. Article 304 provides for the filing of these drawings.

STATE AND FEDERAL COMPREHENSIVE PLANS

39. Section 10(a)(2)(A) of the FPA,¹⁶ 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.¹⁷ Under section 10(a)(2)(A), federal and state agencies filed comprehensive plans that address various resources in California. Of these, the staff identified and reviewed 20 comprehensive plans that are relevant to this project.¹⁸ No conflicts were found.

APPLICANT'S PLANS AND CAPABILITIES

¹⁶ 16 U.S.C. § 803(a)(2)(A).

¹⁷ Comprehensive plans for this purpose are defined at 18 C.F.R. § 2.19.

¹⁸ The list of applicable plans can be found in section 5.5 of the final EIS for the project, issued March 2005.

40. In accordance with sections 10(a)(2)(C) and 15(a) of the FPA,¹⁹ Commission staff evaluated Tri-Dam's record as a 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. I accept the staff's findings in each of the following areas.

A. Conservation Efforts

41. Section 10(a)(2)(C) of the FPA requires the Commission to consider the electricity consumption improvement program of the applicant, including its plans, performance, and capabilities for encouraging or assisting its customers to conserve electricity cost-effectively, taking into account the published policies, restrictions, and requirements of state regulatory authorities. Tri-Dam sells the project's energy to PG&E, a utility. PG&E promotes conservation of electricity use by its customers.

42. Staff concludes that, given the limits of its ability to influence users of the electricity generated by the project, Tri-Dam complies with section 10(a)(2)(C) of the FPA.

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

43. Based on a review of Tri-Dam's compliance with the terms and conditions of the existing license, staff finds that Tri-Dam's overall record of making timely filings and compliance with its license is satisfactory. Staff concludes that Tri-Dam can satisfy the conditions of a new license.

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

44. Commission staff reviewed Tri-Dam's management, operation, and maintenance of the Tulloch 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 concludes that the dam and other project works are safe, and that there is no reason to believe that Tri-Dam cannot continue to safely manage, operate, and maintain these facilities under a new license.

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

D. Ability to Provide Efficient and Reliable Electric Service

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

E. Need for Power

46. The Stanislaus River Projects are a resource that is important to the operation of the Stanislaus River system as a whole. The Tulloch Project has been providing hydroelectric generation for about 50 years. Under the conditions of this license, the project can continue to meet part of California's power requirements, resource diversity, and capacity needs.

47. The Tulloch Project has an installed capacity of 17.1 MW and generates an average of 92,900 MWh per year. With the addition of the turbine/generator at the low-level outlet of Tulloch dam, the Tulloch Project will have a capacity of 24.1 MW and generate an average of 108,900 MWh per year.

48. The North American Electric Reliability Council (NERC) annually forecasts electrical supply and demand nationally and regionally for a 10-year period. The Tulloch Project is located in the California-Mexico Power Area (CA/MX) of the Western Electricity Coordinating Council (WECC). According to the NERC's most recent 2004 forecast, peak demands and annual energy requirements for the CA/MX are projected to grow at annual compound rates of 2.2 percent and 2.4 percent, respectively, from 2004 through 2013. NERC projects resource capacity margins (generating capacity in excess of demand) will range between 22.8 percent and 39.4 percent of firm peak demand during the 10-year forecast period, including estimated new capacity additions. Over the next 10 years, CA/MX estimates that about 5,541 MW of additional capacity will be brought on line. I conclude that the project's power, low cost, displacement of nonrenewable fossil-fired generation and contribution to the region's diversified generation mix will help meet a need for power in the region.

F. Transmission Services

49. The project's transmission facilities that are required to be licensed include the generator leads, station transformers, buses, and switchyard located at the powerhouse.

There is no associated transmission line for this project. Tri-Dam proposes no changes that would affect its own or other transmission services in the region.

G. Cost Effectiveness of Plans

50. Tri-Dam plans to make a number of facility and operational modifications to both improve project generating capability and enhance environmental resources affected by the project. Based on Tri-Dam's record as an existing licensee, I conclude that these plans are likely to be carried out in a cost-effective manner.

H. Actions Affecting the Public

51. Tri-Dam provided extensive opportunity for public involvement in the development of its application for a new license for the Tulloch Project. In its license application, Tri-Dam cites a number of examples of actions it has taken that positively affect the public, including coordinating operation of the Tulloch Project with Reclamation and maintaining a buoy system for boater safety.

PROJECT ECONOMICS

52. 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.*,²⁰ 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.

53. In applying this analysis to the Tulloch Project, we have considered three options: no action, the applicant's proposal, and the project as licensed herein. Under the no-action alternative, the levelized annual cost of operating the Tulloch Project is \$2,347,000, or \$25.6/megawatt-hour (MWh). The project now generates 92,875 MWh annually. When we multiply our estimate of average generation by the alternative power cost of \$33.4/MWh,²¹ we get a total value of the project's power of \$3,103,710 in 2004 dollars.

²⁰ 72 FERC ¶ 61,027.

²¹ Based on Tri-Dam's average cost of energy from qualified facilities. Staff

To determine whether the project is currently economically beneficial, staff subtracts the project's cost from the value of the project's power.²² Therefore, in the first year of a new license, the project would cost \$729,710, or \$7.9/MWh, less than the likely alternative cost of power.

54. Under Tulloch's Proposal (including the planned new generating unit), the levelized annual cost of operating the project would be about \$2,912,300, or \$26.75/MWh. Based on an estimated average of 108,875 MWh, the project would produce power valued at \$3,614,110 when multiplied by the \$33.2/MWh value of the project's power. Therefore, in the first year of the new license, the power would cost \$701,810, or \$6.45/MWh, less than the likely cost of alternative power.

55. As licensed herein, with the mandatory conditions and staff measures, the levelized annual cost of operating the project would be about \$2,963,560, or \$27.22/MWh. Based on an estimated average of 108,875 MWh as licensed, the project would produce power valued at \$3,614,110 when multiplied by the \$33.2/MWh value of the project's power. Therefore, in the first year of the new license, project power would cost \$650,550, or \$5.98/MWh, less than the likely cost of alternative power.

56. In considering public interest factors, the Commission takes into account that hydroelectric projects offer unique operational benefits to the electric utility system (ancillary service benefits). These benefits include their capability to provide an almost instantaneous load-following response to dampen voltage and frequency instability on the transmission system, system-power-factor-correction through condensing operations, and a source of power available to help in quickly putting fossil-fuel based generating stations back on line following a major utility system or regional blackout.

COMPREHENSIVE DEVELOPMENT

57. Sections 4(e) and 10(a)(1) of the FPA,²³ respectively, 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

assumed the value would apply for 2004 and added a rate of \$30/kilowatt-year for dependable capacity.

²² Details of staff's economic analysis for the project as licensed herein and for various alternatives are included in the final EIS issued March 2005.

²³ 16 U.S.C. §§ 797(e) and 803(a)(1).

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.

58. The EIS for the Tulloch Project contains background information, analysis of effects, support for related license articles, and the basis for a finding that the project will not result in any major, long-term adverse environmental effects. The project would be safe if operated and maintained in accordance with the requirements of this license.

59. Based on my independent review and evaluation of the Tulloch Project, recommendations from the resource agencies and other stakeholders, and the no-action alternative, as documented in the EIS, I have selected the Tulloch Project, with staff-recommended measures, and find that it is best adapted to a comprehensive plan for improving or developing the Stanislaus River.

60. I selected this alternative because: (1) issuance of a new license would serve to maintain a beneficial, dependable, and inexpensive source of electric energy; (2) the required environmental measures would protect and enhance fish and wildlife resources, water quality, recreational resources, and historic properties; and (3) the 24.1 MW of electric energy generated from a renewable resource would continue to offset the use of fossil-fueled, steam-electric generating plants, thereby conserving nonrenewable resources and reducing atmospheric pollution.

LICENSE TERM

61. Section 15(e) of the FPA²⁴ 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 and enhancement measures; 40-year terms for projects with a moderate amount of such activities; and 50-year terms for projects with extensive measures.

62. Additionally, it is the Commission's policy to coordinate to a reasonable extent the license expiration dates of projects in a river basin, in order that subsequent relicense proceedings can also be coordinated.²⁵ The Beardsley/Donnells Project No. 2005 is

²⁴ 16 U.S.C. § 808(e).

²⁵ In issuing new licenses, the Commission will coordinate the expiration dates of

located upstream of the Tulloch Project in the Stanislaus River watershed and expires December 31, 2046. In order to facilitate the Commission's future coordinated treatment of these Stanislaus River projects, the expiration date for Tulloch Project should coincide with the expiration date for the Beardsley/Donnells Project. Therefore, I will issue the license for Tulloch Project for a term of 39 years, 11 months.

The Director orders:

(A) This license is issued to Tri-Dam (licensee), for a period of 39 years, 11 months effective the first day of the month in which this order is issued, to construct, operate and maintain the Tulloch Hydroelectric Project. This license is subject to the terms and conditions of the 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.

(B) The project consists of:

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

(2) The Tulloch Project includes: (1) the 1,260-acre Tulloch reservoir, with a gross storage capacity of 66,968 acre-feet at a normal maximum elevation of 510 feet (USGS datum) and a usable storage capacity of 52,139 acre-feet; (2) the Tulloch dam, a 200-foot-high, 1,600-foot-long concrete gravity dam with a 325-foot-long spillway controlled by seven 40-foot by 30-foot radial gates and two 66-inch-diameter low level outlets; (3) two 114-inch-diameter, 157-foot-long riveted steel penstocks embedded in concrete with a total maximum hydraulic capacity of 1,780 cfs; (4) Tulloch powerhouse, a 100-foot by 52-foot concrete structure; (6) two generating units with a total capacity of 17.1 MW, each driven by a vertical-axis Francis turbine with a total maximum hydraulic capacity of 1,800 cfs; (7) a new powerhouse and turbine at the low-level outlet with an authorized capacity of 7.0 MW; (8) Tulloch switchyard; and (8) other appurtenant facilities.

The project works generally described above are more specifically shown and described by those parts of Exhibits A and F shown below:

Exhibit A: The following sections of exhibit A filed on December 23, 2002:

licenses to the maximum extent possible, to maximize future consideration of cumulative impacts at the same time in contemporaneous proceedings at relicensing. *See* 18 C.F.R. § 2.23 (2004).

Pages A-5 to Page A-7

Exhibit F: The following sections of exhibit F filed on December 23, 2002:

<u>Drawing</u>	<u>FERC No.</u>	<u>Description</u>
F-1	2067-1002	Tulloch Project-General Layout
F-2	2067-1003	Tulloch Powerhouse-General Layout
F-3	2067-1004	Tulloch Switchyard-General Layout
F-4	2067-1005	Additional Powerplant at Tulloch Dam, Conceptual Layout

(3) All of the structures, fixtures, equipment, or facilities used to operate or maintain the project and located within the project boundary, all portable property that may be employed in connection with the project and located within or outside the project boundary, and all riparian and 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) This license is subject to the conditions submitted by the California State Water Resources Control Board under section 401(a)(1) of the Clean Water Act, 33 U.S.C. § 1431(a)(1), as those conditions are set forth in Appendix A to this order.

(E) This license is subject to the articles set forth in Form L-5 (October 1975), entitled "Terms and Conditions of License for Constructed Major Project Affecting Navigable Waters and Lands of the United States", and the following additional articles:

Article 201. Administrative Annual Charges. The licensee shall pay the United States an annual charge, effective as of the first day of the month in which this license is issued, for the purpose of:

- a. 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 17.1 megawatts (MW), until the date of commencement of construction of the

new capacity authorized by this license, after which time the authorized installed capacity is 24.1 MW.

- b. Recompensing the United States for the use, occupancy, and enjoyment of 108 acres of its lands.

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

a) Four 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 Project-Drawing Number (i.e., P-2067-1001 through P-2067-####) 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 (i.e., F-1, etc.), Drawing Title, and date of this license shall be typed on the upper left corner of each aperture card.

Two of the sets of aperture cards along with form FERC-587 shall be filed with the Secretary of the Commission, ATTN: OEP/DHAC. The third set shall be filed with the Commission's Division of Dam Safety and Inspections San Francisco Regional Office. The remaining set of aperture cards and a copy of Form FERC-587 shall be filed with the Bureau of Land Management office at the following address:

State Director
Bureau of Land Management
Branch of Adjudication and Records (CA-943.5)
2800 Cottage Way Suite W1834
Sacramento CA 95825-1886
ATTN: FERC Withdrawal Recordation

b) The licensee shall file two separate sets of exhibit drawings in electronic raster 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. Exhibit F 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 in the following format [P-2067-####, F-1, Description, 02-01-2006.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 with the Commission for approval, revised Exhibit G drawings enclosing within the project boundary all principal project works necessary for operation and maintenance of the project. 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 benefited 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 that 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. The benefits will be assessed in accordance with Part 11, Subpart B, of the Commission's regulations.

Article 301. *Start of Construction.* The licensee shall commence construction of the new powerhouse at the low-level outlet within two years from the issuance date of the license and shall complete construction of the project within five years from the issuance date of the license.

Article 302. *Contract Plans and Specifications.* At least 60 days prior to the start of construction of the new powerhouse at the low-level outlet, the licensee shall submit one copy of its plans and specifications 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 303. Cofferdam Construction Drawings. Before starting construction of the new powerhouse at the low-level outlet, the licensee shall review and approve the design of contractor-designed cofferdams and deep excavations and shall make sure construction of cofferdams and deep excavations is consistent with the approved design. At least 30 days before starting construction of the cofferdam, the licensee shall submit one copy to the Commission's D2SI-San Francisco Regional Engineer and two copies to the Commission (one of these copies shall be a courtesy copy to the Commission's Director, Division of Dam Safety and Inspections), of the approved cofferdam construction drawings and specifications and the letters of approval.

Article 304. As-built Drawings. Within 90 days of completion of all construction activities authorized by this license (including, but not limited to, the new turbine/generator at the low-level outlet and new day-use recreational facility), 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 Engineer, the Director, D2SI, and the Director, DHAC.

Article 401. Plans Required by the Certification Conditions.

Requirement to File Plans and Reports for Commission Approval

Various conditions of this license found in the State Water Resources Control Board's (Water Board) Water Quality Certification (Appendix A) require the licensee to prepare plans and reports in consultation with other entities for approval by the Water Board for submittal to the Commission and implement specific measures without prior Commission approval. Each such plan and report shall also be submitted to the Commission for approval. These plans and reports are listed below.

Condition No.	Plan Name	Due Date From License Issuance
1	Shoreline erosion monitoring plan ²⁶	1 year
2	Water quality protection plan for construction of the new turbine	3 months prior to construction
3	Day use area development plan ²⁷	3 months prior to construction

²⁶ See Article 403.

²⁷ See Article 409.

The licensee shall submit to the Commission documentation of its consultation, copies of comments and recommendations made in connection with each plan, and a description of how each 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, each plan becomes a requirement of the license, and the licensee shall implement the plan, or after notice and opportunity for hearing, changes in project operations or facilities including any changes required by the Commission.

Article 402. *Project Operations Agreement.* The licensee shall operate the Tulloch Project in accordance with the terms of the operations agreement, between U.S. Bureau of Reclamation and the South San Joaquin Irrigation and Oakdale Irrigation Districts titled "Operation of New Melones Dam and Reservoir and Tulloch Dam and Reservoir", dated August 30, 1988 and filed with the Commission on February 8, 2006.

Article 403. *Shoreline Erosion Monitoring Plan.* Within one year of license issuance, the licensee shall file with the Commission for approval, a plan for monitoring erosion along the shoreline of Tulloch reservoir. The plan shall include, at a minimum: (1) the proposed schedule for the initial monitoring event; (2) the specific methods that will be used to monitor erosion at five-year intervals; (3) guidelines that will be used for determining the entity responsible for implementing corrective actions at identified erosion sites; (4) guidelines for determining and reporting the basis for the selected corrective action at specific erosion sites; (5) provisions for filing reports with the Commission that: (a) detail the findings of each monitoring event including the likely causes of observed erosion and changes at specific sites since the previous monitoring; (b) describe recommended corrective actions, the basis for selecting the proposed action, and alternative stabilization techniques considered; (c) specify the schedule for implementing corrective actions; (d) specify how the licensee will coordinate any proposed shoreline stabilization work with affected shoreline property owners; (e) specify the frequency of follow-up monitoring after completion of shoreline stabilization projects to determine the effectiveness of the remedial measures and identify additional actions that may be necessary; and (f) include evidence of consultation with appropriate entities.

The plan shall be developed in consultation with the State Water Resource Control Board, Central Valley Regional Water Quality Control Board, California Department of Fish and Game, U.S. Bureau of Reclamation, Tuolumne County, and Calaveras County. The licensee shall include with the shoreline erosion monitoring plan that it files with the

Commission, documentation of consultation with the specified entities, 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 consulted 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 proposed 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 404. *Reservation of Authority to Prescribe Fishways.* Authority is reserved for the Commission to require the licensee to construct, operate, and maintain, or to provide for the construction, operation, and maintenance of, such fishways, as may be prescribed by the Secretary of the Interior, pursuant to section 18 of the Federal Power Act.

Article 405. *Vegetation Management Plan.* Within one year of license issuance, the licensee shall file with the Commission for approval, a vegetation management plan. The plan shall include, at a minimum, the following:

- (1) provisions for periodically training project staff so that during project-related construction, operation, and maintenance they: (a) are aware of current noxious weed locations; (b) are knowledgeable of how to identify noxious weeds that are likely to occur in the project area; and (c) do not enter areas with existing noxious weed populations, or if entry is necessary, conduct work first in clean areas and then in areas with weeds, to avoid spreading weeds within the project area;
- (2) provisions for advising the U.S. Bureau of Reclamation, U.S. Bureau of Land Management, and Tuolumne County of observations of noxious weed populations on lands these agencies manage within the project boundary and coordinating with these agencies regarding eradication or control efforts;
- (3) a commitment to use certified weed-free straw for all construction or restoration projects or, if unavailable, rice straw;

- (4) a commitment to use an approved mix of native plant species for restoration or erosion control purposes;
- (5) specific measures that will be used by the licensee to control or eradicate terrestrial and aquatic noxious weeds within or adjacent to the project boundary;
- (6) specific measures that will be implemented to inform shoreline landowners about how to eradicate or control the spread of noxious weeds on their property;
- (7) specific measures that would be implemented to inform visitors to Tulloch reservoir and associated recreation sites about how to identify noxious weeds and prevent their spread;
- (8) measures to detect and control, to the extent practical, sudden oak death (*Phytophthora ramorum*) within the project boundary;
- (9) provisions for conducting periodic inventories of fire fuels within the project boundary and identification of control and management practices that will be implemented;
- (10) provisions for identification, mapping, management, and monitoring of wetlands, important wildlife habitat, and noxious weed (terrestrial and aquatic) populations within and adjacent to the project boundary;
- (11) specific measures to protect elderberry shrubs that represent suitable habitat for the valley elderberry longhorn beetle (those with a basal stem diameter of at least one inch) described in Article 408; and
- (12) identification of the entity responsible for implementing each aspect of the plan if other than the licensee.

The plan shall be developed in consultation with the U.S. Bureau of Reclamation, U.S. Bureau of Land Management, California Department of Fish and Game, Calaveras County, and Tuolumne County. The licensee shall include with the vegetation management plan that it files with the Commission, documentation of consultation with the specified entities, 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 consulted 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. 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. Western Pond Turtle Management Plan. Within one year of license issuance, the licensee shall file with the Commission for approval, a western pond turtle management plan. The plan shall include, at a minimum: (1) provisions for monitoring western pond turtle populations that use Tulloch reservoir; (2) proposed turtle management and habitat enhancement measures; and (3) a schedule for implementation of monitoring, management, and habitat enhancement measures.

The plan shall be developed in consultation with the California Department of Fish and Game (Cal Fish and Game). The licensee shall include with the western pond turtle management plan that it files with the Commission, documentation of consultation with Cal Fish and Game, 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 Cal Fish and Game 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 407. Wildlife Management Plan. Within one year of license issuance, the licensee shall file with the Commission for approval, a wildlife management plan. The plan shall include, at a minimum: (1) measures to protect bat roosting habitat; (2) provisions for periodically training project staff so that minimal bat disturbance will occur during project-related operation and maintenance; (3) provisions for coordinating with appropriate state and county agencies to establish wildlife protection areas where motorized boating is prohibited, and publicizing any such exclusion zones; (4) the specific

locations where two osprey nesting platforms will be installed within the project boundary, or if a suitable location cannot be identified within the project boundary, adjacent to the project boundary; and (5) a schedule for implementation of training, management, and habitat enhancement measures specified in this plan.

The plan shall be developed in consultation with the U.S. Bureau of Reclamation, U.S. Bureau of Land Management, California Department of Fish and Game, State Water Resources Control Board, Calaveras County, Tuolumne County, and Central Sierra Environmental Resources Center. The licensee shall include with the wildlife management plan that it files with the Commission, documentation of consultation with the specified entities, 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 consulted 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. 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 408. *Valley Elderberry Longhorn Beetle Protection Plan.* Within one year of license issuance, the licensee shall file with the Commission for approval, a valley elderberry longhorn beetle protection plan. The plan shall be consistent with current conservation guidelines for this species issued by the U.S. Fish and Wildlife Service (FWS).

The plan shall be developed in consultation with the California Department of Fish and Game and FWS. The licensee shall include with the valley elderberry longhorn beetle protection plan that it files with the Commission, 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 consulted 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 409. Reservoir Recreation Plan. Within three years of license issuance or one year of procuring an appropriate site, whichever occurs first, the licensee shall file with the Commission for approval, a reservoir recreation plan that provides public day use recreational opportunities at Tulloch reservoir. The plan will include the following: (1) detailed design drawings that depict the following: (a) the locations of up to 15 picnic tables; (b) a beach area; (c) a natural area; (d) a car-top launch area for non-motorized boats; (e) access road(s) and parking areas; and (f) any stream, wetland, and upland habitats (i.e., cover types) that will be influenced by proposed construction, operation, and maintenance activities; (2) proposed protective measures for the habitats depicted in item (1)(f); (3) site-specific erosion and sedimentation control measures that are proposed for implementation during construction and operation of the facility; (4) proposed maintenance and patrol procedures for the facility; (5) any fees that Tri-Dam proposes to implement for public use of this facility; and (6) a schedule for construction of this facility.

This facility shall be constructed within five years of license issuance. Accordingly, the licensee shall submit progress reports on a semi-annual basis, beginning 60 days from the date of this license order and continuing until a site is procured, describing in detail the status of procuring an appropriate site for this facility.

The plan shall be developed in consultation with the State Water Resources Control Board (Water Board), California Department of Parks and Recreation (Cal Parks and Rec), and Calaveras County and Tuolumne County (Counties). The licensee shall include with the reservoir recreation plan that it files with the Commission, documentation of consultation with the Water Board, Cal Parks and Rec, and the Counties, 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 Water Board, Cal Parks and Rec, and the Counties 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 proposed 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 410. *Public Notification of Tulloch Reservoir Drawdowns.* Upon license issuance, the licensee shall notify the public at least two weeks in advance of any planned activities that require the licensee to draw down Tulloch reservoir below normal operating limits. For the purposes of this article, such notification shall be required when a drawdown below elevation 500.0 feet (U.S. Geological Survey [USGS] vertical datum) is planned. Any notice that the licensee develops pursuant to this article shall include the date when the planned drawdown will begin, the depth of the expected drawdown from full pool elevation (elevation 509.5 feet [USGS vertical datum] from March 20 through October 31 and elevation 501.5 feet [USGS vertical datum] from November 1 through March 19), and the expected duration of the drawdown. Notices shall be provided to representatives of homeowner's associations for land that abuts Tulloch reservoir, Tuolumne County or the current manager of the South Shore Lake Tulloch Campground and Marina, and the Commission. In addition, notices shall be posted at publicly accessible locations, such as marinas, boat ramps, and local business establishments.

Article 411. *Shoreline Management Plan.* Upon license issuance, the licensee shall implement, on an interim basis, the "Tulloch Reservoir Shoreline Management Plan" included in Exhibit E, Report on Land Use Management and Aesthetics of Tri-Dam's license application filed with the Commission on December 23, 2002.

Within one year of license issuance, the licensee shall revise the Tulloch Reservoir Shoreline Management Plan. The revised plan shall include, at a minimum: (1) an inventory of sensitive environmental resources within the project boundary (i.e., natural and cultural resources); (2) maps of sensitive shoreline zones that should be afforded extra protection without compromising confidential site locations; (3) strategies that the licensee will implement to protect such sensitive areas from inappropriate encroachment; (4) provisions for future updates to the plan as new information becomes available; and (5) provisions for informing shoreline private landowners about the importance of protecting the zones identified as having sensitive environmental resources. The licensee shall coordinate the environmental information needed for future updates to this plan, specified in item (4), with the information gathered pursuant to Article 405, item (10) of the vegetation management plan.

The plan shall be developed in consultation with the California Department of Fish and Game, the U.S. Fish and Wildlife Service, Tuolumne County, Calaveras County, and representatives of homeowner's associations for land that abuts Tulloch reservoir. The licensee shall include with the revised shoreline management plan that it files with the Commission, documentation of consultation with the consulted entities, 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 consulted 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. The revised plan shall not be implemented until the licensee is notified that the plan is approved. Upon Commission approval, the licensee shall implement the revised plan, including any changes required by the Commission. The shoreline management plan filed with the Tulloch license application shall remain in effect until the Commission approves the revised plan.

Article 412. Programmatic Agreement and Historic Properties Management Plan. The licensee shall implement the “Programmatic Agreement Between the Federal Energy Regulatory Commission and the California Historic Preservation Officer for Managing Historic Properties that May be Affected by Licenses Issued to Tri-Dam Project for the Continued Operation of the Beardsley/Donnells and Tulloch Projects in Tuolumne and Calaveras Counties, California (FERC Nos. 2005 and 2067)”, executed on September 21, 2005, and including but not limited to the Historic Properties Management Plan (HPMP) for the project. In the event that the Programmatic Agreement is terminated, the licensee shall continue to implement the provisions of its approved HPMP. The Commission reserves the authority to require changes to the HPMP at any time during the term of the license. If the Programmatic Agreement is terminated, the licensee shall obtain approvals from or make modifications of the Commission and the California State Historic Preservation Office where the HPMP calls upon the licensee to do so.

Article 413. Standard Land 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 types 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 reservoir 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 reservoir. 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.

(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 exhibit R or 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 Exhibit A or approved report on recreational resources of an Exhibit E; or, if the project does not have an approved Exhibit R or 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; (ii) the grantee shall take all reasonable precautions to insure 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; and (iii) the grantee shall not unduly restrict public access to project waters.

(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 or K drawings (project boundary maps) reflecting exclusion of that land. Lands conveyed under this article shall 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 or K 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.

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

(G) 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 of this order shall constitute acceptance of this license.

J. Mark Robinson
Director

Office of Energy Projects

Form L-5
(October, 1975)

FEDERAL ENERGY REGULATORY COMMISSION

**TERMS AND CONDITIONS OF LICENSE FOR CONSTRUCTED
MAJOR PROJECT AFFECTING NAVIGABLE WATERS
AND 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. In the event the project is taken over by the United States upon the termination of the license as provided in Section 14 of the Federal Power Act, or is transferred to a new licensee or to a nonpower licensee under the provisions of Section 15 of said Act, the Licensee, its successors and assigns shall be responsible for, and shall make good any defect of title to, or of right of occupancy and use in, any of such project property that is necessary or appropriate or valuable and serviceable in the maintenance and operation of the project, and shall pay and discharge, or shall assume responsibility for payment and discharge of, all liens or encumbrances upon the project or project property created by the Licensee or created or incurred after the issuance of the license: *Provided*, that the provisions of this article are not intended to require the Licensee, for the purpose of transferring the project to the United States or to a new licensee, to acquire any different title to, or right of occupancy and use in, any of such project property than was necessary to acquire for its own purposes as the Licensee.

Article 7. The actual legitimate original cost of the project, and of any addition thereto or betterment thereof, shall be determined by the Commission in accordance with the Federal Power Act and the Commission's Rules and Regulations thereunder.

Article 8. 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 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 9. 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 10. 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 11. Whenever the Licensee is directly benefited by the construction work of another licensee, a permittee, or the United States on a storage reservoir or other headwater improvement, the Licensee shall reimburse the owner of the headwater improvement for such part of the annual charges for interest, maintenance, and depreciation thereof as the Commission shall determine to be equitable, and shall pay to the United States the cost of making such determination as fixed by the Commission. For benefits provided by a storage reservoir or other headwater improvement of the United States, the Licensee shall pay to the Commission the amounts for which it is billed from time to time for such headwater benefits and for the cost of making the determinations pursuant to the then current regulations of the Commission under the Federal Power Act.

Article 12. The United States specifically retains and safeguards the right to use water in such amount, to be determined by the Secretary of the Army, as may be necessary for the purposes of navigation on the navigable waterway affected; and 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 Secretary of the Army may prescribe in the interest of navigation, and 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 Secretary of the Army may prescribe in the interest of navigation, or as the Commission may prescribe for the other purposes hereinbefore mentioned.

Article 13. 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 14. In the construction or maintenance of the project works, the Licensee shall place and maintain suitable structures and devices to reduce to a reasonable degree the liability of contact between its transmission lines and telegraph, telephone and other signal wires or power transmission lines constructed prior to its transmission lines and not owned by the Licensee, and shall also place and maintain suitable structures and devices to reduce to a reasonable degree the liability of any structures or wires falling or obstructing traffic or endangering life. None of the provisions of this article are intended to relieve the Licensee from any responsibility or requirement which may be imposed by any other lawful authority for avoiding or eliminating inductive interference.

Article 15. 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 16. 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 17. The Licensee shall construct, maintain, and operate, or shall arrange for the construction, maintenance, and operation of such reasonable recreational facilities, including modifications thereto, such as access roads, wharves, launching ramps, beaches, picnic and camping areas, sanitary facilities, and utilities, giving consideration to the needs of the physically handicapped, and shall comply with such reasonable modifications of the project, as may be prescribed hereafter by the Commission during the term of this license upon its own motion or upon the recommendation of the Secretary of the Interior or other interested Federal or State agencies, after notice and opportunity for hearing.

Article 18. 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 19. 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 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 20. 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 21. Material may be dredged or excavated from, or placed as fill in, project lands and/or waters only in the prosecution of work specifically authorized under the license; in the maintenance of the project; or after obtaining Commission approval, as appropriate. Any such material shall be removed and/or deposited in such manner as to reasonably preserve the environmental values of the project and so as not to interfere with traffic on land or water. Dredging and filling in a navigable water of the United States shall also be done to the satisfaction of the District Engineer, Department of the Army, in charge of the locality.

Article 22. Whenever the United States shall desire to construct, complete, or improve navigation facilities in connection with the project, the Licensee shall convey to the United States, free of cost, such of its lands and rights-of-way and such rights of passage through its dams or other structures, and shall permit such control of its pools, as may be required to complete and maintain such navigation facilities.

Article 23. The operation of any navigation facilities which may be constructed as a part of, or in connection with, any dam or diversion structure constituting a part of the project works shall at all times be controlled by such reasonable rules and regulations in the interest of navigation, including control of the level of the pool caused by such dam or diversion structure, as may be made from time to time by the Secretary of the Army.

Article 24. The Licensee shall furnish power free of cost to the United States for the operation and maintenance of navigation facilities in the vicinity of the project at the voltage and frequency required by such facilities and at a point adjacent thereto, whether said facilities are constructed by the Licensee or by the United States.

Article 25. The Licensee shall construct, maintain, and operate at its own expense such lights and other signals for the protection of navigation as may be directed by the Secretary of the Department in which the Coast Guard is operating.

Article 26. Timber on lands of the United States 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 27. 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 28. 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 29. 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 30. 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 31. 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 32. 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 33. 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 34. The Licensee shall cooperate with the United States in the disposal by the United States, under the Act of July 31, 1947, 61 Stat. 681, as amended (30 U.S.C. sec. 601, *et seq.*), of mineral and vegetative materials from lands of the United States occupied by the project or any part thereof: *Provided*, That such disposal has been authorized by the Commission and that it does not unreasonably interfere with the occupancy of such lands by the Licensee for the purposes of the license: *Provided further*, that in the event of disagreement, any question of unreasonable interference shall be determined by the Commission after notice and opportunity for hearing.

Article 35. 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 36. 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 37. 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

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

In the Matter of Water Quality Certification for the
TRI-DAM PROJECT TULLOCH HYDROELECTRIC PROJECT
FEDERAL ENERGY REGULATORY COMMISSION PROJECT NO. 2067

SOURCES: Stanislaus River

COUNTY: Tuolumne and Calaveras Counties

WATER QUALITY CERTIFICATION FOR FEDERAL PERMIT OR LICENSE

ISSUED SEPTEMBER 16, 2005
BY THE EXECUTIVE DIRECTOR:

The Tri-Dam Project has applied to the Federal Energy Regulatory Commission (FERC) for a new license for the Tulloch Hydroelectric Project (Project). The Tri-Dam Project, owned by the Oakdale and South San Joaquin Irrigation Districts, is the Licensee of the Project. The Project is located on the Stanislaus River in Tuolumne and Calaveras Counties near the town of Copperopolis. The Project includes Tulloch Reservoir (67,000 acre feet capacity) and Dam (200 feet high and 1,600 feet long), two penstocks, and a powerhouse (two vertical-axis Francis turbines, 900 cubic feet per second capacity each, with 9,000 kilowatt combined capacity). The Tri-Dam Project is proposing to construct a new 7,000 kilowatt turbine/generator on the low level outlet of Tulloch Dam and build a 15 unit day use recreation area. The new generator would utilize water that spills over Tulloch Dam and would not require changes in current operations. The new day use area will be built on land owned by the Bureau of Land Management on the Black Creek arm of the reservoir or other suitable location.

1. The Federal Clean Water Act (33 U.S.C. §§ 1251-1387) was enacted “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” (33

U.S.C. § 1251(a).) Section 101 of the Clean Water Act (33 U.S.C. § 1251 (g)) requires federal agencies to “co-operate with the State and local agencies to develop comprehensive solutions to prevent, reduce and eliminate pollution in concert with programs for managing water resources.”

2. Section 401 of the Clean Water Act (33 U.S.C. §1341) requires every applicant for a federal license or permit which may result in a discharge into navigable waters to provide the licensing or permitting federal agency with certification that the project will be in compliance with specified provisions of the Clean Water Act, including water quality standards and implementation plans promulgated pursuant to section 303 of the Clean Water Act (33 U.S.C. § 1313). Clean Water Act section 401 directs the agency responsible for certification to prescribe effluent limitations and other limitations necessary to ensure compliance with the Clean Water Act and with any other appropriate requirement of state law. Section 401 further provides that state certification conditions shall become conditions of any federal license or permit for the project. The State Water Board has delegated this function to the Executive Director by regulation. (Cal. Code Regs., tit. 23, § 3838, subd. (a).)
3. The California Regional Water Quality Control Boards have adopted, and the State Water Board has approved, water quality control plans (basin plans) for each watershed basin in the State. The basin plans designate the beneficial uses of waters within each watershed basin and water quality objectives designed to protect those uses. Section 303 of the Clean Water Act requires the states to develop and adopt water quality standards. (33 U.S.C. § 1313.) The beneficial uses together with the water quality objectives that are contained in the basin plans constitute State water quality standards under section 303.
4. The basin plan for the Central Valley-Sacramento/San Joaquin River Basins identifies irrigation, stock watering, power, warm freshwater habitat, contact and non-contact recreation, and wildlife habitat as beneficial uses of Tulloch Reservoir. The basin plan identifies municipal and domestic supply as a potential beneficial use of Tulloch Reservoir. Protection of the instream beneficial uses identified in the basin plan requires maintenance of adequate instream flows as well as effluent limitations and other limitations on discharges of pollutants from point and nonpoint sources to the Stanislaus River and its tributaries.
5. The State Water Board as responsible agency has reviewed and considered: (a) the Tri-Dam Project’s final FERC License Application; (b) comments on the final License Application by agencies and interested parties; (c) the U.S. Forest Service Final 4(e) Conditions; and (d) the FERC Final Environmental Impact Statement prepared pursuant

to the National Environmental Policy Act for the Stanislaus River Projects. Further, the State Water Board has considered the basin plan, the existing water quality conditions and project-related controllable factors.

6. The State Water Board as responsible agency has reviewed and considered the Mitigated Negative Declaration for this Project (State Clearinghouse Number 2004102062), adopted on November 18, 2004, by the Tri-Dam Project. Tri-Dam Project incorporated conditions into the Project that protect the environment. The State Water Board will file a Notice of Determination within five days from the issuance of this order.

ACCORDINGLY, BASED ON ITS INDEPENDENT REVIEW OF THE RECORD, THE STATE WATER BOARD CERTIFIES THAT THE OPERATION OF THE TULLOCH HYDROELECTRIC PROJECT BY THE TRI-DAM PROJECT UNDER A NEW LICENSE ISSUED BY FERC FOR TRI-DAM'S PROPOSED PROJECT will comply with sections 301, 302, 303, 306 and 307 of the Clean Water Act, and with applicable provisions of state law, provided the Tri-Dam Project complies with the following terms and conditions:

1. Within one year of license issuance, the Licensee shall submit a shoreline erosion monitoring plan for review and approval by the Chief of the Division of Water Rights (Division). The plan shall include: (a) a schedule for monitoring the shoreline once every five years for erosion, (b) guidelines for determining the entity responsible for corrective actions, and (c) plans for corrective actions. The plan shall include a requirement to submit a report to the Chief of the Division and to the Executive Officer of the Central Valley Regional Water Quality Control Board that includes findings and recommended corrective actions, with a schedule to implement the corrective actions.
2. Prior to constructing the new turbine, Licensee shall submit a plan to the Chief of the Division that contains specific measures for the protection of water quality during construction of the new turbine. The plan shall include detailed construction plans and schedules, water quality protection methods, and reporting requirements. Upon review and approval by the Chief of the Division, Licensee shall implement the plan.
3. Licensee shall submit plans for the development of the day use area on the Black Creek arm of the reservoir to the Chief of the Division for review and approval prior to beginning construction.
4. Licensee shall maintain the water surface elevation of Tulloch Reservoir as high as possible to protect the recreational uses of the reservoir, consistent with United States

Bureau of Reclamation contracts and agreements, dam safety requirements, and other mandatory operational requirements. Two weeks prior to any planned reservoir drawdown below normal operating levels, licensee shall provide notification to local homeowners associations, and shall post said notification at publicly accessible locations such as marinas, boat ramps, and local businesses. Notification shall include the expected duration of the drawdown period.

5. Licensee shall submit to the Chief of the Division a copy of the western pond turtle management plan prepared in consultation with the California Department of Fish and Game.
6. This certification is contingent on compliance with all applicable requirements of the Water Quality Control Plan for the Sacramento and San Joaquin River Basins, except as may be modified by the specific conditions of the certification.
7. Licensee must submit any change to the Tulloch Hydroelectric Project, including project operation that would have a significant or material effect on the findings, conclusions, or conditions of this certification, to the Chief of the Division for prior review and written approval.
8. Notwithstanding any more specific conditions in this certification, the Project shall be operated in a manner consistent with all water quality standards and implementation plans adopted or approved pursuant to the Porter-Cologne Water Quality Control Act or section 303 of the Clean Water Act. The Licensee shall take all reasonable measures to protect the beneficial uses of water of the Stanislaus River.
9. The authorization to operate the Project pursuant to this certification is conditioned upon payment of all applicable fees for review and processing of the application for water quality certification and administering the State's water quality certification program, including but not limited to: timely payment of any annual fees or similar charges that may be imposed by future statutes or regulations for the State's reasonable costs of a program to monitor and oversee compliance with conditions of water quality certification.
10. This certification is not intended and shall not be construed to apply to issuance of any FERC license or FERC license amendment other than the FERC license specifically identified in the Licensee's application for certification described above.
11. This certification does not authorize any act which results in the "taking" of a threatened or endangered species or any act which is now prohibited, or becomes

prohibited in the future, under either the California Endangered Species Act (Fish & G. Code §§ 2050 - 2097) or the federal Endangered Species Act (16 U.S.C. §§ 1531 - 1544). If a “take” will result from any act authorized under this certification or water rights held by the Licensee, the Licensee shall obtain authorization for the take prior to any construction or operation of the Project. The Licensee shall be responsible for meeting all requirements of the applicable Endangered Species Act for the Project authorized under this certification.

12. In the event of any violation or threatened violation of the conditions of this certification, the violation or threatened violation shall be subject to any remedies, penalties, process or sanctions as provided for under applicable state or federal law. For the purposes of section 401(d) of the Clean Water Act, the applicability of any State law authorizing remedies, penalties, process or sanctions for the violation or threatened violation constitutes a limitation necessary to assure compliance with the water quality standards and other pertinent requirements incorporated into this certification. In response to a suspected violation of any condition of this certification, the State Water Board may require the holder of any federal permit or license subject to this certification to furnish, under penalty of perjury, any technical or monitoring reports the State Water Board deems appropriate, provided that the burden, including costs, of the reports shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports. In response to any violation of the conditions of this certification, the State Water Board may add to or modify the conditions of this certification as appropriate to ensure compliance.
13. Any change to the operation of the Project that would have a significant or material effect on the findings, conclusions, or conditions of this certification must be submitted to the Chief of the Division of Water Rights for prior review and written approval.
14. This certification is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to Water Code section 13330 and California Code of Regulations, title 23, division 3, chapter 28, article 6 (commencing with § 3867).
15. The State Water Board reserves authority to modify or revoke this certification if monitoring results indicate that continued operation of the project would violate water quality objectives or impair the beneficial uses of the Stanislaus River.
16. The State Water Board may add to or modify the conditions of this certification, as appropriate, to implement any new or revised water quality standards and

implementation plans adopted or approved pursuant to the Porter-Cologne Water Quality Control Act or section 303 of the Clean Water Act.

17. The State Water Board may add to or modify the conditions of this certification as appropriate to coordinate the operations of this Project and other water development projects, where coordination of operations is reasonably necessary to achieve water quality standards or protect beneficial uses of water.

