

UNITED STATES OF AMERICA 78 FERC ¶ 61,110
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Elizabeth Anne Moler, Chair;
Vicky A. Bailey, James J. Hoecker,
William L. Massey, and Donald F. Santa, Jr.

Southern California Edison) Project No. 1388-001
Company

ORDER ISSUING NEW LICENSE

(Issued February 4, 1997)

Southern California Edison Company (Edison) filed an application for a new license, pursuant to Sections 4(e) and 15 of the Federal Power Act (FPA), 1/ for a new license to continue to operate and maintain the 11.25-megawatt (MW) Lee Vining Project, located on Lee Vining Creek in the Mono Lake Basin, about nine miles upstream from Mono Lake and the town of Lee Vining, in Mono County, California. Most of the project occupies lands of the Inyo National Forest. 2/ Edison proposes no new capacity and no new construction.

The Commission issued the original license for the Lee Vining Project in 1939. 3/ That license expired in 1986. Since then Edison has operated the project pursuant to successive annual licenses authorizing Edison to continue project operations pending the disposition of its application for a new license. For the reasons discussed below, we will issue a new license to Edison.

I. BACKGROUND

Notice of the application was published. The City of Vernon, California and the California Department of Fish and Game (Cal. Fish and Game) filed timely motions to intervene in opposition to Edison's application. The California Sport Fish Protection Alliance filed a protest.

The City of Vernon's motion to intervene included notice of intent to file a competing application, which the City subsequently filed on May 6, 1983. The City later withdrew its competing application on March 2, 1987, in return for compensation to be paid by Edison pursuant to a settlement

1/16 U.S.C. §§ 797(e) and 808.

2/Inasmuch as Project No. 1388 is located in part on lands of the United States, Section 23(b)(1) of the FPA, 16 U.S.C.

§ 817(1), requires the project to be licensed.

3/Twentieth Annual Report of the Federal Power Commission at p. 113.

agreement that was approved by the Commission on October 4, 1988, ^{4/} under procedures afforded by Section 10 of the Electric Consumers Protection Act. ^{5/}

Cal. Fish and Game recommended in its motion to intervene that Edison's application be denied unless Edison agreed to change project operating procedures which, alleged Cal. Fish and Game, have in the past damaged fishery resources and riparian vegetation. Cal. Fish and Game subsequently filed, pursuant to Section 10(j)(1) of the FPA, recommendations for the protection and enhancement of fish and wildlife resources, discussed below, which this license adopts in part.

The California Sport Fish Protection Alliance requested in its protest that Edison conduct fish surveys and instream flow studies, release minimum streamflows, install fish screens, and implement other measures to protect fishery resources and raptors.

An Environmental Assessment (EA) was issued on March 29, 1993. ^{6/} The EA contains background information, analysis of impacts, and the basis for the finding of no significant impact on the environment. The concerns raised in comments by intervenors, protesters, and other interested agencies and individuals were considered in preparing the EA. A Safety and Design Assessment was also prepared and is available in the Commission's public file associated with this project.

All comments received from interested agencies, entities, and individuals have been fully considered in determining whether, and under what conditions, to issue this license.

II. PROJECT DESCRIPTION

The existing project consists of the 45-foot-high Saddlebag dam,

^{4/}See 45 FERC ¶ 61,011 (1988).

^{5/}Section 10(a) of ECPA established special procedures designed to encourage existing licensees in nine contested relicensing proceedings, including Project No. 1388, to enter into settlements with municipal applicants, whereby the municipalities could withdraw their competing applications in return for compensation.

^{6/}Incorporated by reference into the EA is the Commission's earlier October 5, 1990 cumulative environmental assessment (CEA), which examined the potential cumulative impacts of two other proposed Mono Lake Basin projects, the Legett Project No. 3272 and the Paoha Project No. 3259, in combination with three existing projects, the Lee Vining Project No. 1388, the Lundy Project No. 1390, and the Rush Creek Project No. 1389. The Commission staff determined in the subsequent March 29, 1993 EA for the Lee Vining Project that there would be no significant cumulative impacts to the target resources of riparian vegetation, riparian-associated wildlife, resident trout, visual quality, and recreation in the Mono Basin as a result of relicensing the Rush Creek Project. (See EA for Project No. 1388 at p. 10.)

impounding the 317-acre Saddlebag Lake, the 27-foot-high Tioga dam and the 19-foot-high Tioga auxiliary dam, impounding the 73-acre Tioga Lake, the 17-foot-high Rhinedollar dam, impounding the 66-acre Ellery Lake (also called Rhinedollar Lake), an intake structure at Rhinedollar dam, a 2,452-foot-long pipeline, a 3,680-foot-long penstock, the Poole powerhouse with a generating unit with a rated capacity of 11.25 MW, a 6.4-mile-long transmission line extending from the Poole powerhouse to the Lee Vining substation, and appurtenant facilities. A more detailed description is contained in Ordering Paragraph (B)(2).

Both Saddlebag Lake and Tioga Lake drain into Ellery Lake, which is the intake and regulating reservoir for Poole powerhouse. The two lakes have historically been drawn down in the winter to provide storage capacity for spring run-off. Ellery Lake is the forebay for the powerhouse, and its storage level is not as varied as the two upper reservoirs. Water is carried from Ellery Lake to the powerhouse via a flowline and penstock.

III. APPLICANT'S PLANS AND CAPABILITIES

In accordance with Sections 10(a)(2)(C) and 15(a) of the FPA, ^{7/} we have evaluated Edison's record as a licensee with respect to the following: (1) consumption efficiency improvement program; (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.

1. Consumption Efficiency Improvement Program

Edison's efforts to conserve electricity include: (1) use of all the energy generated by the projects in its system; (2) encouraging its customers to conserve energy; and (3) maintenance of extensive ongoing programs to reduce system peak demand.

Edison's ongoing plans and activities to promote and achieve conservation include promotion and implementation of (1) state building and appliance standards; (2) supply and demand-side management programs; (3) public agency programs; and (4) electric utility system improvements. Edison's plans meet the statutory requirements of the California Energy Commission (CEC) and conform to the CEC's recommendations on conservation.

We conclude that Edison is making a satisfactory good faith effort to conserve electric energy.

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

We have reviewed Edison's license application in order to judge its ability to comply with the conditions of any license issued, and with

^{7/16} U.S.C. §§ 803 and 808.

applicable provisions of Part I of the FPA. We have also reviewed Edison's record of compliance with the Commission's requirements under its prior license.

Our review shows that Edison has made a satisfactory record of filing submissions in a timely manner and of generally complying with the terms of its existing license. Therefore, we conclude that Edison will be able to provide the resources and expertise necessary to carry out its plans and comply with all articles, terms, and conditions of the new license and other provisions of Part I of the FPA.

3. Safe Management, Operation, and Maintenance

Edison owns and operates the Lee Vining Project. The project dam and appurtenant facilities are subject to Part 12 of the Commission's regulations (18 C.F.R.) concerning project safety. We have reviewed Edison's management, operation, and maintenance of the project pursuant to the requirements of Part 12 and the associated Engineering Guidelines, including all applicable safety requirements such as warning signs and boat barriers, Emergency Action Plan, and Independent Consultant's Safety Inspection Report. We conclude that the project is being safely managed, operated, and maintained.

4. Ability to Provide Efficient and Reliable Electric Service

Edison coordinates project operation with the Los Angeles Department of Water and Power and the Bishop Creek Water Users Association through development and distribution of monthly water release and operation plans. Edison distributes its monthly generation plans to its inter-company departments and informs agencies not involved in power generation of the water releases.

We conclude that Edison has demonstrated the ability to provide efficient and reliable electric service.

5. Need for Power

Edison's operation of the 10 MW Lee Vining Project under the requirements of this license will result in an estimated annual net energy production of 29 gigawatthours of (GWh) of renewable energy.

The 1996 report of the Western Systems Coordinating Council indicated that utilities in the California-Southern Nevada area plan to add over 2,500 MW of capacity over a 10-year planning period. In 1995 Edison had a peak system load of 17,548 MW and an average system energy requirement of about 81,924 GWh. With an annual generation of 29 GWh, the 11.25 MW Lee Vining Project helps meet a small part of Edison's total generation requirements, and displaces some fossil-fueled generation.

We conclude that Edison will continue to need power in both the short and long term, and that the Lee Vining Project can contribute to meeting a small part of that need.

6. Transmission Services

The primary transmission line for the Lee Vining Project extends 6.4 miles from the Poole powerhouse through a voltage transformer bank to a substation which connects to Edison's transmission system via a 15.2 mile-long system transmission line. ^{8/}

Edison proposes no new power development at the project and contemplates the continued use of the project's low-cost energy on its system.

Edison's electrical system is designed to function so that no significant operational or circuit loading impacts would occur with the project out of service. The project's principal benefit to Edison is the project's close proximity to the load it serves. Such proximity minimizes electrical losses and improves area system efficiency.

We conclude that the existing transmission system is adequate and that licensing the project to continue operations will have no significant effect on the existing or planned transmission system.

7. Cost-Effectiveness of Plans

Edison does not propose any modifications to the project. We conclude that the project, as presently constructed and as Edison proposes to operate it, fully develops and uses the hydropower potential of the site.

8. Actions Affecting the Public

The Lee Vining Project generates electricity which Edison uses to serve its power customers. The project also provides employment and opportunities for a limited amount of recreational fishing. Continued operation of the project will benefit the public.

IV. WATER QUALITY CERTIFICATION

Under Section 401(a)(1) of the Clean Water Act, ^{9/} the Commission may not issue a license for a hydroelectric project unless the state certifying agency has issued water quality certification for the project or has waived certification by failing to act on a request for certification within a reasonable time, not to exceed one year.

By letter dated November 4, 1981, Edison requested water quality

^{8/}Under Section 3(11) of the FPA, 16 U.S.C. 796(11), a license project is defined to include that portion of a transmission line transmitting power to the point of junction to an electric distribution system. The 15.2-mile-long line connected to the Lee Vining substation is part of Edison's power distribution system and therefore is not included as part of the project being licensed by this order.

^{9/}33 U.S.C. § 1341(a)(1).

certification for the Lee Vining Project from the California Regional Water Quality Control Board. By letter dated October 28, 1992, the Water Quality Control Board indicated that water quality certification for the Lee Vining project had been waived.

V. PROJECT IMPACTS ON THREATENED OR ENDANGERED SPECIES

By letter dated September 26, 1996, the U.S. Fish and Wildlife Service provided the Commission with an updated list of threatened or endangered species that may occur in the project area. The updated list contained two species, the threatened bald eagle, which was discussed in the EA, and the peregrine falcon, which was not discussed in the EA.

As discussed in the EA, the project is expected to have no unavoidable adverse impacts to the bald eagle. ^{10/} The U.S. Forest Service and the U.S. Department of the Interior's Bureau of Reclamation released peregrine falcons in Lee Vining Canyon in the project vicinity in 1983, 1984, and 1985. The success of these releases was never documented. However, relicensing the Lee Vining Project will not affect any existing or future use of the project for peregrine falcon nesting. The only construction activity, gauge installation, will generate minor, short-term noise unlikely to disturb any falcons that may be nesting in the area. In the EA, the Commission staff concluded that energized parts of the existing 115-kV project transmission line are too far apart to be an electrocution hazard for bald eagles. Peregrine falcons have a shorter wingspan than bald eagles and will not face any electrocution hazard from the project transmission line.

We conclude that relicensing the project will not affect the endangered peregrine falcon.

VI. SECTION 4(e) FINDINGS AND CONDITIONS

Section 4(e) of the FPA ^{11/} states the Commission may issue a license only after a finding that the license will not interfere or be inconsistent with the purpose for which the reservation was created or acquired. Section 3(2) of the FPA ^{12/} defines reservations as including national forests. There is no evidence or allegation in this proceeding to indicate that the relicensing of the Lee Vining Project will interfere with the purposes of Inyo National Forest. We therefore find that this license will not interfere or be inconsistent with the purposes for which the reservation was created.

FPA Section 4(e) also requires that Commission licenses for projects located within United States reservations include all conditions that the Secretary of the department under whose supervision the reservation falls

^{10/}See EA at pp. 36-37.

^{11/}16 U.S.C. § 797(e).

^{12/}16 U.S.C. 796(2).

shall deem necessary for the adequate protection and utilization of such reservation.

The Lee Vining Project is located partly within the Inyo National Forest, which is under the supervision of the U.S. Forest Service. Pursuant to Section 4(e), the Forest Service, by letter dated May 14, 1993, submitted terms and conditions to be included in any new license for the project. Thereafter, Edison filed with the Forest Service an appeal of the conditions.

On December 21, 1993, ^{13/} the Forest Service, in a final decision on the appeal, issued revised Section 4(e) conditions, which are set forth in Appendix A to this order.

On February 3, 1994, Edison appealed the revised Section 4(e) conditions to the Forest Service. Forest Service action on the appeal of the revised conditions is still pending. Ordering Paragraph (D) of this order therefore reserves the Commission's authority to amend the license as appropriate in light of the Forest Service's ultimate disposition of Edison's appeal of the revised conditions.

The Forest Service's revised Section 4(e) conditions, as set forth in Appendix A to this order, require Edison to:

- (1) Obtain the Forest Service's written approval for all final project design plans and any project changes and consult with the Forest Service annually about the project (Conditions 1, 2, and 3);
- (2) Provide minimum flow releases to protect fisheries and riparian resources (Condition 4);
- (3) Install and continuously operate measurement devices to ensure that the streamflow requirements of Condition 4 and the reservoir level requirements of Condition 6 below are complied with (Condition 5);
- (4) Maintain certain reservoir levels (Condition 6);
- (5) Implement a riparian and aquatic resource monitoring plan (Condition 7);
- (6) Implement a hazardous substance plan (Condition 8);
- (7) Implement an erosion control plan (Condition 9);
- (8) Implement a spoil disposal plan (Condition 10);
- (9) Implement a visual resources protection plan

^{13/}The letter was filed on January 3, 1994.

(Condition 11);

(10) Implement a sensitive and threatened and endangered species protection plan (Condition 12);

(11) Implement a cultural resources management plan (Condition 13); and

(12) Obtain a Forest Service special-use authorization (Condition 14).

Forest Service Conditions 1 through 6 require, among other things, that Edison's plans and studies and functional design drawings be reviewed, accepted, and approved by the Forest Service. In Escondido Mutual Water Co. v. LaJolla Band of Mission Indians, ^{14/} the Supreme Court made it clear that the Commission has no authority to decide whether conditions imposed under Section 4(e) are either reasonable or lawful. The Commission must include the Section 4(e) conditions and defer to the Courts of Appeals to determine their validity. ^{15/} However, under the statutory mandate of the Federal Power Act the Commission cannot relinquish its responsibility to assess the project's plans and designs. The Commission's final approval authority over plans and studies is therefore specifically retained in Articles 401 and 407 of this license.

Condition 14 of the Forest Service's Section 4(e) conditions requires Edison to obtain a special use authorization before Edison may start any land-disturbing activities. Section 2401 of the Energy Policy Act of 1992 ^{16/} amended Section 501 of the Federal Land Policy and Management Act of 1976 (FLPMA) ^{17/} to add a new subsection which provides that:

- (d) With respect to any project or portion thereof that was licensed pursuant to, or granted an exemption from, part I of the Federal Power Act which is located on lands subject to a reservation under section 24 of the Federal Power Act and which did not receive a permit, right-of-way or other approval under this section prior to enactment of this subsection, no such permit, right-of-way, or other approval shall be required for continued operation, including continued operation pursuant to section 15 of the Federal Power Act, of such project unless the Commission determines that such project involves the use of any additional public lands or National Forest lands not subject to such

^{14/}466 U.S. 765 (1984).

^{15/}Id. at 777. The only exception to this rule is that the Commission need not include conditions that do not relate to the reservation on which project works are to be located or which relate to project works that are not located on a reservation. See id. at 780-81; Minnesota Power & Light Co., 75 FERC ¶ 61,477-48 (1996).

^{16/}Pub. L. No. 102-486, 106 Stat. 3096 (October 24, 1992).

^{17/}43 U.S.C. § 1761.

reservation.

The Forest Service indicates in its December 21, 1993 letter submitting Section 4(e) conditions that special use permits authorizing use of the project's conduit and powerhouse were issued by the Forest Service on May 24, 1915, and August 8, 1916. 18/ Since these permits were not issued under Section 501 of FLPMA, and since this relicensing proceeding does not involve the use of any additional public lands or National Forest lands, Condition 14 cannot be a part of this license. 19/

VII. RECOMMENDATIONS OF FEDERAL AND STATE FISH AND WILDLIFE AGENCIES AND THE SECTION 10(j) PROCESS

Section 10(j)(1) of the FPA 20/ requires the Commission, when issuing a license, to include conditions based upon recommendations of federal and state fish and wildlife agencies submitted pursuant to the Fish and Wildlife Coordination Act, 21/ to "adequately and equitably protect, mitigate damages to, and enhance, fish and wildlife (including related spawning grounds and habitat)" affected by the project.

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

A number of recommendations were filed by Cal. Fish and Game pursuant to Section 10(j). The new license issued herein contains conditions consistent with Cal. Fish and Game's recommendations that Edison: (1) maintain a minimum instream flow of five cubic feet per second (cfs) or the natural flow of Lee Vining Creek at Saddlebag Dam, whichever is less, and install gauges at inflow streams to Saddlebag Lake to determine the natural flow of Lee Vining Creek at

18/See the Forest Service's letter submittal of revised Section 4(e) conditions, dated December 21, 1993, Enclosure I-A, at pp. 11-12.

19/See *Henwood Associates, Inc.*, 63 FERC ¶ 61,227 (1993); *Pacific Gas and Electric Co.*, 69 FERC ¶ 61,070 (1994). We assume that the broad and comprehensive requirements of Conditions 1 through 13 of the Forest Service's Section 4(e) conditions, which are included in the license issued herein, continue to support the Forest Service's lack of objection to a new license for Project No. 1388 within what it is managing as a potential study river (see discussion infra).

20/16 U.S.C. §803(j)(1).

21/16 U.S.C. § 661 et seq.

Saddlebag Dam; (2) maintain a minimum instream flow of three cfs or the natural flow of Glacier Creek at Tioga Dam, whichever is less, and install gauges at Glacier Creek upstream from Tioga Lake to monitor such flows; (3) install and maintain appropriate stream gauges to measure all instream bypass flows in locations chosen by joint agreement among Cal. Fish and Game, the Forest Service, and the licensee; and (4) raptor-proof transmission line structures to prevent bird losses. 22/

Cal. Fish and Game also recommended that Edison:

(1) maintain a minimum instream flow of 30 cfs as measured below the confluence of the Poole Powerhouse tailrace with Lee Vining Creek; (2) allow no greater than a plus or minus ten percent variation in the release from Saddlebag Dam from October 15 through April 1 to protect trout, trout eggs and larvae; and (3) install and maintain a Cal. Fish and Game-approved fish screen on the water conveyance intake at Ellery Lake. The Commission staff made a preliminary determination that these three recommendations were inconsistent with, or outside the scope of, Section 10(j). These inconsistencies, however, were subsequently resolved at a meeting between the Commission staff and Cal. Fish and Game held on February 4, 1994.

The Commission staff and Cal. Fish and Game agreed at the meeting that the revised Section 4(e) conditions submitted by the Forest Service would adequately address the need for minimum flows below the Poole Powerhouse. Condition 4 of the Forest Service's revised Section 4(e) conditions, which are part of this license, requires the maintenance of a continuous minimum flow release below the Poole Powerhouse of 27 cfs from August through May, and 89 cfs during June and July.

Cal. Fish and Game and the Commission staff agreed that the minimum flow requirements of the Forest Service's Section 4(e) Condition 4 would ensure implementation of Cal. Fish and Game's recommendation regarding releases from Saddlebag Dam. License Article 405 states that, subject to the requirements of the Forest Service's Section 4(e) conditions, flow releases may not be varied by more than plus or minus 10 cfs from the average daily flow in early October. The Forest Service's Section 4(e) Condition 4 also provides that if Edison and the Forest Service can't agree on a month-to-month minimum flow regime, then a year-long minimum flow release will be calculated and established for the year in question.

As an alternative to the recommendation for fish screens at Ellery Lake, the Commission staff and Cal. Fish and Game agreed at the Section 10(j)

22/With the exception of its recommendation for raptor-proofing transmission lines, the substance of Cal. Fish and Game's recommendations are contained in the Forest Service Section 4(e) Conditions 3 and 5, adopted herein. Raptor electrocution generally only occurs on powerlines of 69 kV or less, where the distance between lines is less than 60 inches. Being more than 60 inches apart, the Lee Vining Project's 115 kV transmission lines are too far apart to constitute an electrocution hazard to raptors. See EA at p. 36.

meeting that, inasmuch as approximately 12 percent of the fish stocked in Ellery Lake at the project are annually entrained and probably killed, Edison should annually fund 12 percent (about \$2,400 annually) of Cal. Fish and Game's fish stocking efforts for Ellery Lake.

While prevention or reduction of adverse impacts is the preferred alternative, where, as in this instance, the project's unmitigable adverse impacts to fishery resources do not warrant denying the license and direct mitigation measures such as fish screens would entail costs significantly disproportionate to the replacement cost of the lost fish, it is appropriate to consider the use of compensatory mitigation and the licensee's funding thereof. 23/ License Article 406 therefore requires Edison to annually fund 12 percent of Cal. Fish and Game's fish stocking efforts for Ellery Lake.

Another measure discussed at the meeting to protect the fishery resource was the proposal that whenever the project increases flows below the powerhouse tailrace or project dams, the ramping rate (rate of flow increase) should be 20 percent of the existing flow as measured over a 24-hour period, and whenever the project decreases flows below the project's facilities, the ramping rate should be 15 percent of the existing flow over a 24-hour period.

Cal. Fish and Game's recommended ramping rate, however, would overly restrict project operations and would at times be beyond the operating capability of the project's existing equipment. More to the point, the recommendation is not needed in light of the Forest Service's Condition 4 that has been included in this license. The Commission staff's analysis in the EA indicated that allowing only a plus or minus 10 percent cfs change in flows over a 24-hour period, a restriction subsequently adopted in the Forest Service's Condition 4, will protect fishery resources and ensure ramping flows within the operating capability of the project. 24/ Condition 4's minimum flow requirements should therefore ensure that no sudden and dramatic increases or decreases in streamflows will occur in the project's bypassed reach below the project's dams or in Lee Vining Creek below the project tailrace, and should adequately prevent fish stranding and protect fish during the critical spawning and incubation period of October 15 to April 1.

VIII. WILD AND SCENIC RIVERS SYSTEM

The Wild and Scenic Rivers Act 25/ prohibits the Commission from licensing any hydroelectric project that is on or directly affects rivers Congress has designated for either inclusion in the Wild and Scenic Rivers System or study for potential inclusion in the System (study rivers). In its

23/See Ohio Power Company, 71 FERC ¶ 61,092 (1995).

24/See EA for Project No. 1388 at pp. 29-30.

25/16 U.S.C. §§ 1271-87.

letter to the Commission dated December 21, 1993, submitting conditions to be included in the license pursuant to Section 4(e), the Forest Service indicated that it had determined subsequent to issuance of the EA that the corridor of Lee Vining Creek between the Poole Powerhouse and a downstream Los Angeles Department of Water and Power diversion was eligible for inclusion in the National Wild and Scenic Rivers System.

Pursuant to the 1988 Land Resource Management Plan for the Inyo National Forest, areas that the Forest Service earmarks as a potential study or designated river are managed to protect their suitability for such designation. However, the Forest Service indicated that none of the project development alternatives studied in the EA, including that approved in this order, would affect the eligibility of the river corridor for such designation. ^{26/} The Forest Service concluded by stating that it has no objection to a new license being issued for the project, subject to certain conditions for the protection of lands and resources affected by the project.

IX. COMPREHENSIVE PLANS

Section 10(a)(2)(A) of the FPA, 16 U.S.C. § 803(a)(2)(A), 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. ^{27/} Under Section 10(a)(2)(A), federal and state agencies filed 32 plans that address various resources in California. Of these, the Commission staff identified and reviewed five plans that are relevant to the Lee Vining Project. ^{28/} The project does not conflict with any of these comprehensive plans.

X. COMPREHENSIVE DEVELOPMENT

Sections 4(e) and 10(a)(1) of the FPA ^{29/} require the Commission, in acting on applications for a license, to give equal consideration to the power development purposes and to the purposes of energy conservation, the protection, mitigation of damage to, and enhancement of fish and wildlife, the protection of recreational opportunities, and the preservation of other aspects of environmental quality. Any license issued shall be such as in the

^{26/}See the Forest Service's letter submittal of revised Section 4(e) conditions, dated December 21, 1993, Enclosure 1 at pp. 5-7.

^{27/}Comprehensive plans for this purpose are defined at 18 C.F.R. § 2.19 (1996).

^{28/}The California Water Plan: Projected Use and Available Water Supplies to 2010, 1983, California Department of Water Resources; California Water: Looking to the Future, 1987, California Department of Water Resources; Recreation Needs in California, 1983, California Department of Parks and Recreation; Inyo National Forest Land Resource Management Plan, 1988, Forest Service, U.S. Department of Agriculture; and Inyo National Forest Environmental Impact Statement for the Land and Resource Management Plan, 1988, Forest Service, U.S. Department of Agriculture.

^{29/}16 U.S.C. §§ 797(e) and 803(a)(1).

Commission's judgement 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.

We have considered the proposed project, enhancement measures recommended by intervenors and by the Commission staff, and the alternative of continuing the project operations authorized in the original license. From our independent analysis of the environmental and economic effects of the alternatives, we have selected the applicant's proposed project, plus the staff's recommended additional measures, as the preferred alternative. We have selected this option because these measures will protect and enhance water quality and fishery resources while continuing to generate electricity from a renewable resource. The project's economic and environmental benefits outweigh its costs.

The EA analyzed the effects associated with the issuance of a new license for the Lee Vining Project, and the EA recommends a variety of measures to protect and enhance the environmental resources, which, as discussed above, we adopt. We conclude that issuance of a new license for the Lee Vining Project will not constitute a major federal action significantly affecting the quality of the human environment.

In determining whether a proposed project will be best adapted to a comprehensive plan for developing a waterway for beneficial public purposes, pursuant to Section 10(a)(1) of the FPA, the Commission considers a number of public interest factors, including the economic benefits of project power.

Under our approach to evaluating the economics of hydropower projects, as articulated in Mead Corp., 30/ we employ an analysis that uses current costs to compare the costs of the project and likely alternative power without regard to forecasts of potential future inflation, escalation, or deflation beyond the license issuance date. The basic purpose of our analysis is to provide a general estimate of the potential power benefits and the costs of a project, and 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.

In making these determinations, we considered the project with the applicant's mitigative proposals, with intervenor-recommended enhancement measures, and with the Commission's mitigative proposals. Based on current economic conditions, without future escalation or inflation, with the conditions we have adopted, the annual value to Edison of power from the project will be about \$860,000 annually (about 29.7 mills/kWh). We base our estimate of the project's energy benefits on cost information provided by Edison in August of 1996. The cost of replacing the project's dependable capacity is \$111 per kW-year. The annual cost of operating the project is about \$695,000 (24 mills/kWh). To determine whether

30/72 FERC ¶ 61,027 (1995).

the project is economically beneficial, we subtract the project cost from the current value of the project power. We find that the cost of power from the project will be about \$165,000 (5.7 mills/kWh) less than the current cost of alternative power. The project is therefore economically beneficial.

XI. LICENSE TERM

Section 15 of the FPA ^{31/} specifies that any license issued shall be for a term that the Commission determines to be in the public interest, but not less than 30 years nor more than 50 years. The Commission's policy is to establish 30-year terms for projects with little or no redevelopment, new construction, new capacity, or environmental mitigative or enhancement measures; 40-year terms for projects with a moderate amount thereof; and 50-year terms for those projects with an extensive amount thereof. ^{32/} The environmental mitigation and enhancement costs of the new license for the Lee Vining Project warrant a term of 30 years, effective the first day of the month in which this license is issued.

XII. SUMMARY

Background information, analysis of impacts, support for related license articles, and the basis for our finding of no significant impact on the environment are contained in the EA.

The design of the project is consistent with the engineering safety standards governing dam safety. The project will be safe if operated and maintained in accordance with the requirements of this license. Analysis of related issues is provided in the Safety and Design Assessment, which is available in the Commission's public file for this project.

The Commission orders:

(A) This license is issued to Southern California Edison Company (licensee) for a period of 30 years, effective the first day of the month in which this order is issued, to operate and maintain the Lee Vining 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 interests in those lands, enclosed by the project boundary shown by exhibits G-1 through G-10 (FERC Drawing numbers 1 through 10).

(2) Project works consisting of: (a) the existing 45-foot-high, 600-

^{31/}16 U.S.C. § 808(e)

^{32/}See, e.g., Mead Corp., supra.

foot-long, redwood faced, rockfill Saddlebag dam, impounding 317-acre Saddlebag Lake; (b) the existing 27-foot-high, 270-foot-long, redwood faced, rockfill Tioga dam, impounding 73-acre Tioga Lake; (c) the existing 19-foot-high, 50-foot-long, constant radius concrete arch Tioga auxiliary dam; (d) the existing 17-foot-high, 437-foot-long rockfill Rhinedollar dam, impounding 66-acre Rhinedollar Lake (Ellery Lake); (e) the existing concrete intake structure at Rhinedollar dam; (f) the existing 2,452-foot-long, 48-inch-diameter pipeline; (g) the existing 3,680-foot-long, 42-inch to 28-inch-diameter steel penstock; (h) the existing Poole powerhouse containing one generating unit with a rated capacity of 10,000 kilowatts (kW); (i) the existing 6.4-mile-long, 115-kV transmission line from the Poole powerhouse to the Lee Vining Substation; and (j) appurtenant structures.

The project works generally described above are more specifically described in Exhibit A of the application, sections A.1 through A.5, consisting of four typewritten pages, describing the project electrical and mechanical facilities of the project, and shown by the following exhibits:

<u>Drawing</u>	<u>FERC No.</u> <u>1388-</u>	<u>Showing</u>
F- 1	11	Saddlebag dam
F- 2	12	Tioga dam
F- 3	13	Rhinedollar dam
F- 4	14	Flowline Penstock Details
F- 5	15	Poole powerhouse Plot Plan
F- 6	16	Poole powerhouse Plan and Section

(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 or other rights that are necessary or appropriate in the operation or maintenance of the project.

(C) Exhibits A, F, and G described above are approved and made part of the license.

(D) This license is subject to the conditions (except Condition 14) submitted by the U.S. Forest Service under Section 4(e) of the FPA, as those conditions are set forth in Appendix A to this order. The Commission reserves the right to amend this ordering paragraph and Appendix A to this order as appropriate in light of the Forest Service's ultimate disposition of the appeals of the Section 4(e) conditions, and to make whatever additional conforming changes in the license may be necessitated by any such amendment. For the reasons discussed above, Condition 14 is not incorporated into this

license.

(E) This license is subject to the articles set forth in Form L-1 (October 1975), entitled "Terms and Conditions of License for Constructed Major Project Affecting Lands of the United States," and the following additional articles:

Article 201. The licensee shall pay the United States the following charges, effective the first day of the month in which this order is issued.

(a) For purposes of reimbursing the United States for the cost of administering Part I of the Federal Power Act, a reasonable amount as determined in accordance with the provisions of the Commission's regulations in effect from time to time. The authorized installed capacity for that purpose is 11,250 kilowatts.

(b) Recompensing the United States for use, occupancy, and enjoyment of 752.55 acres of its lands, other than for transmission line right-of-way.

Article 202. Pursuant to Section 10(d) of the FPA , a specified reasonable rate of return upon the net investment in the project shall be used for determining surplus earnings of the project for the establishment and maintenance of amortization reserves. The licensee shall set aside in a project amortization reserve account at the end of each fiscal year one half of the project surplus earnings, if any, in excess of the specified rate of return per annum on the net investment. To the extent that there is a deficiency of project earnings below the specified rate of return per annum for any fiscal year, the licensee shall deduct the amount of that deficiency from the amount of any surplus earnings subsequently accumulated, until absorbed. The licensee shall set aside one-half of the remaining surplus earnings, if any, cumulatively computed, in the project amortization reserve account. The licensee shall maintain the amounts established in the project amortization reserved account until further order of the Commission.

The specified reasonable rate of return used in computing amortization reserves shall be calculated annually based on current capital ratios developed from an average of 13 monthly balances of amounts properly includible in the licensee's long-term debt and proprietary capital accounts as listed in the Commission's Uniform System of Accounts. The cost rate for such ratios shall be the weighted average cost of long-term debt and preferred stock for the year, and the cost of common equity shall be the interest rate on 10-year government bonds (reported as the Treasury Department's 10 year constant maturity series) computed on the monthly average for the year in question plus four percentage points (400 basis points).

Article 203. Within 45 days of the issuance date of the license, the licensee shall file a complete original set and two complete duplicate sets of aperture cards of all the approved drawings, and a third, partial duplicate set of aperture cards showing only the Exhibit G drawings. The set of originals must be reproduced on silver or gelatin 3mm microfilm. The

duplicate sets are copies of the originals made on diazo-type microfilm. All microfilm must be mounted on type D (3-1/4" x 7-3/8") aperture cards. The licensee shall submit two copies of Form FERC-587 with aperture cards.

Prior to microfilming, the FERC Drawing Number shall be shown in the margin below the title block of the approved drawing. After mounting, the FERC Drawing Number must be typed on the upper right corner of each aperture card. Additionally, the Project Number, FERC Exhibit (e.g., F-1, G-1, etc.), Drawing Title, and date of issuance of this license must be typed on the upper left corner of each aperture card.

The complete original set and one complete duplicated set of aperture cards, and one copy of the Form FERC-587, must be filed with the Secretary of the Commission, ATTN: Division of Licensing and Compliance/ERB. The second complete set of aperture cards shall be filed with the Commission's San Francisco Regional Office. The third partial duplicate set of aperture cards (Exhibit G only) and the remaining copy of Form FERC-587 shall be filed with the Bureau of Land Management Office at the following address:

State Director
California State Office
Bureau of Land Management
Branch of Adjudication and Records (CA-943.5)
attn: FERC Withdrawal Recordation
2135 Butano Drive
Sacramento, CA 95825-0451

Article 401. Within six months of the date of issuance of this license, the licensee shall file with the Commission for approval a detailed plan to bury the approximately 0.8-mile section of telephone line that crosses the meadow at Aspen campground and that is visible from the Poole powerhouse access road. The plan shall include, at a minimum, design drawings and a construction schedule.

The licensee shall prepare the plan after consultation with the Forest Service. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the Forest Service, and specific descriptions of how the agency's comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agency to comment and 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 standard engineering principles and conditions at the site.

The Commission reserves the right to require changes to the plan. No land-disturbing activities shall begin until the Commission notifies the licensee that the plan is approved. Upon Commission approval, the licensee

shall implement the plan, including any changes required by the Commission.

Article 402. At least 90 days before the start of any land-disturbing or land-clearing activities at the project, the licensee shall file with the Commission a plan to revegetate disturbed areas with plant species beneficial to wildlife.

The plan shall describe the location of the areas to be revegetated and at a minimum shall include: (1) a description of the plant species used and planting densities; (2) the use of locally collected and/or native plant species; (3) a description of local native plant sources, including donor sites and propagation methods and/or native plant nurseries; (4) fertilization and irrigation requirements; (5) a monitoring program to evaluate the effectiveness of the plantings; (6) provisions for filing monitoring reports with the Commission; (7) a description of procedures to be followed if monitoring reveals that the revegetation is not successful; and (8) an implementation schedule that provides for revegetation as soon as practicable after the beginning of land-clearing and land-disturbing activities within the disturbed area.

The licensee shall prepare the plan taking fully into account the erosion, dust, slopes, and sediment control plan prepared pursuant to license Article 407, and after consultation with the U.S. Fish and Wildlife Service, the Forest Service, and the California Department of Fish and Game. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the plan accommodates the agencies' comments. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons based on project-specific information.

The Commission reserves the right to require changes to the plan. No land-disturbing activities shall begin until the Commission notifies the licensee that the plan is approved. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

Article 403. The flows required by Condition 4 in Appendix A to this order may be temporarily modified if required by operating emergencies beyond the control of the licensee, or for short periods upon agreement among the licensee, the California Department of Fish and Game, and the Forest Service.

Article 404. The licensee shall comply with the requirements of Condition 4 in Appendix A to this order. The Commission reserves the right to require changes to project operations to ensure compliance with Condition 4.

Article 405. The licensee shall limit water level fluctuations below project facilities by not varying flow releases from the project's dams and tailrace between October 15 and April 1 by more than or less than 10 cubic feet per second from the average daily flow in early October (between October

1 and October 14), subject to other minimum flow requirements as specified in Condition 4 in Appendix A to this order.

Article 406. By December 31 of each year following the issuance of this license, the licensee shall pay the California Department of Fish and Game (Cal. Fish and Game), a sum equal to 12 percent of the cost of Cal. Fish and Game's annual fish stocking expenses for Ellery Lake or \$2,400 in 1994 dollars, adjusted annually by the previous year's consumer price index (CPI), whichever is less, to finance trout stocking in Ellery Lake. Within 90 days of providing funds, the licensee shall file with the Commission documentation that: (1) the funds were paid to Cal. Fish and Game and (2) that Cal. Fish and game used the funds for fish stocking purposes.

Article 407. At least 90 days before the start of any land-disturbing or land-clearing activities associated with installation of flow gages or burying the telephone line pursuant to Condition No. 5 in Appendix A and Article 401 to this license, the licensee shall file with the Commission for approval a plan to control erosion and to minimize the quantity of sediment resulting from land disturbance.

The plan shall be based on actual site geological, soil, and groundwater conditions and on project design, and shall include, at a minimum, the following:

- (a) a description of the actual site conditions;
- (b) measures proposed to control erosion and to minimize the quantity of sediment resulting from land disturbance;
- (c) detailed descriptions, functional design drawings, and specific topographic locations of all control measures; and
- (d) a specific implementation schedule and details for monitoring and maintenance programs for the land disturbance.

The licensee shall prepare the plan after consultation with the Forest Service. The licensee shall include with the plan documentation of consultation and copies of comments and recommendations on the completed plan after it has been prepared and provided to the agency, and specific descriptions of how the agency's comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agency to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendations, the filing shall include the licensee's reasons, based on geological, soil, and groundwater conditions at the site.

The Commission reserves the right to require changes to the plan. No land-disturbing or land-clearing activities shall begin until the licensee is notified by the Commission that the plan is approved. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

Article 408. The licensee, before starting any future land-clearing or

land-disturbing activities associated with the project, shall consult with the California State Historic Preservation Officer (SHPO) and the U.S. Forest Service and shall conduct a cultural resources survey of the affected areas.

The licensee shall file the following: (1) a report containing the survey results; (2) a cultural resources management plan, approved by the Commission, to avoid or mitigate impacts to any significant archaeological or historic sites identified during the survey; and, (3) the written comments of the SHPO and the Forest Service on the report and the plan.

If the licensee discovers any previously unidentified archaeological or historic sites during the course of constructing, developing, or operating project works or other clearing or land-disturbing activities in the vicinity of the sites, the licensee shall consult with the SHPO and Forest Service and shall file for Commission approval a cultural resources management plan to avoid or mitigate impacts to significant resources, together with the written comments of the SHPO and Forest Service on the plan.

Upon Commission approval, the licensee shall implement the plan. The survey and the plan shall be based on the recommendations of the SHPO and Forest Service, shall be conducted and prepared by a qualified cultural resources specialist, and shall adhere to the Secretary of the Interior's Guidelines for Archaeology and Historic Preservation.

The report and plan shall contain the following: (1) a description of each discovered site, indicating whether it is listed or eligible to be listed on the National Register of Historic Places; (2) a description of the potential effect of each discovered site; (3) proposed measures for avoiding or mitigating the effects; (4) documentation of the nature and extent of consultation with the SHPO and Forest Service; and (5) a schedule for mitigating effects and conducting additional studies. The Commission may require changes to the plan.

The licensee shall not implement a cultural resources management plan or begin any land-clearing or land-disturbing activities until informed by the Commission that the requirements of this article have been fulfilled.

Article 409. At least 90 days before the start of any land-disturbing or land-clearing activities at the project, the licensee shall file for Commission approval a plan to protect the following sensitive plants: Masonic Mountain jewelflower (Streptanthus oliganthus), Utah monkeyflower (Mimulus glabratus var. utahensis), Mono milkvetch (Astragalus monoensis), Tahoe draba (Draba asterophora var. asterophora), Tiehm's rock cress (Arabis tiehmii), Bodie Hills draba (Draba quadricostata), nodding buckwheat (Eriogonum nutans var. nutans), Mono Lake lupine (Lupinus duranii), snow willow (Salix reticulata spp. nivalis), and Mono buckwheat (Eriogonum ampullaceum).

The plan shall include the results of botanical surveys of all areas disturbed by installing streamflow gages or moving project telephone lines. The plan also shall include a description of measures to protect any sensitive plants and an implementation schedule for the protection measures.

The licensee shall prepare the plan taking fully into account the

erosion and sediment control plan and the revegetation plan prepared pursuant to this license, and after consultation with the U.S. Fish and Wildlife Service, the California Department of Fish and Game, and the Forest Service. The licensee shall include with the plan documentation of consultation and copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the plan accommodates the agencies' comments. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before the licensee files the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons based on project-specific information.

The Commission reserves the right to require changes to the plan. No land-disturbing activities shall begin until the licensee is notified by the Commission that the plan is approved. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

Article 410. (a) In accordance with the provisions of this Article, the licensee shall have the authority to grant permission for certain types of use and occupancy of project lands and waters and to convey certain interests in project lands and waters for certain types of use and occupancy, without prior Commission approval. The licensee may exercise the authority only if the proposed use and occupancy is consistent with the purposes of protecting and enhancing the scenic, recreational, and other environmental values of the project. For those purposes, the licensee shall also have continuing responsibility to supervise and control the use and occupancies for which it grants permission, and to monitor the use of, and ensure compliance with the covenants of the instrument of conveyance for, any interests that it has conveyed, under this Article. If a permitted use and occupancy violates any condition of this Article or any other condition imposed by the licensee for protection and enhancement of the project's scenic, recreational, or other environmental values, or if a covenant of a conveyance made under the authority of this Article is violated, the licensee shall take any lawful action necessary to correct the violation. For a permitted use or occupancy, that action includes, if necessary, canceling the permission to use and

occupy the project lands and waters and requiring the removal of any non-complying structures and facilities.

(b) The type of use and occupancy of project lands and water 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 watercraft 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. If no conveyance was made during the prior calendar year, the licensee shall so inform the Commission and the Regional Director in writing no later than January 31 of each year.

(d) The licensee may convey fee title to, easements or rights-of-way across, or leases of project lands for: (1) construction of new bridges or roads for which all necessary state and federal approvals have been obtained; (2) sewer or effluent lines that discharge into project waters, for which all necessary federal and state water quality certification or permits have been obtained; (3) other pipelines that cross project lands or waters but do not discharge into project waters; (4) non-project overhead electric transmission lines that require erection of support structures within the project boundary, for which all necessary federal and state approvals have been obtained; (5) private or public marinas that can accommodate no more than 10 watercraft 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 Hydropower Licensing, 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 or K 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 R 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 will be excluded from the project only upon a determination that the lands are not necessary for project purposes, such as operation and maintenance, flowage, recreation, public access, protection of environmental resources, and shoreline control, including shoreline aesthetic values. Absent extraordinary circumstances, proposals to exclude lands conveyed under this Article from the project shall be consolidated for consideration when revised exhibit G 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.

Article 501. If the licensee's project was directly benefitted by the construction work of another licensee, a permittee, or the United States on a storage reservoir or other headwater improvement during the term of the original license (including extensions of 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.

(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 that 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 of the date of issuance of this order, pursuant to Section 313 of the FPA. Requests for rehearing may be filed within 30 days of the date of this order, pursuant to 18 C.F.R. § 385.813. The filing of a request for rehearing does not operate as a stay of the effective date of this order or of any other date specified in this order, except as specifically ordered by the Commission. The licensee's failure to file a request for rehearing shall constitute acceptance of this license.

By the Commission.

(S E A L)

Lois D. Cashell,
Secretary.

APPENDIX A

FOREST SERVICE SECTION 4(E) CONDITIONS

Condition No. 1 - Forest Service Approval of Final Design.

Before any construction of the project occurs on National Forest System (NFS) land, the Licensee shall obtain the prior written approval of the FS for all final design plans for project components which the FS deems as affecting or potentially affecting NFS resources. The Licensee shall follow the schedules and procedures for design review and approval specified in the FS special-use authorization. As part of such prior written approval, the FS may require adjustments in final plans and facility locations to preclude or mitigate impacts and to assure that the project is compatible with on-the-ground conditions. Should such necessary adjustments be deemed by the FS, the Commission, or the Licensee to be a substantial change, the licensee shall follow the procedures of Article 2 of the license. Any changes to the license made for any reason pursuant to Article 2 or Article 3 shall be made subject to any new terms and conditions of the Secretary of Agriculture made pursuant to section 4(e) of the Federal Power Act.

Condition No. 2 - Approval of Changes After Initial Construction.

Notwithstanding any license authorization to make changes to the project, the licensee shall get written approval from the FS prior to making any changes in the location of any constructed project features or facilities, or in the uses of project lands and waters, or any departure from the requirements of any approved exhibits filed with the Commission. Following receipt of such approval from the FS, and at least 60 days prior to initiating any such changes or departure, the Licensee shall file a report with the Commission describing the changes, the reasons for the changes, and showing the approval of the FS for such changes. The licensee shall file an exact copy of this report with the FS at the same time it is filed with the Commission. This article does not relieve the Licensee from the amendment or other requirements of Article 2 or Article 3 of this License.

Condition No. 3 - Consultation

Each year during the 60 days preceding the anniversary date of the license, the Licensee shall consult with the FS with regard to measures needed to ensure protection and development of the natural resource values of the project area. Within 60 days following such consultation, the Licensee shall file with the Commission evidence of the consultation with any recommendations made by the FS. The Commission reserves the right, after notice and opportunity for hearing, to require changes in the project and its operation

that may be necessary to accomplish natural resource protection.

Condition No. 4 - Minimum Streamflow Requirements

During the operation of the facilities authorized by this license, the Licensee shall maintain each year a continuous, minimum flow immediately below the outlet works at the Saddlebag Lake Dam and the outlet works at the Tioga Lake Dam, to be determined for each as follows:

IMMEDIATELY BELOW THE OUTLET WORKS FOR THE SADDLEBAG LAKE DAM

The flows that could be sustained immediately below the Saddlebag Lake Dam on a consistent, year-long basis varies from year to year, depending primarily on the availability of water as of April 1st of any given year. However, using historic water availability and flow data, more general target flows have been identified as flows that could be consistently sustained on a year-long basis during years of below normal (dry), normal, and above-normal (wet) years of water availability. Those target flows are as follows:

<u>TYPE OF YEAR</u>	<u>MINIMUM YEAR ROUND FLOW OF:</u>
For DRY YEARS*	6 cubic feet per second (CFS)
For NORMAL YEARS ***	9 cfs
For WET YEARS**	14 cfs

* DRY YEARS are defined as those in which the water availability as of April 1st is representative of the water available on April 1st in the lowest 30% of all previous years dating back to the year 1966.

** WET YEARS are defined as those in which water availability as of April 1st is representative of the water available on April 1st in the highest 30% of all previous years dating back to the year 1966.

*** NORMAL YEARS are those that cannot be classified as either DRY or WET YEARS, per the above definitions.

The monthly flow regime immediately below the outlet works at the Saddlebag Lake Dam, for each given year of this license, shall be determined at two annual meetings to be held between the Forest Service and the Licensee.

The first annual meeting shall be held no later than April 15th of each year.

The Licensee will bring to that meeting applicable snow survey data, and calculations made pursuant to that data to indicate the amount of water available to the project based upon measurements taken on or near April 1st of that year. The Forest Service may also bring to that meeting other comparable and reliable snow survey data it may have that indicates the amount of water availability to this project. Using the available data, the Licensee and the Forest Service will develop a month-to-month flow regime for each of the 12 months in the upcoming water year. (The water year as referenced herein shall

be the 12-month period beginning May 1st thru April 30th, annually). Such a regime shall be developed by no later than May 1st, using one of the following two methods:

A. The Licensee and the Forest Service shall agree to a month-to-month flow regime for all 12 months in the upcoming water year, such that the cumulative flows of that regime do not exceed the total amount of water available to the project for that year as forecasted using available snow survey data;

OR

B. If the Licensee and the Forest Service are unable to agree upon a month-to-month flow release at Saddlebag Lake Dam for the upcoming water year, then a consistent, year-long flow release at Saddlebag Lake Dam will be calculated and established. That year-long release will be based upon the total amount of water available to Saddlebag Lake as snowpack on April 1st of that year, and determined by calculating a continuous, year-long flow which that amount of water will be able to sustain. The total amount of water available to Saddlebag Lake as of April 1st will be based upon data collected by the Licensee and provided to the Forest Service. Other reliable snowpack data collected by the Forest Service or other reliable sources may also be utilized; If, in any given year, the Forest Service and the Licensee are unable to agree upon the total amount of water available to Saddlebag Lake as snowpack on April 1st, and the basis of such a disagreement is reliable, but differing, snowpack data, then the year-long flow release at Saddlebag Lake Dam will be 6 CFS in DRY YEARS, 9 CFS in NORMAL YEARS, and 14 CFS in WET YEARS, as defined herein.

Between August 1 and August 15 of each year, a second annual meeting shall be held between the Licensee and the Forest Service. At this meeting, both parties shall either: 1) further validate the flow regimes for the remainder of the water year as they were developed in the April meeting, or 2) if reliable spring runoff data collected between April 1 and July 30th of that year demonstrates that the availability of water to the project was significantly over or under forecasted at the April meeting, then both parties will renegotiate a month-to-month flow regime for the remainder of the water year (i.e., August 15 thru

April 30) per one of the two methods described in Items A and B, above.

It shall be the objective of the Licensee to maintain the flow regimes established by one of the two methods described above. However, in no case shall the Licensee release a minimum, continuous flow of less than 60% of the flow regime to be established for any given month per either of the methods described above.

The month-to-month flow regime and the minimum flow requirements pursuant to each month shall be as measured immediately below the outlet works of the Saddlebag Lake Dam.

A product of these biannual meetings between the Licensee and the Forest

Service shall be a document (STATEMENT) signed by both parties which clearly identifies the flow regimes to be released immediately below the outlet works of the Saddlebag Lake Dam for the upcoming, or remaining months in the current, water year (as determined pursuant to each meeting), and the minimum, continuous flow requirements for which the Licensee shall be held accountable.

The Licensee shall file two such STATEMENTS with the Director of the Office of Hydropower Licensing (FERC): One pursuant to the results of the above-referenced April meeting by no later than May 15th, and the second pursuant to the results of the early August meeting by no later than September 1st. A copy of each of these two filings will be sent to the Forest Service and the State of California Department of Fish and Game.

IMMEDIATELY BELOW THE OUTLET WORKS FOR THE TIOGA LAKE DAM

(NOTE: The definitions of the terms DRY, NORMAL, and WET (water) years as used in the following text is the same as the definitions provided above, under the description of the flow regimes below Saddlebag Lake Dam).

The objectives for water management at Tioga Lake Dam shall be:

Priority #1: Maintain a year-long base flow (release) of water from the outlet works at the dam needed to support downstream fisheries and riparian habitat.

Priority #2: Starting May 1st of each year, fill the level of Tioga Lake as quickly as possible while coincidentally:

A. Maintaining the base flow needs identified in Priority #1; and, B. Continuing the Licensee's traditional practice of utilizing regulated flow releases as necessary for the springtime cutting of the natural channel of Glacier Creek through accumulated snow and ice, from Tioga Lake Dam downstream to Glacier Creek's intersection with Lee Vining Creek. This practice is needed to minimize the potential for downstream flooding and property damage at Tioga Lodge.

Priority #3: To drain all of the storage capacity of Tioga Lake prior to December 1st of each year (to meet a previous, long-standing contractual agreement between the Licensee and a third party).

These water management objectives shall be achieved as follows:

From December through April of each year, the Licensee shall release a continuous, minimum flow from the outlet works of the Tioga Lake Dam which is not less than the natural inflow into Tioga Lake. Such flow releases shall be measured in Glacier Creek immediately below the outlet works of the Tioga Lake Dam.

From May 1 thru September 30th of each water year, the monthly flow regime immediately below the Tioga Lake Dam will be primarily dependent upon the availability of water as of April 1st of any given year.

Beginning May 1st of each NORMAL and WET year, when the natural inflow

into Tioga Lake is less than 2 cubic feet per second (CFS), the Licensee shall release a continuous flow from the outlet valve of the Tioga Lake Dam that is not less than the natural inflow into Tioga Lake and does not exceed 2 (CFS).

When the natural inflow into Tioga Lake increases to 2 CFS or more, the Licensee shall release a continuous flow from the outlet valve of the Tioga Lake Dam of 2 CFS, and will continue to do so until the water level of Tioga Lake rises to within 2 feet of the elevation of the top of the Tioga Lake Dam spillway. After that date, and thru September 30th of each NORMAL and WET year, the Licensee shall manage the release of water at the Tioga Lake Dam so as to maintain the water level of Tioga Lake to within two feet of the crest of the spillway of the Tioga Lake Dam. In doing so, the Licensee shall maintain a continuous, minimum flow below the outlet works of the Tioga Lake Dam that is not less than 60% of the natural inflow into Tioga Lake.

Beginning on May 1st of each DRY year, when the natural inflow into Tioga Lake is 2 CFS or less the Licensee shall release a continuous flow from the outlet valve of the Tioga Lake Dam that is not less than the natural inflow into Tioga Lake and does not exceed 2 CFS. When the natural inflow into Tioga Lake is greater than 2 CFS, the Licensee shall release a continuous flow from the outlet valve at the Tioga Lake Dam of 2 CFS. Such flow requirements will continue until the level of Tioga Lake rises to within two feet of the crest of the Tioga Lake Dam spillway or, in very dry years, reaches its peak for the year at some point below that level. From that date thru September 30th, the Licensee shall release a continuous flow from the outlet valve of the Tioga Lake Dam that is equal to the natural inflow into Tioga Lake.

During October and November of each year, the Licensee shall release a continuous minimum flow from the outlet works of the Tioga Lake Dam of 2 CFS or natural inflow into Tioga Lake, whichever is less.

Provided, however, that the Licensee and the Forest Service shall meet by no later than April 15th of each year to discuss water availability, and the Licensee's plans to utilize regulated flow releases necessary to cut a channel through snow and ice accumulations in Glacier Creek (from Tioga Lake Dam to Lee Vining Creek). The Licensee shall bring to that meeting applicable snow survey data, and calculations made pursuant to that data, to indicate the amount of water available to the project as measured on or near April 1st of that year. The data will determine whether this is a DRY, NORMAL, or WET year of water availability. The Licensee will identify for the Forest Service plans for the regulated release of water (in terms of both quantity and duration) that the Licensee predicts will be needed that year to cut a channel through the accumulated ice and snow in Glacier Creek, and the dates when the Licensee is planning to do so. Based upon those needs, the availability of water, and the flow regimes specified above, the Licensee will provide the Forest Service with its predictions for the upcoming water year as to 1) when the level of Tioga Lake will rise to within 2 feet of the Tioga Lake Dam spillway, and the period of time that the Licensee is planning to manage the lake at that level, or 2) in DRY years, approximately when the Licensee predicts that the level of Tioga Lake will peak, approximately what that lake level will be, and the period of time that the Licensee plans to manage the lake at that level.

AT AND BELOW THE POOLE POWERHOUSE

During the operation of the facilities authorized by this license, the Licensee shall maintain each year a continuous, minimum flow as follows: August - May, 27 cubic feet per second (cfs) or the natural flow, which ever is less; June - July, 89 cubic feet per second (cfs) or the natural flow, whichever is less, as measured by a continuously recording gauging device to be installed in the Poole Powerhouse. During those periods when short-term repair and testing of the Poole Powerplant facilities may be needed, minimum flows in Lee Vining Creek, as measured downstream from the confluence of the creek and the tailrace of the Poole Powerhouse, may be reduced to not less than 10 cfs (this, then, would include Warren Fork's contribution to Lee Vining Creek).

The Licensee may temporarily modify minimum flows if required by operating emergencies beyond the control of the Licensee. The Licensee may also modify minimum flows for short periods upon written consent of the Forest Service.

Condition No. 5 - Stream Gauges and Lake Level Monitoring Devices

The Licensee shall install a water measurement control section with continuously-recording streamgauges located: a) on Glacier Creek immediately below the outlet works of the Tioga Lake Dam, b) on Lee Vining Creek immediately below the outlet works of the Saddlebag Lake Dam, and c) on Lee Vining Creek, below the confluence of the creek and the tailrace of the Poole Powerhouse, and immediately upstream of the culvert in Mono County Road #3035 (the "Poole Power Plant Road") where that road crosses Lee Vining Creek. The Licensee shall also install continuously recording lake level measuring devices in Saddlebag and Tioga Lakes that have the sensitivity to be utilized in conjunction with the recording streamgauges being required (above) as a means of providing the data necessary to accurately determine the natural inflows into these two lakes at any given point in time. The Licensee shall also install a continuously recording lake level measuring device in Ellery Lake. Forest Service approval must be obtained for the design and location of the measuring control section, streamgauges and the lake level measuring devices not yet installed and prior to their installation. The Licensee shall file a report of the streamflow at the gauging stations and lake levels of Saddlebag, Tioga, and Ellery Lakes by December 31 of each year for the preceding water year. The report must be filed with the Inyo National Forest.

Condition No. 6 - Recreation, Visual and Riparian Resources

In addition to the lake level management requirements for Tioga Lake specified in Condition No. 4, Ellery Lake will be managed to be full (within 2 feet of its spillway elevation) during the annual recreation season (defined as the Friday preceding Memorial Day thru the end of September). During this annual recreation season, Ellery Lake may be drawn down to a level that is more than within 2 feet of the spillway elevation, but only for short periods of time if needed to meet emergency maintenance needs, or with prior written approval from the Forest Service to do so.

The Licensee, the Forest Service, and the California Department of Fish and Game will meet by no later than April 15th of each year to develop a summer operations and maintenance plan for the project facilities. This plan will address the subjects of construction and maintenance of the powerhouse, powerlines, penstocks, flowlines, roads, dams and all other facility construction and maintenance work which is earth disturbing in nature and is beyond simple maintenance where forest resources will not be impacted. Additionally, water management for Ellery, Tioga and Saddlebag Lake levels will be addressed (as previously described under Condition No. 4) and, to the extent possible within the Licensee's operational control over the Project, Forest Service and California Fish and Game management objectives will be met.

Condition No. 7--Monitoring

A monitoring program will be conducted by the Licensee as follows:

A. Monitoring will continue for the term of the license.

B. The Licensee will ensure continuity between monitoring periods, subject to approval by the Forest Service (FS). The FS will approve transect locations and marking methodology prior to implementation. Deviations from approved methodologies must be approved by the FS before their implementation.

C. The Licensee and its contractor will meet with the FS for a field review prior to and at the end of each field season. At the end of each monitoring field season, the Licensee, its contractor, and the FS will discuss monitoring reporting format for final approval by the FS. If determined necessary, a draft of the report will be provided by the Licensee to the FS for review by the end of December of that calendar year.

D. By March 1 of the year following each monitoring season, the Licensee will provide the FS with a monitoring report that has been prepared in accordance with the previously agreed-to format. Monitoring reports will include all data collected, photos, data analysis, a comparative analysis between current and past years' data, and detailed descriptions of methodologies used. Repeatability of measurements within transects and quadrants will be ensured by providing adequate information on all locations.

The Licensee and the FS will then meet by March 31 for a post monitoring review.

E. Yearly riparian measurements will be taken after peak annual flows, at the time of peak vegetative production and prior to annual reservoir drawdowns to provide for comparable data throughout the term of the monitoring plan. Aquatic monitoring will be conducted concurrently.

F. Monitoring will be conducted at 5 sites on Lee Vining and Glacier Creeks. The specific location of each site will be identified on the ground by the FS in consultation with the Licensee and its contractor. Endpoints of transects will be permanently marked with either angle iron or rebar and referenced to permanent bearing points outside the riparian zone. Flagging, transect lines, and other monitoring paraphanelia will be removed upon the completion of data collection at each site.

G. Riparian transects will extend beyond the fluvial surface to ensure that future increases in riparian vegetation are accounted for.

H. Photo documentation will be completed at the same time as the vegetation and aquatic monitoring.

I. As new methodologies and technologies become available, their usefulness and applicability to the monitoring will be evaluated. The Forest Service will have final approval regarding any changes in methodology.

J. Within 1 year from the issuance of this license, and before starting any activities of a land-disturbing nature, the Licensee in conjunction with the Forest Service, shall file a fish and wildlife habitat mitigation plan approved by the Forest Service with the Director, Office of Hydropower Licensing. This plan shall identify mitigation measures necessary to meet Forest Service fish, wildlife, and riparian standards and objectives as outlined in the Land and Resource Management Plan. As a minimum, this plan should address mitigation of the predicted losses identified in the Environmental Analysis for the minimum flows stipulated in Condition 4.

ABIOTIC PARAMETERS TO BE MEASURED ONCE INITIALLY AND ONCE AT THE END OF THE TERM OF LICENSE

(In addition, cataclysmic events may necessitate re-evaluation of some or all of these parameters between monitoring years).

<u>Parameter</u>	<u>Units</u>	<u>Definition</u>
Physiographic valley type	N/A	Classification of types based on landform features
Reach types	N/A	Hydrological classification of stream reaches (e.g., gaining, losing, or in equilibrium)
Elevation	Meters	Altitude above sea level
Channel Gradient	Degrees	Slope of stream channel along length of stream
Valley Slope	Degrees	Slope of surfaces beyond the active channel edge and perpendicular to the stream
Soil profile description	N/A	Description of soil horizon characteristics including color, structure, texture, degree of alkalinity or acidity, rooting depths by species or life form. Descriptions will follow Soil Conservation Service (SCS) soil

Soil moisture retention capacity	gm/gm or %	<p>survey and profile description standards. Number of profiles will reflect soil variability within each site and fluvial surface.</p> <p>Measure of moisture holding capacity of soil determined by gravimetric method or available water holding (field AWC) following SCS standards.</p>
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ABIOTIC PARAMETERS TO BE MEASURED IN 1993, 1994, 1995, AND THEN ONCE EVERY FIVE YEARS THEREAFTER, (i.e., 2000, 2005, 2010, etc.)

Yearly measurements are to be taken after peak flows, during the peak of vegetative production, and prior to annual reservoir drawdown of the year in which monitoring is conducted.

<u>Parameter</u>	<u>Units</u>	<u>Frequency</u>	<u>Method or Source of Data</u>
Streamflow	cfs	Daily	License gauging stations
Streamflow	cfs	Weekly during growing season at each site	Current meter or gauge calibrated to gauging stations.
Riparian zone width	Meters	Yearly	Direct measure with tape. Show x-section profile in data summary.
Channel width bankfull to bankfull	Meters	Yearly	Direct measure on transects
Channel depth bankfull to bankfull	Meters	Yearly	Direct measure along transects (note current water level height)
Soil moisture	Ohms	Yearly	Fiberglass blocks. Number of blocks per transect to be determined according to soil variability.

* For the following climatic parameters, information from the nearest location where weather data is collected, will be provided.

Temperature	Degrees	Daily	License
Precipitation	Millimeters	Daily	License
Relative humidity	Percent	Daily	CA Dept of Water Resources, or nearest source
Wind speed	Meters/second	Daily	CA Dept of Water Resources, or nearest source

VEGETATIVE PARAMETERS TO BE MEASURED IN 1993, 1994, 1995, AND THEN EVERY FIVE YEARS THEREAFTER, (i.e., 2000, 2005, etc.)

Yearly measurements are to be taken after peak flows, during the peak of vegetative production, and prior to annual reservoir drawdowns during the year in which monitoring is conducted.

All vegetative parameters will be identified by fluvial surface.

All vegetative parameters will be measured using belt transects, each five meters in width, with the exception of seedling beds and species composition, which will be determined for each entire site.

<u>Parameter</u>	<u>Units</u>	<u>Frequency</u>	<u>Method of Source of Data</u>
<u>Riparian Vegetative Zone Width</u>	Meters	Yearly	Direct measure with tape. Show x-profile with corresponding fluvial surfaces in data summary.
<u>Absolute Cover (transects)</u>			
Tree/shrub cover	Percent	Yearly	Belt transect by species and by size/age classes.
Herbaceous cover	Percent	Yearly	Nested sq meter plot (min. 3 per transect).
Ground cover (rock, litter, bare ground, water, moss)	Percent	Yearly	Nested sq meter plot (min. 3 per transect); use SCS stds for rock categories.
<u>Absolute Cover (site walkover)</u>	Percent	Yearly	Ocular estimate of absolute cover by species, over entire plot
Frequency	Number	Yearly	Number of individuals recorded during cover estimate on belt transect and cover estimate over

			entire plot.
			Display from plot and belt transect data.
<u>Species Richness</u>	Number	Yearly	Belt transects-count individuals species and by size/age classes.
<u>Relative Importance</u>	#/hectare	Yearly	Belt transect-direct measure or estimation, by species and by size/age classes.
Tree and shrub density			
Tree and shrub height	Meters	Yearly	Display from plot and belt transect data.
Relative cover			
	Percent	Yearly	Measure along transect by species
<u>Stand Age and Productivity</u>			
Tree diameter at breast height	Cm	Yearly	Increment bore taken only once per tree.
Tree growth			
	Cm/yr	Baseline and 10 yr interval	Increment bore will be taken only once per tree.
	Years	Baseline and 10 yr interval	For species with height/dbh relationships
		Yearly	Reference unit estimation method species.
		Yearly	Nested plots on transect, reference unit estimation, by species.
		Yearly	Count stems on transect.
		Yearly	Count stems on transect.
		Yearly	Ocular estimate, brief description of cause, include collection of damaged leaves & insects for verification.
		Yearly	Count by species and size class over whole site.
		Yearly	

		Yearly	Entire site, in channel; record substrate and location.
		Yearly	Presence or absence on transects fluvial surfaces.
		Monthly	Bud scar count and height by species.
		Yearly	Ocular observation and ht by species.
		Yearly	Avg ht and number by species of those to small to increment bore
		Yearly	% of ground area shaded by all wo veg. Using a ceptometer or spher densiometer.
		Yearly	Ceptometer reading mid-stream channel pt on transect.
			Minimum 4/transect: upstream, downstream, endpoints
			False color infrared.
			Minimum of 4/location (upstream, downstream, and endpoints) at 5 locations to be identified between Waugh Lake and Rush Creek Powerh (other than the 3 aquatic/riparia monitoring sites)

Tree age	Years	Baseline and 10 yr interval	Increment bore will be taken only once per tree.
Biomass			
Trees	Kg/hectare	Yearly	For species with height/dbh relationships
Shrubs	Kg/hectare	Yearly	Reference unit estimation method, by species.

Herbaceous	Kg/hectare	Yearly	Nested plots on transect, reference unit estimation, by species.
Shrub stem number	#/shrub	Yearly	Count stems on transect.
Tree stem number for multi-stemmed trees	#/tree	Yearly	Count stems on transect.
<u>Mortality</u> Trees & Shrubs	% of total by species on transect	Yearly	Ocular estimate, brief description of cause, include collection of damaged leaves insects for verification.
Snags	Number/ac	Yearly	Count by species and size class over whole site.
<u>Recruitment</u> Seedling beds	Number, spp	Monthly	Entire site, in channel; record substrate and location.
Seedlings	Number, spp	Yearly	Presence or absence on transects by fluvial surfaces
Tree & shrub juveniles			Bud scar count and height by species.
Shoot age	Years/meters	Yearly	Ocular observation and ht by species.
Shoot origin	Sexual or veg./meters	Yearly	Avg ht and number by species those to small to increment
Basal diameter	Millimeters	Yearly	bore.
Canopy Closure	Percent		
Stream Shading	Percent		

	35 mm (black and white prints)		
<u>Shading</u> Canopy Closure	Percent	Yearly	% of ground area shaded by all woody veg. using a ceptometer or sphere densiometer.
Stream Shading	Percent	Yearly	Ceptometer reading mid-stream, channel pt on transect.
<u>Photo documentation</u> Photo points	35 mm (black and white prints)	Yearly	Minimum 4/transect: upstream, downstream, endpoints
Aerial photos	1":500'	Yearly	False color infrared.
Off-site Photo Points	35 mm (black and white prints)	Yearly	Minimum of 4/location (upstream, downstream, and endpoints) at 5 locations to be identified between Waugh Lake and Rush Creek Powerhouse (other than the 3 aquatic/riparian monitoring sites)

AQUATIC PARAMETERS TO BE MEASURED IN 1993, 1994, 1995, AND THEN ONCE EVERY FIVE YEARS THEREAFTER (I.E., 2000,2005, ETC.)

Yearly measurements will be taken after peak flows, during the peak of vegetative production, and prior to annual reservoirs drawdowns during the year in which monitoring is conducted.

All parameters will be measured along the same transects used for riparian monitoring. Unless otherwise indicated, parameters are measured at 15 evenly spaced sampling points across each transect.

<u>Parameter</u>	<u>Units</u>	<u>Frequency</u>	<u>Method of Source of Data</u>
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<u>Height of Bankfull</u>	cm	Yearly	vertical distance from water level to bankfull
<u>Wetted Perimeter width</u>	cm	" "	distance across wetted perimeter of channel
<u>Water Depth</u>	cm	" "	at each sampling point along transects
<u>Water Velocities</u>	ft/sec	Yearly	at each sampling point along transects
<u>Discharge</u>	cu ft/sec	" "	calculate from water depth and velocity
<u>Channel Substrate</u>	cm	" "	actual particle size for each sampling point along line transect.
Size Composition	percent	" "	a) ocular estimate of particle size distribution along wetted width of veg. Belt transects b) calculated from above point sampling estimates and grouped as follows: boulder > 30 cm cobble 8-30cm gravel 0.5cm-8cm sand 0.1-0.5cm fines < 0.1cm
Embeddedness	percent	" "	% percent particles embedded in fine/sand substrates at each sampling point along transects. After Pfankuch (1978) for each transect.
Consolidation	rating	" "	Measured from water surface.
<u>Streambank angle</u>	degrees	" "	Horizontal extension of bank out over water.
<u>Streambank overhang</u>	cm	" "	Using densiometer or similar device with right, left, and midchannel readings at each transect.
<u>Stream Canopy Cover</u>	%	" "	Horizontal coverage of substrate by submerged organic debris. horizontal coverage of transect

	cm	" "	by aquatic vegetation.
	cm	" "	
<u>Submerge Debris</u>	cm	" "	Horizontal coverage of substrate by submerged organic debris.
<u>Aquatic Vegetation</u>	cm	" "	Horizontal coverage of transect by aquatic vegetation.

Immediately following the third five-year monitoring interval, (i.e., following the year 2011), the Licensee shall prepare, using the data collected as required above, an analysis of the effects of the flow requirements (identified in Condition No. 4) on aquatic and riparian dependent resources. Based upon that analysis, the licensee shall recommend any changes in flow necessary to meet Forest Service management goals and objectives for aquatic/riparian dependent resources, as identified in the Inyo National Forest Land and Resource Management Plan. The licensee shall provide the FS, FG, and the U.S. Fish and Wildlife Service an opportunity to comment on their analysis and recommendations, and shall submit all such documentation to the Commission by no later than 6 months following the close of the second five-year monitoring interval. The above procedure will be repeated after each subsequent five-year monitoring interval. In addition, the Forest Service reserves the right to petition the Commission to amend the flows cited in Condition No. 4 if determined necessary to meet the above referenced management goals and objectives.

Condition No. 8 - Hazardous Substances Plan

Within 1 year following the date of issuance of this license and at least 60 days before starting any activities the FS determines to be of a land-disturbing nature on National Forest System land, the Licensee shall file with the Director, Office of Hydropower Licensing, a plan approved by the Forest Service for oil and hazardous substances storage and spill prevention and cleanup.

At a minimum, the plan must require the Licensee to (1) maintain in the project area, -a cache of spill cleanup equipment suitable to contain any spill from the project; (2) to periodically inform the Forest Service of the location of the spill cleanup equipment on National Forest System lands and of the location, type, and quantity of oil and hazardous substances stored in the project area; and (3) to inform the FS immediately of the nature, time, date, location, and action taken for any spill.

The Licensee shall not commence activities the FS determines to be

affected by the plan until after 60 days following the filing date, unless the Director, Office of Hydropower Licensing, prescribes a different commencement schedule.

Condition No. 9 - Erosion Control Plan

Within 1 year following the date of issuance of this license and before starting any activities the FS determines to be of a land-disturbing nature on NFS land, the Licensee shall file with the Director, Office of Hydropower Licensing, a plan approved by the FS for the control of erosion, stream sedimentation, dust, and soil mass movement. The Licensee shall not commence activities the FS determines to be affected by the plan until after 60 days following the filing date, unless the Director, Office of Hydropower Licensing, prescribes a different commencement schedule.

Condition No. 10 - Spoil Disposal

Within 1 year following the date of issuance of this license and before starting any activities the Forest Service determines to be of a land-disturbing nature on National Forest System land, the Licensee shall file with the Director, Office of Hydropower Licensing, a plan approved by the Forest Service for the storage and/or disposal of excess construction/tunnel spoils and slide material. At a minimum, the plan must address contouring of any storage piles to conform to adjacent land forms and slopes, stabilization and rehabilitation of all spoil sites and borrow pits, and prevention of water contamination by leachate and runoff. The plan also must include an implementation schedule and maintenance program.

The Licensee shall not commence activities the Forest Service determines to be affected by the plan until after 60 days following the filing date, unless the Director, Office of Hydropower Licensing, prescribes a different commencement schedule.

Condition No. 11 - Visual Resource Protection

Before starting any activities the FS determines to be of a land-disturbing nature on NFS lands, the Licensee shall file with the Director, Office of Hydropower Licensing, a plan approved by the FS for the design and construction of project facilities in order to preserve or enhance its visual character. The plan must consider facility configurations and alignments, building materials, color, conservation of vegetation, landscaping, and screening. Project facilities of concern to this plan include, among other things, clearings, diversion structures, penstocks,

pipes, ditches, powerhouses, other buildings, transmission lines and corridors, and access roads.

Condition No. 12 - Protection of Sensitive and T&E Species

Within 1 year from the issuance of this license and before starting any activities the FS determines to be of a land-disturbing nature on NFS land, the Licensee shall file with the Director, Office of Hydropower Licensing, a

detailed implementation plan approved by the FS for the mitigation of impacts to sensitive, threatened, and endangered plant and animal species located within the area to be disturbed.

The Licensee shall not commence activities the FS determines to be affected by the plan until after 60 days following the filing date, unless the Director, Office of Hydropower Licensing, prescribes a different commencement schedule.

Condition No. 13 - Cultural Resources Management

Within 1 year following issuance of this license, the Licensee shall submit for Forest Service approval a multi-year plan to implement provisions of the "Management Plan for Historic and Archaeological Resources Associated with the Lee Vining Creek Hydroelectric Project" (White, 1990) concerning the management of those resources within the project boundaries. These provisions will allow for compliance with Section 106 of the National Historic Preservation Act. The Licensee shall consult with the California State Historic Preservation Officer and the Inyo National Forest prior to the demolition, alteration, or remodeling of the contributing properties that would affect their significant characteristics. The Licensee shall implement the Plan in a manner satisfactory to the Forest Service and the California State Historic Preservation Office, and consistent with the Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation.

Condition No. 14 - Requirement to Obtain a Forest Service Special-Use Authorization.

Within 6 months following the date of issuance of this license and before starting any activities the FS determines to be of a land-disturbing nature, the Licensee shall obtain from the FS a special-use authorization for the occupancy and use of NFS lands, and that authorization shall be filed with the Director, Office of Hydropower Licensing.

The Licensee may commence land-disturbing activities authorized by the license and special-use authorization 60 days following the filing date of such authorization, unless the

Director, Office of Hydropower Licensing, prescribes a different commencement schedule.

Notwithstanding the authorizations granted under the Federal Power Act, NFS lands within the project boundaries shall be managed by the FS under the laws, rules, and regulations applicable to the NFS. The terms and conditions of the FS special-use authorization are enforceable by the FS under the laws, rules, and regulations applicable to the NFS. The violation of such terms and conditions also shall be subject to applicable sanctions and enforcement procedures of the Commission at the request of the FS. In the event there is a conflict between any provisions of the license and FS special-use authorization, the special-use authorization shall prevail on matters which the FS deems to affect NFS resources.