



Capital of the Adirondacks

**Village of Saranac Lake** 39 Main Street, 2nd Floor Suite 9 • Saranac Lake, NY 12983-2294 • Phone: (518) 891-4150 • [www.saranaclakeny.gov](http://www.saranaclakeny.gov)

**REQUEST FOR PROPOSALS  
FERC Relicensing  
P-8369-NY, Lake Flower  
Village of Saranac Lake**

The Village of Saranac Lake, is requesting proposals for a qualified vendor to complete a Federal Energy Regulatory Commission ("FERC") Relicensing of its P-8369-NY Lake Flower project.

**Purpose**

The purpose and scope of this contract is to provide services of a Qualified Firm for relicensing of Lake Flower Dam P-83659-001-NY

**Request for Proposal**

Refer to attached RFP, the work will be completed within the time frames as outlined within.

The Contractor shall provide any specialized instruments or equipment necessary to perform the Relicensing

Now Therefore, the Village Board of Saranac Lake authorizes the RFP in reference to the relicensing of Lake Flower Dam, FERC NO: 8369-001-NY



Request for Proposal

Relicensing Management Services

Village of Saranac Lake

**Lake Flower Dam Hydroelectric Project**

**FERC No. 8369-001-NY**

**Request for Proposal (RFP) – Lake Flower Dam Relicensing**

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## 1.0 INTRODUCTION

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Project works consists of: (1) - 24-foot-high 97-foot-long concrete dam with a crest elevation of 1533 feet MSL including a 49-foot-long spillway section with a crest elevation of 1528 feet MSL. (2) a reservoir with a surface area of 1,360 acres and a gross storage capacity of 6,200acre-feet at the spillway crest.

### 1.1 PROJECT FACILITIES

Project consists of one power house with a 200-kw generating unit and hydro mechanical water pumping for emergency water supply.

### 1.2 CURRENT PROJECT OPERATIONS

Project is licensed as an instantaneous run-of-the river for protection of fish and wildlife and shall maintain a minimum flow of 55 cubic feet per second. The cubic feet per second is measured at Dorsey St Bridge with a continuous monitoring system. Exhibit Current Licensing for FERC 8369-001-NY

### 1.3 RFP SCHEDULE

Following is the schedule for proposal submittal process:

- **Intent to Bid** - Bidders should indicate intent to submit a bid through an email response by August 23, 2021 to email Kareen Tyler, Village Clerk at [clerk@saranaclakeny.gov](mailto:clerk@saranaclakeny.gov).
- **Questions** - All questions regarding this RFP shall be submitted by 5:00 p m (EST) on August 30, 2021, to John M. Sweeney, email address [manager@saranaclakeny.gov](mailto:manager@saranaclakeny.gov). Village of Saranac Lake will distribute any responses to questions to all prospective bidders as an amendment to the RFP.
- **Proposal Due Date** - Proposals Due are due by 5:00 p m (EST) on September 6., 2021 and must be submitted electronically via email to email address [clerk@saranaclakeny.gov](mailto:clerk@saranaclakeny.gov) . Village of Saranac Lake is not responsible for any late delivery caused by faulty computer, ISP or other services. Proposals may be rejected if received later than the due date, unless an addendum to the RFP has been issued by Village of Saranac Lake for extension of time.

Following review of the submitted proposals, Village of Saranac Lake may at its discretion request interviews with firms submitting the top ranked proposals.

#### **1.4 CONTACT INFORMATION**

Following is the contact information for questions and proposal submittals:

John M. Sweeney, Village Manager, 39 Main St, Saranac Lake, NY 12983 [manager@saranaclakeny.gov](mailto:manager@saranaclakeny.gov)

#### **1.5 SELECTION CRITERIA AND PROPOSAL EVALUATION**

The successful consultant will satisfy the following qualifications:

- A proven record of successfully providing strategic guidance for relicensing hydroelectric projects;
- A record of success in Project Management of relicensing efforts including planning, scheduling and managing cost-effective processes;
- Expert knowledge of and experience with FERC procedures, NEPA and CWA 401 certification processes;
- Expert knowledge and experience working with FERC and relevant federal and state agencies in the relicensing process and ability to be approved by FERC for licensing qualifications;
- A credible reputation for working with FERC, federal and state agencies, Tribes and NGOs in the relicensing process;
- Proficiency in providing information and data management services related to FERC relicensing and managing electronic databases;
- Proven experience in hiring, managing and integrating the work of sub-consultants; and,
- A working knowledge of hydroelectric operations, and associated water and environmental resources in the region [e.g., Northeast or Midwest],

All proposals received by the deadline will be evaluated for responsiveness to the RFP. Proposals found to be non-responsive or deficient may be rejected. All proposals found to be responsive will be

reviewed by and ranked by Village of Saranac Lake. Village of Saranac Lake will conduct reference checks at its discretion.

### **1.6 PRICING**

Bidders shall provide a time and materials, not-to-exceed, pricing for the specified scope of work as provided in this RFP, with a detailed breakdown by task of labor and direct expenses, including any subcontracted expenses, as stipulated in Section 4.7 and 4.8 of this RFP. Bidders shall provide rate sheets to include team members and job titles identified to perform the work.

Village of Saranac Lake anticipates that the services for the selected contractor will extend throughout the term of the relicensing process. Additional services may be requested during the course of the relicensing; such additional work will require independent authorization from Village of Saranac Lake.

### **1.7 TERM OF CONTRACT AND WORK AUTHORIZATION**

The successful consultant will contract with Village of Saranac Lake to perform a scope of work consistent with Section 2 of this RFP. The successful bidder must review the Commercial Terms and Conditions provided in Attachment A of this RFP, and any exceptions to these shall be noted in the proposal submittal, as specified in Section 4.9 of this RFP. Work may not begin until approved by Village of Saranac Lake and an authorized representative of the successful bidder has executed a signed agreement.

## **2.0 SCOPE OF WORK**

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The following scope of work provides a general description of the scope of services to support the FERC relicensing of the Lake Flower Dam, FERC NO: 8369-001-NY Hydroelectric Project. The selected contractor shall provide all work and associated products so that they are complete and sufficient to satisfy, at a minimum, the requirements of FERC and applicable sections of 18 CFR, and requirements subsequent to Section 401 of the Federal Clean Water Act. In addition, all reports, maps, drawings, and license exhibits shall be compatible with final FERC content and format requirements and shall be suitable for electronic filing and publication.

The selected contractor shall provide ample time in the schedule for submittal of all draft documents to Village of Saranac Lake for review prior to distribution of materials to stakeholders and filing with FERC. In addition to these specified services, Bidders may identify and provide a proposed scope of work and

cost estimate for any additional optional tasks they deem necessary or beneficial to Village of Saranac Lake for successful relicensing of the Project. Bidder must clearly state any assumptions for specific tasks defined in the Scope of Work.

### **2.1 STRATEGIC SERVICES AND PROJECT MANAGEMENT**

Serve as the lead licensing consultant to Village of Saranac Lake, performing strategic planning, budgeting, scheduling and oversight activities associated with the relicensing of the project.

### **2.2 INFORMATION MANAGEMENT**

Collect, make-available, publish and maintain data necessary for the relicensing effort, including, but not limited to:

- Develop, provide and maintain public and internal documents developed during the relicensing process.
- Develop and maintain a website and/or other means to provide public information and internal document facilitation. Provide supporting protocols for the use of the system as well as training and maintenance of the system as required.
- Develop, provide and maintain data and databases, including but not limited to GIS, necessary for project management or preparation of relicensing materials.

### **2.3 SCIENTIFIC AND ENGINEERING SERVICES**

Develop study plans and protocols including but not limited to scientific and engineering work directly related to information needs for the relicensing. Manage relevant engineering and scientific studies and analyses. Bidders must provide a list of the anticipated studies in support of the relicensing efforts (both scientific (e.g., environmental) and engineering (e.g., upgrades or feasibility) related), an explanation of why specific studies are anticipated, and the estimated cost to complete each study, including draft and final study reports.

### **2.4 SUB-CONTRACTOR AND ADDITIONAL CONSULTANT MANAGEMENT**

Oversee and direct sub-contractors engaged in the relicensing effort. Provide quality control and oversight, as necessary, for services and work products of subcontractors and additional consultants.

## **2.5 DOCUMENT AND REPORT DEVELOPMENT AND FILING**

Prepare and produce documents, data, required environmental reports and/or other documents and materials supportive of the relicensing process for the Project. Examples of documentation (but neither exclusive nor inclusive) that may be required are listed below.

- Kick-off Meeting with Village of Saranac Lake
- Initial Agency Outreach and Site Visit
- Notice of Intent (NOI) and Pre-application Document (PAD)
- Proposed Study Plans
- Revised Study Plans (as necessary)
- Initial Study Report
- Updated Study Report
- Application to the NYSDEC, or other relevant agency for water quality certification under the CWA Section 401
- Preliminary Licensing Proposal (PLP) or Draft License Application
- License Application
- Application for Water Quality Certification
- Graphic materials related to any of the above
- Relicensing Schedule
- Annual and Task Specific Budgets
- Monthly Status reports
- Website and Information Management architecture
- GIS documentation and data to meet FERC requirements
- Responses to comments or requests related to any of the above documents

## **2.6 Facilitation, Negotiation and Information Support**

Arrange, attend and facilitate meetings, take and publish all meeting minutes, consultations and negotiations with agencies, non-governmental organizations and the public. Prepare information for presentations at public meetings and facilitate and lead such meetings. Collect data and prepare summary reports of meetings and consultations.

## **3.0 PROPOSAL CONTENT REQUIREMENTS**

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Proposals should give a straightforward and concise description of the consultant's experience and capabilities to carry out the requested services. Proposals may have additional materials attached that further demonstrate expertise or proficiency.



Each bidder is required to provide the following information as part of the proposal package. Responses should follow the numbering format used below and shall specifically address the question or information requested in each section and sub-section.

**3.1 SECTION 1. LETTER OF INTEREST**

The letter of interest may contain information not requested or shown elsewhere in the proposal. No longer than two (2) pages.

**3.2 SECTION 2. ADMINISTRATIVE INFORMATION**

Provide the following information regarding your firm.

- A. Firm name and business address, telephone number, e-mail address, and web-site address for Principal-in-Charge and Project Manager.
- B. Year Firm was established, type of ownership, state of incorporation and parent company, if any.

**3.3 SECTION 3. EXPERIENCE, CAPABILITIES, AND PROPOSED PROJECT TEAM**

- A. Licensing and Relicensing Experience, particularly in the state(s) or region in which the project is located.
- B. Representative list of current (a FERC license has not been issued or your contract is continuing) and recent (license application was filed within the past 5 years) Projects, owners, locations and type of services for which your firm is the lead contractor for FERC licensing or re-licensing services. Also please provide reference contacts for at least three of these projects.
- C. Capabilities
  - 1) Discuss your firm's availability to manage the Project relicensing including the commitment of the project manager and other key personnel.
  - 2) Discuss your firm's ability to provide scientific and resource specific support (such as cultural resources, biological and ESA resources, water quality, etc.) relevant to FERC required documentation such as Environmental Reports, applicant prepared Environmental Assessments and to develop study plans, evaluate data and prepare reports required by FERC in the preparation of a PAD and other relicensing documentation.

- 3) Discuss your firm's capabilities for conducting cost-benefit analyses, as part of the licensing process. Describe how these analyses would be used for the Project.
- 4) Discuss your firm's capabilities for conducting public meetings and negotiations with agencies & other intervening parties.
- 5) Discuss your firm's information and document management capabilities. Village of Saranac Lake will require maintenance of all correspondence, documents, data, drawings and other supporting materials in an electronic format compatible with Village of Saranac Lake software and equipment, to include hard copy material.
  - a. Discuss how records and other information will be collected, maintained and indexed for the project, including how your firm will document meetings and other external communications.
  - b. Describe the format that will be used to make formal submittals (i.e., PAD, NOI, Scoping Documents, etc.) to the agencies and other interested parties (i.e. electronic, hardcopy, etc.)
  - c. Describe information management systems or software that may be used to facilitate internal and external access to documents, reports, correspondence, etc.
- 6) Discuss your firm's capabilities regarding GIS, CAD or other mapping, analysis, and drawing tools. Discuss how these tools will be used in the relicensing process.
- 7) Project Manager(s) and Key Personnel
  - a. Propose the Project Manager(s) for the project. Discuss their experience in managing similar projects and the responsibilities this individual(s) will have.
  - b. Describe the other key individuals proposed and their roles for the Project.

### **3.4 SECTION 4. APPROACH TO PROJECT RELICENSING**

Describe your general approach to organize and implement the Project relicensing, including the strategic approach to utilizing the FERC relicensing process name (ILP, TLP, ALP), and recommended FERC Process. Village of Saranac Lake intends to file the Pre-application Documents for the projects at the beginning of the 5 ½ year window defined by FERC regulations. Contract award is anticipated to

occur in Q2-3 2021, allowing for approximately one year to conduct initial agency outreach, gather information and develop the Pre-Application Documents and Notice of Intent documents.

### **3.5 SECTION 5. PROJECT MANAGEMENT**

- A. Discuss your firm's approach to project management, activities planning and budgeting and cost control measures for relicensing projects, including any planning, scheduling & budget tools proposed for the project and how they will be used. Provide specific efficiencies that would be achieved if awarded both projects.
- B. Discuss how the project team will interface with Village of Saranac Lake personnel, the resource agencies, and other stakeholders, including how your firm will manage internal and external communications, review of draft and final documents, document transmittal, etc.
- C. Village of Saranac Lake will require the consultant to provide routine reports on the status of work, including field studies, meetings, formal submittals, budgets, etc. It is assumed that regular status meetings and reports will be provided as a minimum, however, the frequency and nature of these meetings and reports (e.g. face-to-face meetings, conference calls, written reports, etc.) will be based on the needs of the particular phase of the project. Discuss how the status of the project will be tracked and reported to Village of Saranac Lake.

### **3.6 SECTION 6. KEY DELIVERABLES AND SCHEDULE**

Based on your current knowledge of the Projects and recommended process timeline (i.e., timing of filing the NOI/PAD within the 5-5 ½ year window), develop a proposed preliminary schedule for the relicensing effort. This may be provided as a spreadsheet or other format for convenience. Include the following milestones as a minimum:

- Project Management and Strategy Meetings
- Facility Information Collection Activities
- Regulatory Agency and Key Stakeholder Meetings (pre-filing)
- Key FERC submittal dates
- Study Plan Scoping Activities
- Internal Comment & Review Periods
- Dispute Resolution Activities
- Field Studies
- Public Information Activities
- Draft and Final License Application Activities

In addition, please identify any deliverables associated with the process timeline.

### 3.7 SECTION 7. ESTIMATED LABOR AND COSTS

- A. Based on your current knowledge of the Project, estimate the total number of man-hours and the total costs that may be associated with the following general phases of the re-licensing project:
- 1) Pre-planning and strategy activities - including budgeting, scheduling, issue identification, review of existing documents, project needs, agency meetings, etc.
  - 2) PAD/NOI preparation and filing activities – including information gathering, agency meetings, document preparation, etc.
  - 3) Field study design and implementation activities – including agency and public meetings, addressing comments, dispute resolution, studies, data evaluation, etc. Bidders must provide a list of the anticipated studies in support of the relicensing efforts, and an explanation of why specific studies are anticipated to be required by FERC and/or agencies. Bidders shall provide cost estimates for each individual study, including draft and final study reports. Bidders shall also identify any potential strategies to minimize study requests or requirements, to the extent possible.
  - 
  - 4) Draft and Final License Application preparation and filing activities
  - 5) Post-license filing support activities (until license is issued) – including meetings, filing of comments, draft license reviews, negotiation support, etc.
- B. Provide all assumptions that are used to develop the labor and cost estimates (such as number of meetings, types and nature of studies (field work versus literature reviews), availability of information, etc. should be included to clarify the estimates.
- C. Based on your current knowledge of the Project and your proposed approach, provide an estimate of the anticipated cost **by month** from initiation of the contract through receipt of the license. Assume that work begins in Q3 of 2021 and that new licenses are issued before October 27, 2027.

**3.8 SECTION 8. RATES FOR SERVICES AND EQUIPMENT**

- A. Provide your firm's current rates for services (staffing categories and rates) and equipment.
- B. Discuss how your firm will bill per diem, travel, expenses, fees and other extraordinary items during the project.
- C. Provide your current rates for administrative services such as copying, printing, computer and equipment use.

**3.9 SECTION 9. EXCEPTIONS AND CONFLICT OF INTEREST STATEMENT**

- A. Exceptions - Provide a copy of already negotiated commercial terms between the parties that are acceptable for this consulting engagement.
- B. Conflict of Interest - Clearly identify any potential conflict of interest your firm (or subcontractors, if applicable) may have if awarded the relicensing of these projects and any relationship your firm may have (past or present) with other hydropower owners or other entities that may be a stakeholder in the relicensing. If applicable, state what measures will be taken to address the conflict.

## **Attachments**

**FEDERAL ENERGY REGULATORY COMMISSION**  
**WASHINGTON, D.C. 20426**

OFFICIAL BUSINESS  
PENALTY FOR PRIVATE USE, \$300



POSTAGE AND FEES PAID  
FEDERAL ENERGY  
REGULATORY COMMISSION  
FERC-361

P - 000269000 110814  
DAVID MACDOWELL, DIRECTOR  
MACDOWELL, DAVID  
OFFICE OF COMMUNITY DEVELOPMENT  
38 MAIN STREET  
SARANAC LAKE NY 10983

UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Village of Saranac Lake Project No. 8369-081

ORDER ISSUING LICENSE  
(Minor Project)  
( Issued October 27, 1987 )

The Village of Saranac Lake has filed a license application under Part I of the Federal Power Act (FPA) to construct, operate, and maintain the Lake Flower Water Power Project, located in Franklin County, New York, on the Saranac River, a navigable waterway of the United States. <sup>1/</sup>

Notice of the application has been published. No protests or motions to intervene were filed in this proceeding, and no agency objected to issuance of this license. Comments received from interested agencies and individuals have been fully considered in determining whether to issue this license, as discussed below.

Recommendations of Federal and State Fish and Wildlife Agencies

Section 10(j) of the FPA, as amended by the Electric Consumers Protection Act of 1986 (ECPA), Pub. L. No. 99-495, requires the Commission to include license conditions based on recommendations of federal and state fish and wildlife agencies for the protection, mitigation, and enhancement of fish and wildlife. The environmental assessment for the Lake Flower Water Power Project addresses the concerns of the federal and state fish and wildlife agencies, and makes recommendations consistent with those of the agencies.

Comprehensive Plans

Section 10(a)(2) of the FPA, as amended by ECPA, requires the Commission to consider the extent to which a project is consistent with comprehensive plans (where they exist) for improving, developing, or conserving a waterway or waterways affected by the project that are prepared by an agency established, pursuant to federal law, that has the authority to prepare such plans or by the state in which the facility is or will be located. The Commission considers plans to be within the scope of section 10(a)(2) only if such plans reflect the preparers' own balancing of the competing uses of a waterway, based on their data and applicable policy considerations (i.e., consider and balance all

<sup>1/</sup> Order Issuing License (Major), New York State Electric & Gas Corporation, Project No. 2738 (issued September 23, 1980).

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relevant public use considerations). With regard to plans prepared at the state level, such plans are within the scope of section 10(a)(2) only if they are prepared and adopted pursuant to a specific act of the state legislature and developed, implemented, and managed by an appropriate state agency. <sup>2/</sup>

No comprehensive plans of the type referred to in section 10(a)(2) of the FPA relevant to this project have been identified. Four resource plans <sup>3/</sup> that touch on various aspects of waterway management were brought to our attention and have been reviewed in relation to the proposed project as part of our broad public interest examination under section 10(a)(1) of the FPA. No conflicts were found.

Based upon our review of the agency and public comments filed in this proceeding, and an independent analysis, as discussed herein, it is concluded that the Lake Flower Water Power Project is best adapted to a comprehensive plan for the Saranac River, taking into consideration the beneficial public uses described in section 10(a)(1) of the FPA.

Summary of Findings

An Environmental Assessment (EA) was issued for this project. Background information, analysis of impacts, support for related license articles, and the basis for a finding of no significant impact on the environment are contained in the EA attached to this order. Issuance of this license is not a major federal action significantly affecting the quality of the human environment.

<sup>2/</sup> See Fieldcrest Mills, Inc., 37 FERC 161,264(1986).

<sup>3/</sup> New York State Department of Environmental Conservation's Master Plan for Development of Salmonid Fisheries in Lake Champlain - 1977; New York State Department of Environmental Conservation and Adirondack Park Agency's Adirondack Park State Land Master Plan-1985; New York State Office of Parks, Recreation and Historic Preservation's New York Statewide Comprehensive Recreation Plan-1983; New York State Energy Office's Analysis of Electricity Supply Options for New York State-1985.



The design of this project is consistent with the engineering standards governing dam safety. The project will be safe if constructed, operated, and maintained in accordance with the requirements of this license. Analysis of related issues is provided in the Safety and Design Assessment attached to this order.

The Director, Office of Hydropower Licensing, concludes that the project would not conflict with any planned or authorized development, and would be best adapted to comprehensive development of the waterway for beneficial public uses.

The Director orders:

(A) This license is issued to the Village of Saranac Lake (licensee) for a period of 40 years, effective the first day of the month in which this order issued, to construct, operate, and maintain the Lake Flower Water Power 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, shown by Exhibit G:

<u>Exhibit</u>	<u>PERC No. 8369-</u>	<u>Showing</u>
G	5	Project Location & Impoundment Map

(2) Project works consisting of: (1) a 24-foot-high, 97-foot-long concrete dam with a crest elevation of 1,533 feet MSL including a 49-foot-long spillway section with a crest elevation of 1,528 feet MSL; (2) a reservoir with a surface area of 1,360 acres and a gross storage capacity of 6,200 acre-feet at the spillway crest; (3) two powerhouses, one containing a 75-kW generating unit and the other a 165-kW generating unit for a total installed capacity of 240-kW; (4) a 100-foot-long, 13.2-kV transmission line; (5) the 0.48-kV generator leads; (6) the 0.48/13.2-kV transformer; and (7) appurtenant facilities.

The project works generally described above are more specifically shown and described by those portions of Exhibits A and F recommended for approval in the attached Safety and Design Assessment.

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

(C) The Exhibit G described above and those sections of Exhibits A and F recommended for approval in the attached Safety and Design Assessment are approved and made part of the license.

(D) The following sections of the Federal Power Act (Act) are waived and excluded from the license for this minor project:

4(b), except the second sentence; 4(e), insofar as it relates to approval of plans by the Chief of Engineers and the Secretary of the Army; 6, insofar as it relates to the acceptance and expression in the license of terms and conditions of the Act that are waived here; 10(c), insofar as it relates to depreciation reserves; 10(d); 10(f); 14, except insofar as the power of condemnation is reserved; 15\*; 16; 19; 20; and 22.

\* At the expiration of this license, any license application filed, including the licensee's, will be treated as an original license application. The municipal preference provisions of Section 7(a) of the Federal Power Act will apply.

(E) This license is subject to the articles set forth in Form L-14, (October 1975), entitled "Terms and Conditions of License for Unconstructed Minor Project Affecting Navigable Waters of the United States," except Article 15. The license is also subject to the following additional articles:

Article 201. The licensee shall pay the United States the following annual charge, effective the first day of the month in which this license is issued:

For the purpose of reimbursing the United States for the cost of administration of Part I of the FPA, 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 320 horsepower.

Article 202. The licensee shall clear and keep clear to an adequate width all lands along open conduits and shall dispose of all temporary structures, unused timber, brush, refuse, or other material unnecessary for the purposes of the project which result from maintenance, operation, or alteration of the project works. In addition, all trees along the periphery of project reservoirs which may die during operations of the project shall be removed. All clearing of lands and disposal of unnecessary material shall be done with due diligence to the satisfaction of the authorized representative of the Commission and in accordance with appropriate federal, state, and local statutes and regulations.

Article 301. The licensee shall commence construction of project works within two years from the issuance date of the license and shall complete construction of the project within four years from the issuance date of the license.

Article 302. The licensee shall at least 60 days prior to start of construction, submit one copy to the Commission's Regional Director and two copies to the Director, Division of Inspections of the final contract drawings and specifications for pertinent features of the project, such as water retention structures, powerhouse, and water conveyance structures. The Director, Division of Inspections may require changes in the plans and specifications to assure a safe and adequate project.

Article 303. The licensee shall review and approve the design of contractor-designed cofferdams and deep excavations prior to the start of construction and shall ensure that construction of cofferdams and deep excavations is consistent with the approved design. At least 30 days prior to start of construction of the cofferdam, the licensee shall submit to the Commission's Regional Director and Director, Division of Inspections, one copy each of the approved cofferdam construction drawings and specifications and the letter(s) of approval.

Article 304. The licensee shall within 90 days of completion of construction file, for approval by the Commission, revised Exhibits A, F, and G to describe and show the project as built.

Article 401. The licensee, after consultation with the Adirondack Park Agency, the New York State Department of Environmental Conservation, and the U.S. Fish and Wildlife Service, shall prepare and file with the Commission for approval before commencing any project-related land-clearing, land-disturbing, or spoil-producing activities, a comprehensive plan to control erosion, dust, and slope stability, and to minimize the quantity of sediment or other potential water pollutants resulting from

project construction, spoil disposal, and project operation and maintenance. The Commission reserves the authority to require changes to the plan. No project-related land-clearing, land-disturbing, or spoil-producing activities shall begin until the licensee is notified that the plan complies with the requirements of this article. The plan shall be based on actual-site geological, soil, slope, and groundwater conditions and the final project design, and shall include detailed descriptions of the actual-site conditions, detailed descriptions and functional design drawings of control measures, topographic map locations of all control measures, a specific implementation schedule, specific details of monitoring and maintenance programs for the project construction period and for project operation, and a schedule for periodic review of the plan and for making any necessary revisions to the plan. The licensee shall include in the filing documentation of consultation with the agencies before preparing the plan, copies of agency comments or recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how all of the agency comments and recommendations are accommodated by the plan. The licensee shall allow a reasonable time frame, in no case less than 30 days, for agencies to comment and make recommendations prior to filing the plan. If the licensee disagrees with any agency recommendations, the licensee shall provide a discussion of the reasons for disagreeing, based on actual-site geological, soil, and groundwater conditions, and shall also provide written responses from the agencies on the licensee's reasons for disagreement.

Article 402. The licensee shall operate the Lake Flower Project in an instantaneous run-of-river mode for the protection of fish and wildlife resources in the Saranac River. The licensee, in operating the project in an instantaneous run-of-river mode, shall at all times act to minimize the fluctuation of the impoundment surface elevation, by maintaining a sufficient discharge from the project so that flow in the Saranac River, as measured immediately downstream of the project tailrace, approximates the instantaneous sum of the inflow to the impoundment. Instantaneous run-of-river operation may be temporarily modified if required by operating emergencies beyond the control of the licensee and for short periods upon mutual agreement between the licensee and the New York State Department of Environmental Conservation, and the U.S. Fish and Wildlife Service.

Article 403. The licensee shall discharge from Lake Flower, a continuous minimum flow of 55 cubic feet per second, as measured immediately downstream from the reservoir dam into the bypass channel, or inflow to the reservoir, whichever is less, for the protection of fish and wildlife resources in the Saranac River. All

flows in excess of the maximum hydraulic capacity of the project shall also be passed over the spillway and through the outlet works when necessary. These flows may be temporarily modified if required by operating emergencies beyond the control of the licensee and for short periods upon mutual agreement between the licensee and the Adirondack Park Agency, the New York State Department of Environmental Conservation, and the U.S. Fish and Wildlife Service.

Article 404. The licensee, after consultation with the New York State Department of Environmental Conservation, and the U.S. Fish and Wildlife Service, shall develop a plan to monitor the instantaneous flow releases and minimum flow releases required by articles 402 and 403, respectively. The plan shall include the location and design of gages, a schedule for the installation and calibration of the gages, identification of the method of flow data collection, and provisions for providing the flow data to the agencies. The plan shall be filed with the Commission for approval within 1 year from the date of issuance of this license and prior to commencement of project operations and shall include comments from the consulted agencies on the plan. The Commission reserves the authority to require modification to the plan.

Article 405. The licensee shall consult with the New York State Department of Environmental Conservation and the U.S. Fish and Wildlife Service on the final design of the trashracks at the intakes to minimize attraction and entry of fish. Within 5 months from the date of issuance of this license, the licensee shall file for Commission approval functional design drawings of the trash-rack structures at the intake for preventing the attraction and entry of fish. These facilities shall be operational at the time of project startup. The filing shall include documentation of consultation and comments of the consulted agencies on the drawings. The Commission reserves the authority to require modification to the design. The licensee shall file as-built drawings with the Commission within 6 months after completion of construction.

Article 406. The licensee, after consultation with the Adirondack Park Agency (APA) and the New York State Department of Environmental Conservation (DEC), and prior to the commencement of project operation, shall: (1) construct the switchyard behind the former powerhouse on the left bank of the Saranac River; (2) screen the switchyard as much as possible from view; and (3) bury the proposed transmission line. Within 3 months from the completion of the above measures, the licensee shall file with the Commission, as-built drawings showing the location of the above facilities and screening. Consultation with the APA and DEC shall be included in the filing.

Article 407. The licensee, after consultation with the Adirondack Park Agency and the New York State Department of Environmental Conservation and within 1 year from the issuance date of the license, shall file for Commission approval, a long-range plan for the maintenance and enhancement of existing recreational facilities in the project area. The plan shall include, but not be limited to, provisions for a canoe portage around the dam with take-out and reentry facilities, a long-range program for maintaining and enhancing other recreational facilities, a construction schedule, a map showing the type and location of existing and proposed facilities and improvements, and documentation of agency consultation.

Article 408. The licensee, before starting any land-clearing or land-disturbing activities, other than those specifically authorized in this license, shall consult with the New York State Historic Preservation Officer (SHPO). If the licensee discovers previously unidentified archeological or historic properties during the course of constructing or developing project works or other facilities at the project, the licensee shall stop all land-clearing and land-disturbing activities in the vicinity of the properties and consult with the SHPO. In either instance, the licensee shall file with the Commission a cultural resources management plan prepared by a qualified cultural resource specialist after having consulted with the SHPO.

The management plan shall include: (1) a description of each discovered property indicating whether it is listed on or eligible to be listed on the National Register of Historic Places; (2) a description of the potential effects on each discovered property; (3) proposed measures for avoiding or mitigating effects; (4) documentation of the nature and extent of consultation; and (5) a schedule for mitigating effects and conducting additional studies. The Commission reserves the authority to require changes to the plan.

The licensee shall not begin land-clearing or land-disturbing activities, other than those specifically authorized in this license, or resume such activities in the vicinity of a property discovered during construction, until informed that the requirements of this article have been fulfilled.

Article 409. (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 other 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 uses 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, cancelling the permission to use and occupy the project lands and waters and requiring the removal of any non-complying structures and facilities.

(b) The types of use and occupancy of project lands and waters for which the licensee may grant permission without prior Commission approval are: (1) landscape plantings; (2) non-commercial piers, landings, boat docks, or similar structures and facilities that can accommodate no more than 10 watercraft at a time and where said facility is intended to serve single-family type dwellings; and (3) embankments, bulkheads, retaining walls, or similar structures for erosion control to protect the existing shoreline. 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 uses 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 and roads for which all necessary state and federal approvals have been obtained; (2) storm drains and water mains; (3) sewers that do not discharge into project waters; (4) minor access roads; (5) telephone, gas, and electric utility distribution lines; (6) non-project overhead electric transmission lines that do not require erection of support structures within the project boundary; (7) submarine, overhead, or underground major telephone distribution cables or major electric distribution lines (69-kV or less); and (8) water intake or pumping facilities that do not extract more than one million gallons per day from a project reservoir. No later than January 31 of each year, the licensee shall file three copies of a report briefly describing for each conveyance made under this paragraph (c) during the prior calendar year, the type of interest conveyed, the location of the lands subject to the conveyance, and the nature of the use for which the interest was conveyed.

(d) The licensee may convey fee title to, easements or rights-of-way across, or leases of project lands for: (1) construction of new bridges or roads for which all necessary state and federal approvals have been obtained; (2) sewer or effluent lines that discharge into project waters, for which all necessary federal and state water quality certificates 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 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 the edge of the project reservoir at normal maximum 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 45 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 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 paragraphs (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 covenants running with the land adequate to ensure that: (i) the use of the lands conveyed shall not endanger health, create a nuisance, or otherwise be incompatible with overall project recreational use; and (ii) the grantee shall take all reasonable precautions to ensure that the construction, operation, and maintenance of structures or facilities on the conveyed lands will occur in a manner that will protect the scenic, recreational, and environmental values of the project.


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

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

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

(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 issued under authority delegated to the Director and is final unless appealed under Rule 1902 to the Commission by any party within 30 days from the issuance date of this order. Filing an appeal does not stay the effective date of this order or any date specified in this order. The licensee's failure to appeal this order shall constitute acceptance of the licensee.

  
Fred E. Springer  
Acting Director, Office  
of Hydropower Licensing

ENVIRONMENTAL ASSESSMENT  
DIVISION OF ENVIRONMENTAL ANALYSIS, OFFICE OF HYDROPOWER LICENSING  
FEDERAL ENERGY REGULATORY COMMISSION

Date: September 23, 1987

Project name: Lake Flower FERC No. 8369-001

A. APPLICATION

1. Application type: Minor License Date filed: 11 / 13 / 86  
2. Applicant: Village of Saranac Lake  
3. Water body: Saranac River River basin: Lake Champlain  
4. Nearest city or town: Saranac Lake  
5. County: Franklin & Essex State: New York

B. PURPOSE AND NEED FOR ACTION

1. Purpose: The proposed project would provide an estimated average of 892,000 kilowatthours (kWh) of electric energy per year to the Niagara Mohawk Power Corporation, a local utility.
2. Need for power: The power from the project would be useful in meeting a small portion of the need for power projected for the New York Power Pool (NYPP) area of the Northeast Power Coordinating Council (NPCC) region. From the time the project would go on-line (i.e., into commercial operation), it would be available to displace fossil-fueled electric power generation in the NPCC region and adjacent areas, thus conserving nonrenewable fossil fuels and reducing the emission of noxious byproducts caused by the combustion of fossil fuels.

C. PROPOSED PROJECT AND ALTERNATIVES

1. Description of the proposed action: The proposed project would consist of the following facilities: (1) an existing 24-foot-high, 97-foot-long concrete dam with a crest elevation of 1,533 feet mean sea level (msl), including a 49-foot-long spillway section with a crest elevation of 1,528 feet msl; (2) an existing reservoir with a surface area of 1,360 acres and a gross storage capacity of 6,200 acre-feet at the spillway crest; (3) two existing powerhouses, one on either abutment of the dam; (4) a new 75-kilowatt (kW) generating unit to be installed in one of the powerhouses and a new 165-kW generating unit to be installed in the other powerhouse for a total installed capacity of 240 kW; (5) a 13.2-kilovolt overhead transmission line, less than 100 feet long; and (6) appurtenant facilities. The applicant proposes to operate the project in a run-of-river mode (flow in the river below the project equals instantaneous inflow to the reservoir).
2. Applicant's proposed mitigative measures.
- a. Construction: The applicant proposes to minimize construction impacts by the following methods: (1) scheduling construction activities for low-flow periods; (2) testing all material to be excavated for toxic

substances; (3) removing all material in compliance with New York State Department of Environmental Conservation (DEC) and Department of the Army, New York District Corps of Engineers (Corps) permit requirements; (4) using earthen cofferdams during excavation work for the tailrace and powerhouse rehabilitation; (5) discharging water pumped from the excavation through a filter medium; (6) immediately correcting any excessive turbidity levels encountered during construction; (7) consulting the DEC prior to initiating of any action that would result in interruption of downstream flows, including cofferdam installation; (8) refueling construction vehicles and equipment away from the project site; (9) preventing spillage of debris and materials into the river; (10) protecting the integrity of the river bank; (11) preventing erosion of sediments into the river; (12) maintaining the same rate of water releases from the dam as would otherwise be provided to maintain downstream fish habitat; and (13) restoring vegetative cover disturbed or altered as a result of construction.

b. Operation: The applicant proposes to minimize operational and other post-construction project impacts by operating the project in a run-of-river mode, and by installing fencing around the project works to ensure public safety.

3. Federal lands affected.

- No.  Yes; agency: \_\_\_\_\_; acreage = \_\_\_\_\_;  
 The federal land management agency has provided conditions by letter dated: \_\_\_\_/\_\_\_\_/\_\_\_\_ (Attachment \_\_\_\_).  
 Conditions have not been provided.

4. Alternatives to the proposed action: Because the applicant is not an electric utility, the available alternatives are to construct or not construct the project. If the license is not issued, the project would not be constructed, and the power that would have been developed from a renewable resource would be lost and eventually would have to be provided using nonrenewable fuels.

D. CONSULTATION AND COMPLIANCE

1. Fish and wildlife consultation (Fish & Wildlife Coordination Act).  
a. U.S. Fish & Wildlife Service (FWS) :  Yes  No  
b. State(s) :  Yes  No  
c. National Marine Fisheries Service (NMFS) :  Yes  No

2. Section 7 consultation (Endangered Species Act).

a. Listed species: None, except for occasional transient individuals.

b.  Not required.  Required; completed (date): \_\_\_\_/\_\_\_\_/\_\_\_\_.  
Remarks: The Department of the Interior (Interior), by letter dated April 29, 1987, states that no biological assessment or further Section 7 consultation is required.

3. Section 401 certification (Clean Water Act).

Not required.

Required; the applicant requested § 401 certification on 9 / 5 / 86.

Status:  Granted by the certifying state agency on: 6 / 11 / 87.

Waived by the certifying state agency on:  / /.

Waived; section 401 certification is waived if not acted upon by the certifying agency within 1 year from the date of the certifying agency's receipt of the request (See Commission Order No. 464, issued February 11, 1987).

Undetermined; 1 year has not yet elapsed since the applicant's request and the state agency has not yet acted on the request.

The 1-year period would expire on:  / /.

4. Cultural resource consultation (Historic Preservation Act).

a. Register status:  None.  Eligible or listed.

b. State Historic Preservation Officer (SHPO):  Yes  No.

c. National Park Service (NPS):  Yes  No.

d. Council:  Not required.  Completed (date):  / /.

e. Further consultation:  Not required.  Required.

Remarks: The New York State SHPO states that the proposed project would have no effect upon districts, sites, buildings, structures, objects, or archeological resources in or eligible for listing in the National Register of Historic Places (letter to the applicant from Julia S. Stokes, New York State Historic Preservation Officer, New York State Office of Parks, Recreation, and Historic Preservation, Albany, New York, May 22, 1986).

5. Recreation consultation (Federal Power Act).

a. U.S. Owners:  Yes  No b. NPS:  Yes  No

c. State(s) :  Yes  No

6. Wild and scenic rivers (Wild and Scenic Rivers Act).

Status:  None.  Listed. Determination completed:  / /.

Administering agency:

Remarks: The Saranac River is listed on the Nationwide Rivers Inventory as having potential for designation as a wild and scenic river. Interior, however, by letter dated April 29, 1987, states that the proposed project would not have a significant impact on the river's identified natural values.

7. LWCFA lands and facilities affected (Land and Water Conservation Fund Act).

Status:  None.  Designated. Determination completed:  / /.

Administering agency:

8. COMMENTS

1. The following agencies and other entities provided comments on the application or filed a motion to intervene in response to the public notice dated 03/03/87.

Commenting agencies and other entities	Date of letter
Department of the Army, North Atlantic Division, Corps of Engineers	04 / 09 / 87
Department of the Interior	04 / 29 / 87
Adirondack Park Agency	05 / 05 / 87
National Marine Fisheries Service	05 / 29 / 87
New York State Department of Environmental Conservation	06 / 15 / 87
Environmental Protection Agency	06 / 19 / 87

\* Indicates a motion to intervene.

2.  The applicant responded to the comments or motion(s) to intervene by letter(s) dated 04/29/87, 05/04/87, 05/28/87, and 06/22/87.

The applicant did not respond to the comments or motion(s) to intervene.

F. AFFECTED ENVIRONMENT

1. General description of the locale (Source: Village Saranac Lake, 1986, application): The Lake Flower Project area is located in the Adirondack Mountains in northern New York State. The 179-square-mile drainage of the Saranac River above the Lake Flower Dam is characterized by numerous interconnecting lakes, with Lake Flower, Oseetah Lake, and Kivassa Lake at elevation 1,528 msl comprising the project reservoir.

The lakes are surrounded by mountains, with the higher mountains to the east rising to elevations of 3,921 feet msl (about 6 miles east at Moose Mountain) and higher. The project area lies within the heavily wooded Adirondack State Park Forest Preserve, with northern hardwoods (primarily sugar maple, American beech, and yellow birch) dominating the lower elevations of the immediate project area near the lakes. Primary land uses in the general locale are forestry and recreation.

2. Resources unaffected by the proposed action: The staff concludes that there would be no relevant or material environmental impacts on vegetation and wildlife resources because the new hydropower facilities would be installed at an existing dam and powerhouses within the Village of Saranac Lake. Those resources are therefore not discussed further in the environmental assessment.

3. Descriptions of the resources in the project impact area. (Source: Village of Saranac Lake, 1986, application, exhibit E, unless indicated otherwise.)

- a. Geology and soils (Sources: Isachsen and Fisher, 1970; and Village of Saranac Lake, 1987): Bedrock in the project area is primarily syenitic gneiss at the dam and anorthositic gneiss in the reservoir area. Unconsolidated deposits in the project area consist mostly of glacial kame sands and gravels.
- b. Streamflow:
 

<u>low flow</u> :	70	cfs.	<u>flow parameter</u> :	flow exceeded 90 percent of the time.
<u>high flow</u> :	600	cfs.	<u>flow parameter</u> :	flow exceeded 10 percent of the time.
<u>average flow</u> :	200	cfs.	<u>flow parameter</u> :	flow exceeded 50 percent of the time.

The flow parameters are based on the applicant's flow duration curve.

- c. Water quality: Water quality of the Saranac River in the project area is good. Water quality classification above the dam in Lake Flower is AA, the highest New York State water quality classification. The water is rated suitable for drinking and has a dissolved oxygen (DO) standard of 5.0 milligrams per liter (mg/l) daily average. Water quality below the dam is C and is suitable for fishing and fish propagation and for primary and secondary recreation, and has a DO standard of 5.0 mg/l, daily average.
- d. Fisheries:
 

<u>Anadromous</u> :	<input checked="" type="checkbox"/> Absent.	<input type="checkbox"/> Present.
<u>Resident</u> :	<input type="checkbox"/> Absent.	<input checked="" type="checkbox"/> Present.

Lake Flower and the Saranac River downstream from Lake Flower support a high quality warmwater fishery. The principal gamefish species include northern pike, largemouth bass, and smallmouth bass. Also included in this fishery are shiners, suckers, yellow perch, and brown bullhead. In addition, the DEC stocks 9-inch brown trout below the dam for a spring (April-June) fishery.
- e. Cultural:
 

<input checked="" type="checkbox"/> National Register (listed and eligible) properties have not been recorded.
<input type="checkbox"/> There are properties listed on or eligible for listing on the National Register of Historic Places in the area of the project's potential environmental impact.
- f. Visual quality: The visual character of the proposed project development area is dominated by the existing dam and powerhouses, the Main Street bridge crossing the lower end of the reservoir (Lake Flower) immediately upstream of the dam, another bridge spanning the river immediately downstream of the Municipal Building tailrace, and surrounding commercial and office buildings of the Village of Saranac Lake.

- g. Recreation: Lake Flower and the Saranac River below the dam receive extensive recreational use, including boating, canoeing, swimming, fishing, and water skiing. Existing facilities include beaches, a boat launch, and several small park areas. The Saranac River is designated by the State of New York as a recreational river in the state's Wild, Scenic, and Recreational River System.
- h. Land use: The proposed project area is located within the Adirondack Park. Most of the land in the project vicinity is classified by the State of New York as wild forest. Other land uses in the project area include residential and commercial development.
- i. Socioeconomics: The socioeconomics of the Village of Saranac Lake and the rest of the area surrounding the proposed project are, for the most part, either directly or indirectly based on the extensive year-round recreational use of the mountains, lakes, rivers, and associated recreational developments of the Adirondack Park.

G. ENVIRONMENTAL ISSUES AND PROPOSED RESOLUTIONS

Mitigative measures recommended by the staff are in addition to those proposed by the applicant, Section C(2), and any conditions identified in Section C(3). There are 9 issues addressed below.

- 1. Erosion, sedimentation, turbidity, and slope stability: Increased erosion, sedimentation, and turbidity levels would occur during project construction due to borrowing of earthen cofferdam materials, cofferdam construction, clearing of protective vegetation, site access, construction of the new switchyard and transmission line, tailrace excavation, removal of the cofferdams, and disposal of the cofferdam materials. Toxic substances or other pollutants that may be trapped in sediments could be released to the river waters during removal of the sediments during project construction. Use of heavy equipment and other project construction activities could weaken or otherwise affect the integrity and stability of the riverbank slopes. Because previous dam reconstruction activities at the project site have resulted in downstream sedimentation, the Adirondack Park Agency (APA) is concerned with the potential for any additional downstream erosion and sedimentation impacts that might result from tailrace excavations. The APA thus recommends preparation of an erosion and sedimentation control plan that would include the use of measures that would be necessary to protect the environment, engineering details for all proposed erosion control measures, and a schedule for their installation. The applicant states that, regarding this recommendation, it would take appropriate action with the agency which has jurisdiction. The DEC recommends that the applicant should be required to comply with all near-term construction-related conditions attached to applicable DEC water protection permits. The DEC also recommends requiring the preparation of an environmental management and construction plan to be submitted to the DEC for approval as a prerequisite to the issuance of DEC permits and prior to commencing any project-related construction activities. The applicant has accepted this recommendation. The Environmental Protection Agency recommends monitoring of turbidity levels in the Saranac River during cofferdam construction and use.



The applicant generally proposes to schedule construction during low river flow periods, test all materials to be excavated for toxic substances, remove all materials in compliance with the DEC and the Corps permit requirements, use a cofferdam during excavations for the tailrace and powerhouse rehabilitation, filter water pumped from the excavations, refuel construction equipment and vehicles away from the river, protect the integrity of the river banks, prevent erosion of sediments to the river, and restore vegetative cover.

Careful planning, scheduling, and implementation of appropriate control measures could minimize project-related erosion, sedimentation, turbidity, and bank slope instability. To ensure that these impacts would be kept to minimal levels, the licensee, after consultation with appropriate resource agencies, and prior to commencing project land-clearing, land-disturbing, and spoil-producing activities, should prepare a comprehensive plan to control erosion, sedimentation, turbidity, and slope stability for the project.

2. Alternation of the existing flow regime of the Saranac River: The DEC, the APA, and Interior express concern regarding the potential for adverse impacts on the river's fishery resources as a result of reduced flows during project operations. These agencies recommend that the project be operated in a run-of-river mode. In addition, Interior recommends that prior to commencement of project operation, the applicant should submit a plan for monitoring instantaneous flow releases at the project. Following approval of the plan, Interior recommends that the applicant should measure instantaneous flows, maintain records of discharges at the project, and provide records of discharges to the U.S. Fish and Wildlife Service (FWS) and the DEC. The applicant proposes to operate the project in a run-of-river mode and as recommended, to provide prior to commencement of project operations a plan for monitoring flow releases and to make available records of flow releases as specified in the plan.

Operating the project in a run-of-river mode would maintain the existing flow regime of Saranac River and would minimize impacts to aquatic resources. To protect the aquatic resources of the Saranac River in the project area, the licensee should operate the project such that instantaneous outflow from the project equals instantaneous inflow to the project. Furthermore, to ensure that instantaneous flow releases are maintained during project operations, a stream-flow monitoring plan should be developed after consultation with the FWS and the DEC and be submitted to the Commission for approval prior to commencement of project operations.

3. Reduced bypassed reach flows: The diversion of flows from Lake Flower through the two powerhouses during project operations would reduce flows in an approximately 100-foot-long reach (bypassed reach) of the Saranac River channel below the existing spillway and would likely affect downstream fish passage and reduce aquatic habitat in the bypassed reach. The DEC, the APA, and Interior state that the reduced flow in the bypassed reach of the Saranac River below the existing spillway would adversely impact the river's aquatic resources. Interior recommends that when adequate flows for power generation are not available, all flows should be passed over the spillway; and when river flows exceed the maximum hydraulic capacity of the project, all excess flows should be passed over the spillway and through the outlet works when necessary. The DEC and the APA recommend that, upstream flows permitting, a minimum conservation flow of 55 cfs should be spilled at the dam at all

times to accommodate the downstream passage of fish and to protect aquatic habitats in the bypassed reach of the Saranac River. The applicant agrees to these mitigative measures.

The release of the minimum flows recommended by the agencies and agreed-to by the applicant would ensure protection of the aquatic resources in the Saranac River. Therefore, the licensee should release a minimum flow of 55 cfs at the dam at all times, upstream flows permitting, and should pass over the spillway and through the outlet works when necessary all flows in excess of the hydraulic capacity of the project. Furthermore, to ensure that the above minimum flows are maintained during project operations, streamflow monitoring gauges should be installed downstream of the project.

4. Turbine-induced fish injury and mortality: The DEC and the APA state that the project could adversely affect the fishery resources as the result of turbine-induced injury or mortality if downstream migrating juvenile and adult fish enter the intake. The DEC and the APA recommend that trashracks with 1-inch spacing between the bars should be installed at an angle not less than 45 degrees to the direction of the intake flow to reduce the potential for impingement and entrainment of downstream migrating fish. The applicant has agreed to these mitigative measures.

Although fish moving downstream and entering the project intakes would be subject to turbine-induced injury or mortality, the attraction of fish toward the intake could be reduced by measures such as orienting the racks at an angle to the stream flow direction to reduce the velocities of the entrance flows, and the number of fish that could physically pass through the racks into the intakes could be reduced by such measures as narrowing the spaces between the trashrack bars. Therefore, to minimize the attraction, entry, and subsequent turbine-induced injury and mortality of fish, the licensee should consult with the DEC and the FWS on final intake trashrack designs that would minimize the attraction and entry of fish into the intakes.

5. Long-term future protection and enhancement of fish and wildlife resources: Interior recommends that:

- a. The applicant should, for the conservation and development of fish and wildlife resources, construct, maintain, and operate, or arrange for the construction, maintenance and operation of such reasonable facilities, and comply with such reasonable modifications of the project structures and operations, as may be ordered by the Federal Energy Regulatory Commission upon its own motion or which may be prescribed by the Secretary of the Interior or the fish and wildlife agency or agencies of (New York State,) after notice and opportunity for hearing; and
- b. whenever the United States shall desire, in connection with the project, to construct fish and wildlife facilities or to improve the existing fish and wildlife facilities at its own expense, the applicant should permit the United States or its designated agency to use, free of cost, such of the applicant's lands and interests in lands, reservoirs, waterways, and project works as may be reasonably required to complete such facilities or such improvements thereof. In addition, after notice and opportunity for hearing, Interior recommends the applicant should modify the project operations as may be reasonably prescribed by the Federal Energy Regulatory Commission in order

to permit the maintenance and operation of the fish and wildlife facilities constructed or improved by the United States under the provisions of this condition. Interior recommends that this condition shall not be interpreted to place any obligation on the United States to construct or improve fish and wildlife facilities or to relieve the applicant of any obligation under the license.

Terms and conditions of any license issued would include these two provisions that would require modification of project structures and operations, for the development and conservation of fish and wildlife resources in the future, if needed.

6. Switchyard and transmission line impacts on recreation and visual quality:

The DEC and the APA recommend that the proposed switchyard be relocated to a site behind the powerhouse on the opposite side of the river and that the proposed overhead transmission line be placed underground to reduce visual and recreational impacts. The DEC, in addition, recommends that the switchyard be screened as much as possible from the view of recreationists and village residents. By letter dated June 22, 1987, the applicant has agreed to implement these recommendations.

The proposed switchyard location is a public park that provides fishing access to the Saranac River below the dam. Locating the switchyard at this site would pose a safety hazard to fishermen and would also reduce fishing access to the plunge pool and tailwater area below the dam. If the switchyard was to be located on the opposite riverbank and was to be adequately screened, recreational use would not be adversely affected. In addition, placing the transmission line underground would lessen visual impacts on recreationists. The licensee therefore should relocate the switchyard to the opposite side of the river, place the proposed transmission line underground, and screen the switchyard to reduce visual impacts.

7. Long-range recreation plan: The APA indicates that although existing recreational facilities may be adequate to accommodate existing use, the applicant should take measures to meet long-range recreational needs. Specifically, the APA recommends that the applicant prepare a long-range recreational plan that would provide for the maintenance and enhancement of existing facilities and a designated canoe portage route around the dam. The applicant agrees to prepare a long-range plan in consultation with the APA, but does not specify what measures would be included of the maintenance and enhancement of recreation in the project area.

Given the existing heavy recreational use of the project reach of the Saranac River, existing facilities would need to be maintained and upgraded in the future. In addition, although an informal canoe portage route around the dam exists, a defined portage route with take-out and reentry facilities would enhance canoeing opportunities in the project area. The licensee therefore, after consultation with the APA and the DEC, should file for Commission approval, a plan to provide facilities for portaging canoes around the dam and to maintain and enhance other existing facilities in the project area.

8. Public access: Interior recommends that the applicant allow the public free access, to a reasonable extent, to project lands and waters for outdoor recreational purposes. The applicant concurs with Interior's recommendation. A standard article of the license would require the licensee to provide such access to the project.

9. Archeological and historic properties identified during land-clearing and land-disturbing activities, or affected by changes in the design or location of project facilities: Eligible archeological and historic properties could be adversely affected either because their presence in the project area was unknown prior to construction being commenced or because of changes in the design or location of project facilities. Therefore, before commencing land-clearing or land-disturbing activities within the project boundaries, other than those for which SHPO comments have been received, and before resuming such activities in the vicinity of properties discovered during construction, the licensee should file a plan, including a schedule for conducting the necessary studies, and the SHPO's written comments concerning the plan, and should await notification from the Director, Office of Hydropower Licensing, that these requirements have been fulfilled.

H. ENVIRONMENTAL IMPACTS

1. Assessment of adverse and beneficial impacts expected from the project as proposed by the applicant (P) [Section C(2)]; the proposed project with the staff's recommended mitigation (Ps) [Section G]; and any other alternative considered (A) [Section C(4)].\*

Resource	Impact			Remarks
	P	Ps	A	
a. Geology/Soils	IAS			
b. Streamflow	IAS			
c. Water quality:				
Temperature	0			
Dissolved oxygen	0			
Turbidity and sedimentation	IAS			
d. Fisheries:				
Anadromous	0			d. Increased downstream sedimentation and turbidity during project construction would affect downstream resident fish. Turbine-related resident fish injury and mortality during project operation would be reduced by designing the intake trashracks to minimize the attraction and entry of fish into the intakes.
Resident	2AL	IAL		
e. Vegetation	0			
f. Wildlife	0			
g. Cultural:				
Archeology	0			
History	0			
h. Visual quality	IAL	IAS		h. Burying the transmission line and screening the switchyard would reduce long-term visual impacts. Construction of facilities would create a minor short-term visual impact.
i. Recreation	2AL	IAS		
j. Land use	0			
k. Socioeconomics	IBL			i. Relocation of the proposed switchyard to the left river bank would ensure that safe fisherman access would be maintained in the small public park on the right river bank. Construction activities would temporarily disturb recreationists in the immediate project development area.  k. Project revenues would reduce the need for the Village of Saranac Lake (applicant) to increase local property tax rates.

\* The assessment reflects the adoption of any federal land management agency's conditions, in addition to the applicant's proposed mitigation. Assessment symbols indicate the following impact levels:

0 = No impact; 1 = Minor impact; 2 = Moderate impact; 3 = Major impact;  
A = Adverse; B = Beneficial; L = Long-term impact; S = Short-term impact.

2. Impacts of the no-action alternative.

Under the no-action alternative, there would be no construction of project facilities or changes to the existing physical, biological, or cultural components of the area. Electrical power that would be generated by the proposed hydroelectric project would have to be generated from other available sources or offset by conservation measures.

3. Recommended alternative (including proposed, required, and recommended mitigative measures):  Proposed project.  Alternative action.  No action.

4. Reason for selecting the preferred alternative: The proposed project would provide electrical power without significantly affecting the environmental conditions of the project area.

I. UNAVOIDABLE ADVERSE ENVIRONMENTAL IMPACTS OF THE RECOMMENDED ALTERNATIVE

Construction and removal of earthen cofferdams, tailrace excavations, and other land-clearing and land-disturbing construction activities would cause minor, short-term increases in erosion, sedimentation, and turbidity, with subsequent minor, short-term effects on downstream resident fish. Project construction activities would also create minor, short-term visual impacts and would temporarily disturb recreationists in the immediate project development area. Project operation would result in minor, long-term turbine-induced injury and mortality to resident fish.

J. CONCLUSION

Finding of No Significant Impact. Approval of the recommended alternative [H(3)] would not constitute a major federal action significantly affecting the quality of the human environment; therefore, an environmental impact statement (EIS) will not be prepared.

Intent to Prepare an EIS. Approval of the recommended alternative [H(3)] would constitute a major federal action significantly affecting the quality of the human environment; therefore, an EIS will be prepared.

K. LITERATURE CITED

1. Isachsen, Yngvar W., and Donald W. Fisher. 1970. Geologic map of New York-Adirondack sheet. New York State Museum and Science Service Map and Chart Series No. 15.
2. Village of Saranac Lake. 1986. Application for license for the Lake Flower Project, a minor water power project of 0.24 megawatts, FERC No. 8369, New York. November 13, 1986.
3. Village of Saranac Lake. 1987. Additional information for the application for license for the Lake Flower Project, a minor water power project of 0.24 megawatts, FERC No. 8369, New York. May 18, 1987.

L. LIST OF PREPARERS

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SAFETY AND DESIGN ASSESSMENT  
LAKE FLOWER PROJECT  
FERC NO. 8169-001 - NY

DAM SAFETY

The Commission's New York Regional Director classified the existing Lake Flower Dam as high hazard on April 24, 1987. The dam was reconstructed to its present configuration in 1937. The dam is a 24-foot-high concrete gravity structure with an uncontrolled ogee-shaped spillway spanning 49 feet of the dam's 97 feet length. The freeboard between the normal pool and the top of the dam is 5 feet. The gross storage capacity of the reservoir, comprised of interconnecting Lake Flower, Lake Oseetah and Lake Kiwassa, at normal pool elevation is 6,200 acre-feet. The dam is classified high hazard because the Village of Saranac Lake is located immediately downstream of the dam. Several residential structures and commercial establishments located along the river banks would be impacted by failure of the dam resulting in potential loss of life and property.

The dam was also inspected under the Corps of Engineers' National Dam Inspection Program and a Phase I inspection report prepared in August 1980. The Corps report indicated that the spillway capacity was inadequate to pass the probable maximum flood and the stability of the dam was unsatisfactory under certain loading conditions. It made several recommendations which were observed by the Commission staff to have been implemented by the applicant. The field inspection revealed a major rehabilitation of the dam which involved repairs to the spillway, non-overflow section, buildings adjacent to the dam and the stoplog structure. The dam was resurfaced and four post-tensioned rock anchors installed in the spillway section and two rock anchors in the non-overflow section. The stoplog structure was modified by the installation of two electrically operated slide gates. The rehabilitated dam would be stable for all credible loading conditions, including flooding, in accordance with our standards of safety.

PROJECT DESIGN

The Municipal Building located at the north abutment of the dam contains two pump units. One of these pump units would be replaced by a 75-kw turbine-generator unit.

The Niagara Mohawk Power Corporation Powerhouse located at the south abutment is abandoned and would be used to house the second 165-kw turbine-generator unit.

Both the units would have vertical propeller type turbines. The unit replacing the pump would be equipped with automatically adjusted runner blades and the unit being installed in the former powerhouse with manually adjusted runner blades.

ECONOMIC FEASIBILITY

The Lake Flower Project is potentially feasible so long as its projected levelized cost is less than the long-term levelized alternative energy cost of any utility in the region that can be served by the project. The staff has identified projected levelized alternative energy costs in the region of 95.6 mills per kWh. Since the levelized energy from the project is estimated to be 94.8 mills per kWh, the staff is reasonably confident that there will be a market for the project power at a price sufficient to support the project's construction and operation.

WATER RESOURCE PLANNING

The New York Department of Environmental Conservation, by letter dated June 15, 1987, recommended a minimum conservation flow of 55 cfs at the dam, upstream flows permitting, to accommodate the downstream passage of fish and to protect aquatic habitats in the bypass reach of the river. The minimum spillage requirement would also contribute to the mitigation of the aesthetic impacts from the proposed diversions for generation purposes. The applicant responded by letter dated June 22, 1987, agreeing to the proposed minimum flow requirement.

The two powerplants would operate run-of-river. They would operate automatically with unit loading regulated by river flow. The powerplants would operate between the streamflow of 155 cfs and 490 cfs at an average net head of 11.5 feet. The existing hydromechanical unit not replaced would operate within a streamflow range of 95 cfs and 155 cfs. Flows below 95 cfs and in excess of 490 cfs would be passed over the spillway and through the outlet works when the spillway capacity is exceeded. The estimated average annual generation of 892,000 kWh is reasonable.

The drainage area at the project site is 179 square miles which is characterized by several interconnecting lakes. Since no gaging station is located near the project site, indirect methods were used to develop the flow-duration curve. The average streamflow at the site is 304 cfs. A streamflow of 490 cfs, the combined minimum flow and hydraulic capacities of the pump and powerplants, is equalled or exceeded 15 percent of the time on the flow-duration curve. The project site is adequately developed.

No specific State and Federal agency comments or recommendations were made addressing flood control, navigation, water supply, or irrigation requirements in the basin.

The headwaters of the Saranac River originate on a mountain plateau. The river is approximately 83 miles long and drains a watershed of 618 square miles. The river, characterized by rocky streambed and shallow depth, flows swiftly with many rapids.

The Lake Champlain Drainage Basin Planning Status Report included no projects, either proposed or constructed on Saranac River or its tributaries that this project would impact and the project would not conflict with any pending applications for exemption, license or preliminary permits.

Based on the above, staff concludes that the proposed Lake Flower Project adequately utilizes the available flow and head at the site and would not conflict with any existing or planned water resource developments in the basin.

EXHIBITS

The following portions of Exhibit A and the following Exhibit F drawings conform to the Commission's rules and regulations and are included in the license.

- Exhibit A: Item 1(i) entitled "Generating Units."
- Item 1(ii) entitled "Proposed Hydraulic Turbine."
- Item 1(viii) entitled "Proposed Facilities."

<u>Exhibit F Drawing</u>	<u>FERC No.</u>	<u>Description</u>
1	1	Existing Conditions - Site and Dam Details
2	2	Existing Facilities
3	3	Proposed Conditions - Site Plan and Dam Details
4	4	Proposed Facilities

FEDERAL ENERGY REGULATORY COMMISSION

TERMS AND CONDITIONS OF LICENSE FOR UNCONSTRUCTED  
MINOR PROJECT AFFECTING NAVIGABLE WATERS  
OF THE UNITED STATES

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

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

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

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made without the prior approval of the Commission, which in its judgment have produced or will produce any of such results, shall be subject to such alteration as the Commission may direct.

Upon the completion of the project, or at such other time as the Commission may direct, the Licensee shall submit to the Commission for approval revised exhibits insofar as necessary to show any divergence from or variations in the project area and project boundary as finally located or in the project works as actually constructed when compared with the area and boundary shown and the works described in the license or in the exhibits approved by the Commission, together with a statement in writing setting forth the reasons which in the opinion of the Licensee necessitated or justified variation in or divergence from the approved exhibits. Such revised exhibits shall, if and when approved by the Commission, be made a part of the license under the provisions of Article 2 hereof.

Article 4. The construction, operation, and maintenance of the project and any work incidental to additions or alterations shall be subject to the inspection and supervision of the Regional Engineer, Federal Power Commission, in the region wherein the project is located, or of such other officer or agent as the Commission may designate, who shall be the authorized representative of the Commission for such purposes. The Licensee shall cooperate fully with said representative and shall furnish him a detailed program of inspection by the Licensee that will provide for an adequate and qualified inspection force for construction of the project and for any subsequent alterations to the project. Construction of the project works or any feature or alteration thereof shall not be initiated until the program of inspection for the project works or any such feature thereof has been approved by said representative. The Licensee shall also furnish to said representative such further information as he may require concerning the construction, operation, and maintenance of the project, and of any alteration thereof, and shall notify him of the date upon which work will begin, as far in advance thereof as said representative may reasonably specify, and shall notify him promptly in writing of any suspension of work for a period of more than one week, and of its resumption and completion. The Licensee shall allow said representative and other officers or employees of the United States, showing proper credentials, free and unrestricted access to, through, and across the project lands and project works in the performance

of their official duties. The Licensee shall comply with such rules and regulations of general or special applicability as the Commission may prescribe from time to time for the protection of life, health, or property.

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

Article 6. The Licensee shall install and thereafter maintain gages and stream-gaging stations for the purpose of determining the stage and flow of the stream or streams on which the project is located, the amount of water held in and withdrawn from storage, and the effective head on the turbines; shall provide for the required reading of such gages and for the adequate rating of such stations; and shall install and maintain standard meters adequate for the determination of the amount of electric energy generated by the project works. The number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, shall at all times be satisfactory to the Commission or its authorized representative. The Commission reserves the right, after notice and oppor-

tunity for hearing, to require such alterations in the number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, as are necessary to secure adequate determinations. The installation of gages, the rating of said stream or streams, and the determination of the flow thereof, shall be under the supervision of, or in cooperation with, the District Engineer of the United States Geological Survey having charge of stream-gaging operations in the region of the project, and the Licensee shall advance to the United States Geological Survey the amount of funds estimated to be necessary for such supervision, or cooperation for such periods as may be mutually agreed upon. The Licensee shall keep accurate and sufficient records of the foregoing determinations to the satisfaction of the Commission, and shall make return of such records annually at such time and in such form as the Commission may prescribe.

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

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

Article 9. The United States specifically retains and safeguards the right to use water in such amount, to be determined by the Secretary of the Army, as may be necessary for the purposes of navigation on the navigable waterway affected; and the operations of the Licensee, so far as they affect the use, storage and discharge from storage of waters affected by the license, shall at all times be controlled by such reasonable rules and regulations as the Secretary of the Army may prescribe in the interest of navigation, and as the Commission may prescribe for the protection of life, health, and property, and in the

interest of the fullest practicable conservation and utilization of such waters for power purposes and for other beneficial public uses, including recreational purposes, and the Licensee shall release water from the project reservoir at such rate in cubic feet per second, or such volume in acre-feet per specified period of time, as the Secretary of the Army may prescribe in the interest of navigation, or as the Commission may prescribe for the other purposes hereinbefore mentioned.

Article 10. On the application of any person, association, corporation, Federal agency, State or municipality, the Licensee shall permit such reasonable use of its reservoir or other project properties, including works, lands and water rights, or parts thereof, as may be ordered by the Commission, after notice and opportunity for hearing, in the interests of comprehensive development of the waterway or waterways involved and the conservation and utilization of the water resources of the region for water supply or for the purposes of steam-electric, irrigation, industrial, municipal or similar uses. The Licensee shall receive reasonable compensation for use of its reservoir or other project properties or parts thereof for such purposes, to include at least full reimbursement for any damages or expenses which the joint use causes the Licensee to incur. Any such compensation shall be fixed by the Commission either by approval of an agreement between the Licensee and the party or parties benefiting or after notice and opportunity for hearing. Applications shall contain information in sufficient detail to afford a full understanding of the proposed use, including satisfactory evidence that the applicant possesses necessary water rights pursuant to applicable State law, or a showing of cause why such evidence cannot concurrently be submitted, and a statement as to the relationship of the proposed use to any State or municipal plans or orders which may have been adopted with respect to the use of such waters.

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

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

Article 13. So far as is consistent with proper operation of the project, the Licensee shall allow the public free access, to a reasonable extent, to project waters and adjacent project lands owned by the Licensee for the purpose of full public utilization of such lands and waters for navigation and for outdoor recreational purposes, including fishing and hunting: Provided, That the Licensee may reserve from public access such portions of the project waters, adjacent lands, and project facilities as may be necessary for the protection of life, health, and property.

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

Article 15. The Licensee shall consult with the appropriate State and Federal agencies and, within one year of the date of issuance of this license, shall submit for Commission approval a plan for clearing the reservoir area. Further, the Licensee shall clear and keep clear



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

Article 16. Material may be dredged or excavated from, or placed as fill in, project lands and/or waters only in the prosecution of work specifically authorized under the license; in the maintenance of the project; or after obtaining Commission approval, as appropriate. Any such material shall be removed and/or deposited in such manner as to reasonably preserve the environmental values of the project and so as not to interfere with traffic on land or water. Dredging and filling in a navigable water of the United States shall also be done to the satisfaction of the District Engineer, Department of the Army, in charge of the locality.

Article 17. If the Licensee shall cause or suffer essential project property to be removed or destroyed or to become unfit for use, without adequate replacement, or shall abandon or discontinue good faith operation of the project or refuse or neglect to comply with the terms of the license and the lawful orders of the Commission mailed to the record address of the Licensee or its agent, the Commission will deem it to be the intent of the Licensee to surrender the license. The Commission, after notice and opportunity for hearing, may require the Licensee to remove any or all structures, equipment and power lines within the project boundary and to take any such other action necessary to restore the project waters, lands, and facilities remaining within the project boundary to a condition satisfactory to the United States agency having jurisdiction over its lands or the Commission's authorized representative, as appropriate, or to provide for the continued operation and maintenance of nonpower facilities and fulfill such other obligations under the license as the Commission

may prescribe. In addition, the Commission in its discretion, after notice and opportunity for hearing, may also agree to the surrender of the license when the Commission, for the reasons recited herein, deems it to be the intent of the Licensee to surrender the license.

Article 18. The right of the Licensee and of its successors and assigns to use or occupy waters over which the United States has jurisdiction, or lands of the United States under the license, for the purpose of maintaining the project works or otherwise, shall absolutely cease at the end of the license period, unless the Licensee has obtained a new license pursuant to the then existing laws and regulations, or an annual license under the terms and conditions of this license.

Article 19. The terms and conditions expressly set forth in the license shall not be construed as impairing any terms and conditions of the Federal Power Act which are not expressly set forth herein.