

UNITED STATES OF AMERICA 78 FERC ¶62,113
FEDERAL ENERGY REGULATORY COMMISSION

Seneca Falls Power Corporation)

Project No. 2438-007

ORDER ISSUING NEW LICENSE
(MAJOR PROJECT)

(February 13, 1997)

INTRODUCTION

On November 5, 1993, the Seneca Falls Power Corporation (SFPC) filed an application for a new license pursuant to Sections 4(e) and 15 of the Federal Power Act (FPA) to operate and maintain the 7.44 megawatt (MW) Waterloo and Seneca Falls Hydroelectric Project No. 2438, located on the Seneca River in Seneca, Yates, Schuyler, and Ontario Counties, New York. 1/ The Federal Power Commission issued the original license for the project to the New York State Electric & Gas Corporation (NYSEG) in 1965. The NYSEG declined to seek a new license for this project. The current license expired on December 1, 1993, and since then, NYSEG has operated the project under an annual license. 2/

The SFPC proposes to increase the project's capacity and would operate the project to provide power for the City.

OWNERSHIP AND CONTROL OF THE PROJECT

Standard license Article 5 requires a licensee, by five years after issuance of its license, to acquire and retain title in fee to, or the right to use in perpetuity, project property sufficient to accomplish all project purposes. The licensee must have sufficient rights in project property to enable the Commission, through the licensee, to carry out its regulatory

- 1/ The project is located on a navigable waterway. See 33 FPC page 413 (1965).
- 2/ The original license issued on March 5, 1965 only included the Waterloo and Seneca Falls powerhouses, appurtenant equipment, and Van Cleef Lake within the project boundary. On December 31, 1991 (the statutory deadline for filing an application for new license for this project), the NYSEG declined to submit a license application for this project. SFPC submitted an application for a new license in response to a Commission Notice Soliciting Applications issued on February 24, 1992. The application for a new license is considered a relicense. See 62 FERC ¶ 61,064 (1993).

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responsibilities with respect to the project, and any nonlicensee who owns or controls rights necessary for the operation of a project must become a licensee. 3/

In a meeting on January 30, 1997, with the Commission's staff, SFPC stated and NYSEG agreed that they were actively negotiating and close to executing an asset purchase agreement to acquire the necessary project property rights.

Because the project to be licensed is existing and is an operating facility controlled by NYSEG, and could impede SFPC's compliance with the requirements of the license issued here, SFPC must act expeditiously to acquire a property rights asset purchase agreement consistent with the requirements of this order.

Article 203 of this license requires SFPC to timely execute an asset purchase agreement with NYSEG to acquire the necessary property rights to the project lands and facilities for the construction, operation, and maintenance of the Waterloo and Seneca Falls Project No. 2438 under the terms of the license, including required safety measures.

BACKGROUND

Notice of the application was issued on May 10, 1995. Four entities filed timely motions to intervene in this proceeding: the New York State Department of Environmental Conservation (NYSDEC) dated May 22, 1995, New York State Electric & Gas Corporation dated May 31, 1995, the Department of the Interior (Interior) dated July 5, 1995, and New York Rivers United with American Rivers, Inc., and the Natural Heritage Institute, dated July 14, 1995. No agency filed a motion to intervene in opposition to the project.

The motions to intervene were unopposed and therefore granted automatically under Rule 214(c)(1) of the Commission's Rules of Practice and Procedure. 4/

On August 25, 1995, the Commission issued a Public Notice indicating that the license application was ready for environmental analysis. Comment letters during the notice period were filed by Interior dated October 10, 1995 and by NYSDEC dated October 19, 1995.

The Commission's staff issued the Waterloo and Seneca Falls Project Draft Environmental Assessment (DEA) for public comment on February 27, 1996. In response, we received one comment

3/ See City of Fayetteville Public Works Commission, 16 FERC ¶ 61,208 (1981).

4/ 18 C.F.R. ¶ 385.214(c)(1).

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letter from the SFPC filed on March 29, 1996. Commission staff considered these comments in preparing the final Environmental Assessment (EA) which is attached to and made a part of this license.

PROJECT DESCRIPTION

The Waterloo and Seneca Falls Project consists of two developments that are 4.2 miles apart: the Waterloo Development and the Seneca Falls Development. The project is located on the 12.6-mile-long Seneca River section of the New York State Barge Canal System (NYSBCS) between Seneca Lake and Cayuga Lake.

The existing constructed Waterloo Development consists of a 306-foot-long dam which includes a navigational lock structure and an intake structure. The project impoundment has a surface area of 43,200 acres (including Seneca Lake) with a proposed usable storage capacity of 4,300 acre-feet and normal water surface elevations of 446.0 feet Barge Canal Datum (BCD) in the summer and 445.0 feet BCD in the winter. The powerhouse houses three Francis turbines rated at 1.67 MW with a total hydraulic capacity of 1,650 cubic feet per second (cfs) connected directly to three generators (NYSEG removed a fourth inoperable unit in 1994) with a total generating capacity of 1.440 MW. A more detailed project description is contained in the ordering paragraph (B)(2).

SFPC would rehabilitate two of the three existing units at this development thereby increasing the capacity by 0.34 MW to 1.78 MW.

The New York State Thruway Authority (NYSTA) owns the lock and the Taintor gate dam at the Waterloo Development. The Taintor gates are manually operated, with three gates providing flow to the power canal and one to a 1,600-foot-long bypassed channel. The downstream end of the bypassed channel is marked by a 4-foot-wide concrete weir that is elevated about 0.5 foot above the canal's water surface. The NYSDEC periodically requires supplemental flow releases equivalent to the 7-day average minimum flow ranging from 50 to 100 cfs (depending on the season). NYSDEC requires these flows to maintain the canal's capacity to assimilate waste released downstream of the Waterloo Development by the W.R. Grace Company. The owner of the Waterloo Development is compensated for the lost energy associated with such releases.

The existing constructed Seneca Falls Development consists of a 286-foot-long dam which includes a navigational lock structure and powerhouse intake structure. The project impoundment has a surface area of 135 acres with a proposed usable storage capacity of 65 acre-feet and normal water elevation of 430.5 feet BCD. The powerhouse houses four Francis turbines (one currently inoperable) rated at 5.96 MW with a total hydraulic capacity of 1,860 cfs connected directly to four

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generators with a total generating capacity of 6.0 MW. A more detailed project description is contained in the ordering paragraph (B)(2).

SFPC would rehabilitate the inoperable unit and one of the operable units at this development, thereby increasing installed generating capacity by 2.50 MW to 8.5 MW and the hydraulic capacity to 2,480 cfs.

NYSTA currently owns the lock and dam at the Seneca Falls Development. Historically, up to 1 foot of storage in Van Cleef Lake was used for power generation purposes.

APPLICANT'S PLANS AND CAPABILITIES

In accordance with Section 10 and Section 15 of the FPA, the staff evaluated SFPC's record as a licensee for these areas: (1) conservation efforts; (2) ability to comply with the new license; (3) safe management, operation, and maintenance of the project; (4) ability to provide efficient and reliable electric service; (5) need for power; (6) transmission line improvements; (7) project modifications; and (8) compliance record. I accept the staff's finding in each of these areas.

1. Consumption Efficiency Improvement Program - Section 10(a)(2)(C)

The Commission considers Section 10(a)(2)(C) of the FPA in cases of state or municipal applicants, or an applicant which is primarily engaged in generation or sale of electric power. SFPC is a private developer not primarily engaged in generation or sale of electric power. Therefore this section of the FPA is not applicable.

2. Ability to Comply with the New License - Section 15(a)(2)(A)

Staff reviewed SFPC's license application in an effort to judge its ability to comply with the articles, terms, and conditions of any license issued, and with other applicable provisions of this part of the FPA.

SFPC has or can acquire the resources and expertise necessary to carry out its plans and comply with all terms and conditions of a new license.

3. Safe Management, Operation, and Maintenance of the Project - Section 15(a)(2)(B)

The project developments are subject to compliance with Part 12 of the FERC's regulations. The necessary studies of the dam and public safety are ongoing. Any remedial structural modifications that may be determined necessary will be pursued in accordance with the procedures specified in Part 12.

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The Seneca Falls development has had numerous foundation problems since its construction by the State of New York in 1912.

These problems included repairing a blow out of the dam's north abutment in 1915, repairing the foundation of the north wall of Lock No. 3 in 1917, replacing the floor in Lock No. 3 because of heavy leakage in the late 1960's, observing the development of a sink hole on the upstream side of the north abutment cutoff wall in 1966, grouting the cutoff wall from the south wall of Lock No. 3 to the south abutment in 1987, and repairing the foundation under locks 2 and 3 after a blow out of the foundation under Lock No. 2 in 1990 and 1991.

Although the foundation of the Seneca Falls development has a potential for continuing problems throughout the life of the project, with an appropriate degree of monitoring the hydroelectric potential of the existing lock and dam, which are owned and subject to continuing operation by the New York State Thruway Authority, could be beneficially developed. The high probability for ongoing future problems at the site necessitates the careful assessment, monitoring, and continued evaluation of the foundation.

Eleven exploratory holes were drilled in 1991 and provide a cross-section of the foundation rock between Lock No. 2 and the natural ground past the substation to the north of the dam. The results of this investigation showed the presence of a layer of very broken rock and voids immediately below the base of the dam and powerhouse ranging in thickness between one and five feet. This fractured layer continues north into the abutment and constitutes the base of a massively disturbed zone of broken rock and voids which appears to be 70 to 80 feet thick. The total length of the disturbed zone under the dam and through the abutment is in excess of 170 feet.

The project's dolomitic shale foundation rock contains numerous layers of gypsum and anhydrite. These materials are susceptible to chemical phase changes which can result in solutioning and/or volumetric increases due to groundwater infiltration. The susceptible zones within the foundation are expected to continue to undergo chemical alteration with the passage of time, which could result in further foundation voiding and surface subsidence.

Article 301 requires the licensee to investigate and assess the adequacy of the foundation material below the Seneca Falls Development. Article 302 requires the licensee to establish a base reference for the ongoing monitoring of foundation conditions in order to ensure the expeditious identification and mitigation of any condition that could potentially create a safety hazard or jeopardize the integrity of the Seneca Falls development.

4. Efficient and Reliable Electric Service - Section 15(a)(2)(C)

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Staff reviewed SFPC's plans and its ability to operate and maintain the project in a manner most likely to provide efficient and reliable electric service.

During the next several years many capital improvements will be performed on the developments, including increasing the capacity of the existing generators. These improvements also include work on the existing dams, spillways and gates.

SFPC would provide efficient and reliable electric service in the future.

5. Need for Power - Section 15(a)(2)(D)

SFPC's need for the electricity produced by the project is addressed in the attached EA. Based on the discussion in the EA, staff concludes that the short and long term need for power exists to justify licensing the Waterloo and Seneca Falls Project.

6. Transmission Line Improvements - Section 15(a)(2)(E)

Based on the application, the existing transmission facilities at the Waterloo and Seneca Falls Project are adequate for the existing and proposed increase in generation.

7. Project Modifications - Section 15(a)(2)(F)

SFPC is not proposing any fundamental changes to the project generating facilities or operation. However, SFPC proposes to upgrade two generators at each site, provide fish passage facilities and attraction flows, and other mitigation enhancements.

SFPC has no plans for making other significant project changes, except for those required to ensure the project safety.

Based on SFPC's license application, the proposed project configuration and operation, and the environmental enhancements, the project will provide power in a cost effective manner.

8. Compliance Record with Existing Licensee - Section 15(a)(3)(A) and (B)

The Commission considers Section 15(a)(3)(A) and (B) in the case of an application filed by the existing licensee. Since SFPC is not the existing licensee, and NYSEG declined to file a license application for this project, Section 15(a)(3)(A) and (B) of the FPA are not applicable.

WATER QUALITY CERTIFICATION

Section 401(a)(1) of the Clean Water Act (CWA) 5/ requires

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an applicant for a federal license or permit for any activity that may result in a discharge into navigable waters of the United States to provide to the licensing or permitting agency a certification from the state in which the discharge originates that such discharge will comply with certain sections of the CWA.

Section 401(d) of the CWA provides that state certification

shall set forth conditions necessary to ensure that applicants comply with specific portions of the CWA and with appropriate requirements of the state law. 6/

The SFPC applied for Water Quality Certification (WQC) on November 4, 1993, pursuant to Section 401 of the CWA. NYSDEC issued a Section 401 WQC on November 3, 1994, which is within the 1 year specified for action by the certifying agency. The conditions in the November 3, 1994, WQC are attached to this license order.

A revised WQC was issued on March 10, 1995, incorporating several provisions requested by SFPC and agreed to by the NYDEC. In a letter filed on February 8, 1996, SFPC agreed to the conditions in the revised WQC, and requested that the Commission adopt these conditions in the license order.

Both of the WQC's issued for the Waterloo Seneca Falls Project contain conditions numbered 1 through 18. Only WQC condition numbers 6, 7, 8, 9, and 10 were subsequently revised. Both of the WQC conditions are examined below, including the revised conditions.

My findings regarding the November 3, 1994, WQC conditions follow. 7/

I do not consider the requirements that were revised in the WQC to be timely and therefore do not consider changes from the November 3, 1994, WQC to represent mandatory conditions for the license issued for this project. However, in the exercise of the Commission's responsibilities under Section 10(a) of the FPA, the Commission's staff has also examined the NYSDEC's revised WQC conditions to determine if adoption of the revised conditions would be in the best public interest.

Condition 1 requires that the project, including relevant records, be subject to inspection at reasonable hours and intervals, upon reasonable notice to the certificate holder, by NYSDEC personnel to determine whether SFPC is complying with the

5/ 33 U.S.C. § 1341(a)(1).

6/ 33 U.S.C. § 1341(d).

7/ See Great Northern Paper, Inc., 77 FERC § 61,068 at pp. 61,271-72 (1996).

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terms of the WQC. This condition will become part of the license.

Condition 2 requires that the right to modify, suspend, or revoke the WQC be reserved by NYSDEC in accordance with 6NYCRR Section 621.14. Condition 2 in effect gives the state unilateral authority to alter its certification beyond that provided for in the CWA, is beyond the scope of Section 401 and thus will not be included in the license. 8/

Condition 3 requires that SFPC be responsible for complying with the terms of the WQC and for its actions, and those of its contractors, agents, and representatives in undertaking such compliance. SFPC should indemnify, and hold harmless, the state of New York from suits and claims arising only from acts or omissions of the certificate holder in undertaking such compliance. SFPC should notify NYSDEC of any occurrence that prevents or inhibits compliance. We agree that SFPC is responsible for complying with the mandatory water quality-related conditions of the WQC and with other conditions contained in its license for this project and this condition will become part of the license for this project.

Condition 4 states that the WQC does not convey to SFPC any right to trespass upon the lands or interfere with the riparian rights of others, nor does it authorize the impairment of any rights, title, or interest in real or personal property held or vested in a person not a party to this certification. Although this condition is a statement more than a recommended license requirement, it will become part of the license.

Condition 5 states that SFPC is responsible for obtaining any permits, approvals, lands, easements, and rights-of-way that may be required for this project. This provision is required in the Commission's standard use articles attached to any license issued. Specifically, the Commission requires SFPC to acquire title in fee or the right to use in perpetuity all lands necessary or appropriate for the construction, maintenance, and operation of the project.

Condition 6 requires that the daily fluctuation of Seneca Lake should not exceed 0.1 foot and the daily fluctuation of Van Cleef Lake should not exceed 0.25 feet from the daily target elevation for each lake, respectively, set by the New York State Thruway Authority (NYSTA). Seasonal fluctuations should be in accord with the rule curve developed by the New York State Department of Transportation and NYSEG in the late 1970s in response to concerns of the Seneca Lake Waterways Association. This condition is made part of the license in Article 405.

Condition 6 was revised to require the above daily

8/ See Niagara Mohawk, *supra* 76 FERC at p. 61,832 (1996).

fluctuations of both impoundments not be exceeded, unless otherwise instructed to do so by the NYSTA. The NYSTA is responsible for operating the barge canal system. I agree and include in Article 405 provisions for varying from the recommended water level management regime due to circumstances beyond the control of SFPC (emergency conditions) and for short periods of time upon mutual agreement with NYSTA and NYSDEC.

Condition 7 requires that SFPC ensure that a minimum flow of 10 cfs (leakage flow measured by NYSEG's consultant) be released to the Waterloo bypassed reach.

Condition 7 was revised to recommend a continuous minimum flow of 2 cfs (leakage flow measured by SFPC's consultant) be released to the Waterloo bypassed reach through Taintor gate No. 6. The origin of the discrepancy in recommended bypassed reach flows is the difference in measurements of leakage flows by NYSEG's consultant and SFPC's consultant. We recommend that SFPC continuously provide what is now leakage flow to the Waterloo bypassed reach from Taintor gate No. 6, which we consider to be the objective of Condition 7. Article 403 requires a leakage flow to the Waterloo bypassed reach subject to field verification.

Condition 8 requires that SFPC submit a flow monitoring plan for NYSDEC approval within 3 months of the issuance of the WQC. This flow monitoring plan would provide for the installation and maintenance of a U.S. Geological Survey (USGS) gaging station, unless justification for an alternative gaging station is provided. The flow monitoring plan should include all gages and/or equipment for the purpose of: (1) determining the stage and/or flow of the stream or streams on which the project is located; (2) determining all other project flows including flow through the turbine(s) and other bypass/diversion flows; and (3) determining project headpond and tailwater elevation. The licensee should keep accurate and sufficient records of the foregoing flow data to the satisfaction of NYSDEC and should provide such data in a format and interval as NYSDEC may request.

Further, the original WQC also included four additional paragraphs on the schedule for installation of gages, calibration plans, location of staff gages, and precision limit of headpond and tailwater elevations.

Condition 8 was revised by deleting all four paragraphs, and deleting the first of the three items listed above. Also revised was the schedule for submitting the flow monitoring plan to within 3 months of acceptance of the FERC license. Article 406 requires development and implementation of a water level and flow monitoring plan. The portion of Condition 8 that pertains to approval and schedules would give the NYSDEC authority beyond that provided for in the Clean Water Act, is thus beyond the

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scope of Section 401 and is not included in this license. 9/

Condition 9 states that the existing trashracks with adjacent bars spaced 1-3/8 inches apart are, for now, satisfactory to protect fish from entrainment. However, when replacing the existing racks for any reason, SFPC should also install special purpose devices to prevent fish from entering the project turbine, while minimizing subsequent losses due to impingement. To minimize entrainment/impingement of fish, the following design criteria would be met: (1) all water entering the turbines must pass through the exclusionary devices; (2) the maximum width of any opening in the device will not exceed 1 inch (e.g., 1-inch clear-spaced trashracks, 1-inch clear-spaced louvers, plate overlays with 1-inch circular openings, etc.); and (3) the approach flow velocity, as measured approximately 1 foot

in front of the device, will be maintained at 2 feet per second (fps) or less.

Condition 9 also requires that if the approach velocity exceeds 2.0 fps, SFPC should satisfactorily demonstrate to NYSDEC that excessive fish impingement is not occurring on the surface of the exclusionary device. An impingement assessment plan should be submitted within 6 months of completing installation of the exclusionary device if the velocities are greater than 2.0 fps. The condition also requires that the impingement assessment must be completed within 2 years of the installation of the exclusionary device.

Condition 9 was revised to require that an impingement assessment plan should be submitted within 2 years of license issuance if the velocities encountered are excessive. The revised condition also requires that the impingement assessment must be completed within 3 years of FERC license issuance.

Article 408 includes the provisions of Condition 9. The portion of Condition 9 that pertains to scheduling would give the NYSDEC the authority beyond that provided for in the Clean Water Act, is thus beyond the scope of Section 401 and is not included in this license. 10/

Condition 10 requires acceptance of the fish passage structures as proposed by SFPC in its license application. SFPC should continuously pass a flow equivalent to 2 percent of the maximum station hydraulic capacity through the fish bypass facility at each station during salmonid migrations (from March 1 to and including May 15 and from October 1 to and including December 15) as an attraction and conveyance flow. For the remainder of the year, the 2 percent flow should be provided only during periods of generation. In this latter instance, the fish

9/ See Great Northern Paper, supra at p. 61,272.

10/ See Great Northern Paper, supra p. 61,272.

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passage facility should begin to operate at least one-half hour before the station units are brought on-line to give those fish that have accumulated in the vicinity of the trashracks an outlet prior to start-up. Operation of the fish passage facility should conclude no sooner than one-half hour following the end of any period of hydroelectric generation.

Condition 10 was revised to require continuous flow equivalent to 2 percent of the maximum station hydraulic capacity through the fish bypass facility at each station during project operation as an attraction/conveyance flow. The state's Section 10(j) recommendations also reflect this modified regime. We agree with the revised WQC and include the provisions of the revised WQC condition in Article 409.

Condition 10 of the revised WQC would allow SFPC the opportunity, at any later date during the license period, to

perform studies that would determine if a flow equivalent to 2 percent of the maximum station hydraulic capacity is necessary for effective attraction and conveyance of fish through the project's fish passage structure. Condition 10 requires all study proposals and subsequent results and recommendations be submitted to NYSDEC for review and approval. Article 410 of the license requires SFPC to develop with the state, a plan to monitor the effectiveness of fish passage facilities.

Condition 11 requires that SFPC curtail generation and install stoplogs or otherwise shut off flow through the turbines prior to commencing any maintenance dredging activities in the intake/forebay area. This provision must be satisfied in implementing Article 401 of this license.

Condition 12 requires that SFPC sample any sediments to be disturbed or removed from the project waters and test them for contaminants. Condition 12 requires that sampling and testing should be accomplished according to a protocol submitted to and approved by NYSDEC beforehand. Condition 12 also requires that prior to dredging or other excavation, SFPC should secure NYSDEC approval for all disposal locations for any sediments to be removed from the project waters. Article 401 requires SFPC to develop with the state, a plan to control erosion.

Condition 13 requires that, prior to commencing activities which could adversely affect water quality, SFPC should receive NYSDEC approval of an erosion and sediment control plan. This plan should be submitted at least 90 days before the intended date for commencing work. At a minimum, SFPC should accomplish the following objectives:

- isolate in-stream work from the flow of water and prevent discolored (turbid) discharges and sediments from entering the waters of the river due to excavation, dewatering, and construction activities;

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- exclude heavy construction equipment from below the mean high water line until the work area is protected by an approved structure and dewatered;

- stabilize any disturbed banks by grading to an appropriate slope, followed by armoring or vegetating as appropriate, to prevent erosion and sedimentation into the waterbody;

- minimize soil disturbance, provide appropriate grading and temporary and permanent revegetation of stockpiles and other disturbed areas to minimize erosion/sedimentation potential;

- protect all waters from contamination by deleterious materials such as wet concrete, gasoline, solvents, epoxy resins or other materials used in construction, maintenance and operation of the project;

- install effective erosion control measures on the

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downslope of all disturbed areas and maintain them in a fully functional condition. These erosion control measures are to be installed before commencing any other activities involving soil disturbance;

ensure complete removal of all dredged and excavated material, debris or excess materials from construction, from the bed and banks of all water areas to an approved upland disposal site; and

ensure that all temporary fill and other materials placed in the waters of the river are completely removed, immediately upon completion of construction, unless otherwise directed by NYSDEC.

This condition must be satisfied in implementing Article 401 of the license. We also require that SFPC obtain Commission approval of the erosion and sedimentation control plan prior to any land disturbing activities.

Condition 14 requires that the design for the placement of cofferdams, construction of temporary access roads or ramps, or other temporary structures that encroach upon the bed or banks of the river be approved by NYSDEC prior to installation. These designs should be developed in accordance with Condition 13 (above). Article 401 requires that SFPC consider the placement of these temporary structures with the state when developing a plan to control erosion. We also require that SFPC obtain Commission approval of design for placement of temporary structures.

Condition 15 requires that during all periods of construction, SFPC maintain adequate flows immediately downstream of work sites to ensure that the water quality standards

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established for the water body are met. This condition must be satisfied in implementing Article 401 of the license.

Condition 16 requires that SFPC monitor the waters of the river at a point immediately upstream of project activities and at a point no more than 100 feet downstream from any discharge point or other potential source of turbidity. If at any time turbidity measurements from the downstream locations exceed the measurements from the locations upstream of the work areas, all related construction on the project should cease until the source of the turbidity is discovered and the situation is corrected. This condition must be satisfied in implementing Article 401 of the license.

Condition 17 requires that the NYSDEC contact specified in the WQC be notified in writing at least two weeks prior to commencing any work performed under the authority of the WQC. This condition must be satisfied in implementing Article 401 of the license.

Condition 18 requires that SFPC provide public access to project waters as proposed in its application. The recreation

plan required by Article 414 must satisfy this condition.

SECTION 18 FISHWAY PRESCRIPTION

Section 18 of the FPA provides the Secretary of the Interior the authority to prescribe fishways at Commission-licensed projects. 11/ Interior, by letter dated October 10, 1995, requested the following Section 18 prescriptions for the Waterloo and Seneca Falls Project:

- 1) SFPC should install downstream fish passage facilities at the Waterloo and Seneca Falls developments as described in the license application. The fishways should use the existing trashracks to direct fish to the fishway entrance. When the trashracks are replaced for any reason, they should be replaced with racks which have 1-inch clear spacing or less, and approach velocities measured 1 foot in front of the trashracks should be 2 fps or less. The fish passage chute should provide 2 percent of the station's maximum hydraulic capacity as an attraction flow. The fishways should be continuously operated during all periods of hydroelectric generation beginning at least one-half hour before the station units are brought on line and concluding no sooner than one-half hour following the
- 11/ Section 18 of the FPA provides: "The Commission shall require the construction, maintenance and operation by a licensee at its own expense of...such fishways as may be prescribed by the Secretary of Commerce or the Secretary of Interior, as appropriate."

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end of any period of hydroelectric generation;

- 2) SFPC should develop, in consultation with the U.S. Fish and Wildlife Service (FWS), a plan to monitor the effectiveness of the fishways;
- 3) SFPC should permit personnel from FWS to inspect facilities and project records pertaining to construction, operation, and maintenance of the fishways to determine compliance with the terms of the fishway prescription;
- 4) Interior reserves the right to modify its fishway prescription upon review of new information; and
- 5) Interior grants SFPC the opportunity to review and comment on the prescriptions for fishways.

Interior further reserves its authority to prescribe upstream fishways in the future, should the need arise.

I do not consider the requirement to develop a plan to monitor the effectiveness of the fishways, to inspect facilities and project records to ensure compliance, and granting SFPC the

opportunity to review and comment on fishway prescriptions to be appropriate fishway prescriptions. They do not constitute project operations and measures that are directly related to the functioning of the specific physical fishways. However, I am requiring, and SFPC has agreed to conduct, fishway effectiveness studies as a condition of any license issued for this project. Ensuring compliance with requirements to construct fishways is the responsibility of FERC, not the resource agencies. Article 410 requires fishway effectiveness studies.

Interior's recommendation to reserve the right to modify its fishway prescription upon the review of new information is not a fishway prescription. Instead, we consider this to be a reservation of authority to prescribe modifications to the downstream fishways if such a need is established during the term of the license. Article 411 reserves that authority.

RECOMMENDATIONS OF FEDERAL AND STATE FISH AND WILDLIFE AGENCIES

Section 10(j) of the FPA requires the Commission to include license conditions based on recommendations of federal and state fish and wildlife agencies submitted pursuant to the Fish and wildlife Coordination Act, for the protection of, mitigation of adverse impacts to, and enhancement of fish and wildlife resources. Conditions based on such fish and wildlife recommendations must be included in the license unless the Commission determines that the recommendations are inconsistent with the purposes and requirements of the FPA or other applicable law.

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Interior, in its October 10, 1995, letter, and NYSDEC in its October 10, 1995 letter, provide recommendations under Section 10(j) of the FPA.

Pursuant to Section 10(j) of the FPA, I evaluated each recommendation of the federal and state wildlife agencies for consistency with the purpose and requirements of Part I of the FPA or other applicable law. I have adopted all the measures to protect and enhance fish and wildlife resources recommended by Interior and NYSDEC.

The Commission staff determined that three of the agency recommendations for license conditions were either outside the scope of Section 10(j), or were beyond the scope of Section 401. First, Interior and NYSDEC recommended that a flow monitoring plan be submitted within 3 months of acceptance of the license. Second, NYSEC recommended that any license issued should incorporate conditions of the WQC issued on March 10, 1995. Third, Interior recommended that free public access be allowed to project waters and adjacent land owned by SFPC. 12/

I examined these recommendations and the staff comments on them in the EA. I concur with the EA's findings that under Section 10(a) the first recommendation and portions of the second recommendation are unwarranted and would not be in the public interest to adopt for reasons given in Section VIII of the EA. The third recommendation for public access to project lands and

waters is included as a standard article attached to this license.

COMPREHENSIVE PLANS

Section 10(a)(2) of the FPA requires the Commission to consider the extent to which a project is consistent with federal or state comprehensive plans for improving, developing, or conserving a waterway or waterways affected by the project. Under Section 10(a)(2), federal and state agencies filed a total of 27 plans of which we identified as applicable 4 New York and 3 United States comprehensive plans. No conflicts were found. Section IX of the EA lists the comprehensive plans relevant to this project.

COMPREHENSIVE DEVELOPMENT

Sections 4(e) and 10(a)(1) of the FPA, 16 U.S.C. §§ 797(e) and 803(a)(1), require the Commission, in acting on applications for license, to give equal consideration to the power and development purposes and to the purposes of energy conservation, the protection, mitigation of damage to, and enhancement of fish and wildlife, the protection of recreational opportunities, and

12/ See Table 7 of the EA for a complete list of these recommendations.

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the preservation of other aspects of environmental quality. Any license issued shall be such as in the Commission's judgment will be best adapted to a comprehensive plan for improving or developing a waterway or waterways for all beneficial public uses. The decision to license this project, and the terms and conditions included herein, reflect such consideration.

The EA analyzed the effects associated with the issuance of a new license for the Waterloo and Seneca Falls Project. The EA recommends a variety of measures to protect and enhance environmental resources, which as discussed above, I have adopted. In conclusion, the issuance of a new license for the Waterloo and Seneca Falls Project will not constitute a major federal action significantly affecting the quality of the human environment.

In determining whether a proposed project will be best adapted to a comprehensive plan for developing a waterway for beneficial public purposes, the Commission considers a number of public interest factors, including the economic benefit of the project power.

Under the Commission's approach to evaluating the economics of hydropower projects, as articulated in Mead Corporation, Publishing Paper Division, 13/ the Commission employs an analysis that uses current costs to compare the costs of the project and likely alternative power with no forecasts concerning potential future inflation, escalation, or deflation beyond the license issuance date. The basic purpose of the Commission's economic

analysis is to provide a general estimate of the potential power benefit and the costs of a project, and reasonable alternatives to the project power. The estimate helps to support an informed decision concerning what is in the public interest with respect to a proposed license.

Based on current economic conditions, without future escalation or inflation, the Waterloo and Seneca Falls Project, if licensed as SFPC proposes, would provide a firm (or a dependable) capacity of 2.780 MW and produce an average of about 23.210 gigawatt-hours of (Gwh) of energy, at an annual cost of about \$739,000, or about \$3,400 (0.1 mills/kwh) more than the current cost of an equivalent amount of capacity and energy using alternative power sources which would cost about 18.6 mills/kwh.

If licensed in accordance with the conditions adopted herein, the project would provide a firm (or dependable) capacity of 2.780 MW and produce an average of about 22.668 Gwh of energy, at an annual cost of about \$804,300 or about \$78,700 (3.5 mills/kwh) more than the current cost of an equivalent amount of capacity and energy using alternative power sources.

Our evaluation of the economics of the applicant and staff

13/ See 72 FERC para. 61,027 (1995).

alternatives shows that they appear to cost more than currently available alternative power.

In any event, as noted above, it is SFPC which must make the business decision whether to pursue the license. As we explained in Mead, our economic analysis is by necessity inexact. Project economics is, moreover, only one of the many public interest factors considered in determining whether or not, and under what conditions, to issue a license. 14/

Based on staff's review of the agency and public comments filed on this project and our analysis pursuant to Section 10(a)(1) of the FPA, I find that the Waterloo and Seneca Falls Project, with our protection and enhancement measures, will be best adapted to the comprehensive development of the Seneca River for beneficial public uses.

A. Recommended Alternative

This alternative would:

- ù incorporate erosion and sedimentation control plans that include measures specified in the WQC in the final plans for any project-related construction;
- ù continue to operate the project as run-of-the-river within the NYSTA water level constraints and the mechanical ability of the station units;
- ù maintain the Van Cleeef Lake impoundment at a target elevation of 430.5 feet (BCD) with a maximum daily

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water level fluctuation of +0.25 feet;

- ù maintain the Seneca Lake impoundment within 0.1 feet of the seasonal target elevation of 446.0 feet (BCD) during the summer and at 445.0 feet (BCD) during the winter;
- ù continue to provide the 7-day average minimum flow at the Waterloo Development within the guidelines established by NYSDEC in the 1988 agreement;
- ù provide an automatic flow release mechanism at the

14/ In analyzing public interest factors, we take into consideration the fact that hydroelectric projects offer unique electric utility system operational benefits, and that proposed projects may provide substantial benefits not directly related to utility operation, benefits that would be lost if a license were denied solely on economic grounds. See *City of Augusta, et al.*, 72 FERC ¶ 61,114, flat copy at p. 19 n. 57 (1995).

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Seneca Falls Development by lowering the crest of the needlebeam to elevation 431.0 feet BCD;

- ù provide an instantaneous minimum flow of historical leakage (2 cfs, subject to field verification) through Taintor gate No. 6 or approved alternative structure to the bypassed reach at the Waterloo Development;
- ù develop and implement a flow monitoring plan for determining turbine discharges and minimum flows through the bypassed reach as well as headpond and tailwater elevations;
- ù develop and implement a plan to monitor dissolved oxygen and temperature upstream and downstream of the powerhouses twice a day from June through October during at least the first year following license issuance, and consult with NYSDEC to determine the need for subsequent sampling or remedial measures if water quality standards are not met;
- ù replace the existing trashracks (1-3/16 inch clear bar spacing at Waterloo and 1-3/8 inch clear bar spacing at Seneca Falls) with 1 inch clear spacing when the existing trashracks require replacement unless a better practical technology to reduce fish entrainment becomes available;
- ù install downstream fish passage facilities at both developments during the spring of the third year following license issuance;
- ù provide attraction and conveyance flows through the

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fishways at both developments by releasing 2 percent of the maximum station hydraulic capacity (33 cfs at Waterloo and 50 cfs at Seneca Falls) through the fishway when the project is operating and 1/2 hour before and after periods of generation;

- ù develop and implement a fishway effectiveness plan at each development;
- ù develop and implement a qualitative Waterloo bypassed reach wetland monitoring plan;
- ù rehabilitate and open the Seneca Falls powerhouse to the public as a "museum grade" operating powerhouse with the existing equipment intact, including access for at least two school busses and development of an interpretive brochure;
- ù manage cultural resources through the provisions of a Cultural Resources Management Plan;

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- ù develop a car-top boat access point on Van Cleef Lake;
- ù upgrade the existing boat launch and shoreline angling access at Oak Island Park, making all improvements accessible for persons with disabilities;
- ù allow continued public access to project-related lands within the constraints of public safety and project security;
- ù develop and implement a recreation plan that includes proposed signage at all facilities;

Based on the staff's independent analysis of the environmental and economic effects of the alternatives, I have selected the SFPC's proposed project with additional protection and enhancement measures as the preferred alternative. I selected this option because: (1) with protection and enhancement, the environmental effects of operating the project would be relatively minor; (2) the proposed enhancement measures would benefit water quality, fisheries, and recreational resources; and (3) the electricity that would be generated from a renewable resource would be beneficial, since it would reduce the use of fossil-fueled, steam-electric generating plants, thereby conserving nonrenewable energy resources and reducing atmospheric pollution.

LICENSE TERM

Section 15(e) of the FPA 15/ specifies that any license issued shall be for a term that the Commission determines to be in the public interest, but not less than 30 years, nor more than 50 years from the date on which the license is issued. Commission policy establishes 30-year terms for projects with little or no redevelopment, new construction, new capacity, or environmental mitigative or enhancement measures; 40-year terms

for projects with a moderate amount of proposed redevelopment, new construction, new capacity or mitigative and enhancement measures; and 50-year terms for projects with proposed extensive redevelopment, new construction, new capacity, or mitigative and enhancement measures.

Because the SFPC proposes moderate new hydropower development at the existing project, and in light of the moderate environmental enhancement measures I am requiring, the new license for the Waterloo and Seneca Falls Hydroelectric Project will be for a term of 40 years.

SUMMARY OF FINDINGS

The final EA issued for this project includes background

15/ 16 U.S.C. § 808(e).

information, analysis of impacts, support for related license articles, and the basis for a finding of no significant impact on the environment. Issuance of this license is not a major federal action significantly affecting the quality of the human environment.

The design of this project will be consistent with the engineering standards governing dam safety upon satisfaction of the requirements of Part 12, Subpart D of the Commission's regulations. The project should be safe if operated and maintained in accordance with the requirements of this license.

I conclude that the project will not conflict with any planned or authorized development, and will be best adapted to comprehensive development of the waterway for beneficial public uses.

The Director orders:

(A) This license is issued to the Seneca Falls Power Corporation (Licensee), for a period of 40 years, effective March 1, 1997, to operate and maintain the Waterloo and Seneca Falls Hydroelectric Project. This license is subject to the terms and conditions of the FPA, which is incorporated by reference as part of this license, and subject to the regulations the Commission issues under the provisions of the FPA.

(B) The project consists of:

- (1) All lands, to the extent of the Licensee's interests in those lands, shown in the Exhibit G, FERC Drawing Numbers 2438-1010 through 2438-1014 filed in October 1994:
- (2) The Waterloo and Seneca Falls Hydroelectric Project consists of two developments: The proposed Waterloo Development consists of: (1) the existing 16.5-foot-high, 306-foot-long dam (including a navigational lock

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structure); (2) an impoundment with a surface area of 43,200 acres (including Seneca Lake) with a proposed usable storage capacity of 4,300 acre-feet and normal water surface elevations of 446.0 feet Barge Canal Datum (BCD)(summer) and 445.0 feet BCD (winter); (3) an existing intake structure; (4) the forebay canal; (5) the existing powerhouse, which has three Francis turbines rated at 1.67 MW with a total hydraulic capacity of 1,650 cubic feet per second (cfs) connected directly to three generators (NYSEG removed a fourth inoperable unit in 1994) with a total proposed generating capacity of 1.440 MW; (6) the existing tailrace; (7) the existing 20-foot-long, 34.5-kv transmission line; and (8) appurtenant facilities. SFPC would rehabilitate two of the three existing units at this development thereby increasing the capacity by

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0.34 MW to 1.780 MW.

The proposed Seneca Falls Development consists of: (1) the existing 68-foot-high, 286-foot-long dam (including a navigational lock structure and powerhouse intake structure); (2) an impoundment with a surface area of 135 acres with a proposed usable storage capacity of 65 acre-feet and normal water surface elevation of 430.5 feet BCD; (3) an existing intake structure which is integral with dam; (4) the existing powerhouse, which has four Francis turbines (one currently inoperable) that are rated at 5.96 MW with a total hydraulic capacity of 1,860 cfs connected directly to four generators with a total generating capacity of 6.0 MW; (5) the existing tailrace; (6) the existing 300-foot-long, 34.5-kv transmission line; and (7) appurtenant facilities. SFPC would rehabilitate the inoperable unit and one of the operable units at this development, thereby increasing capacity by 2.50 MW to 8.50 MW and the hydraulic capacity to 2,480 cfs.

The project works generally described above are more specifically shown and described by those portions of Exhibit A and F filed in October 1994 shown below.

Exhibit A: The following sections of Exhibit A: the generator and turbine descriptions on page A-17 to A-19; and additional mechanical and electrical equipment described elsewhere on pages A-21 to A-24.

Exhibit F-	FERC Drawing No.	Showing	
	1	2438-1001	Waterloo Development Site Plan
Elevation and	2	2438-1002	Waterloo Dam Plan, Section
Elevation and	3	2438-1003	Waterloo Powerhouse Plan, Section

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	4	2438-1004	Waterloo Lock No.4
Plan	5	2438-1005	Seneca Falls Site
	6	2438-1006	Seneca Falls Dam &
Powerhouse Plan	7	2438-1007	Seneca Falls Dam and Powerhouse
Downstream			Elevation
	8	2438-1008	Seneca Falls Powerhouse, Dam Sections and Elevations
	9	2438-1009	Seneca Falls Locks No. 2&3

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

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

(D) This license is subject to the articles set forth in Form L-3 (October 1975), entitled, "Terms and Conditions of License for Constructed Major Project on Navigable Waterways," and the following additional articles.

Article 201. The Licensee shall pay the United States the following annual charge:

For the purposes of reimbursing the United States for the cost of administering of Part I of the FPA, a reasonable amount as determined in accordance with the provision of the Commission's regulations in effect from time to time. The authorized installed capacity for that purpose is 7,440 kilowatts (kw). This annual charge shall be effective on March 1, 1997.

In addition to the above charge a reasonable amount as determined in accordance with the provisions of the Commission's regulations in effect from time to time. The authorized proposed additional capacity for that purpose is 2,840 kw. This annual charge shall be effective as of the date of commencement of construction of the new capacity.

Article 202. Within 45 days of the effective date of the license, the Licensee shall file an original set and two duplicate sets of aperture cards of the approved exhibit drawings. The set of originals shall be reproduced on silver or gelatin 35 mm microfilm. The duplicate set shall be copies of the originals made on diazo-type microfilm. All microfilm shall

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be mounted on type D (3-1/4" x 7-3/8") aperture cards.

Prior to microfilming, the Commission Drawing Number (2438-1001 through 2438-1014) shall be shown in the margin below the title block of the approved drawing. After mounting, the Commission Drawing Number shall be typed on the upper right corner of each aperture card. Additionally, the Project Number, Commission Exhibit (e.g., F-1, G-1, etc.), Drawing Title, and date of this license shall be typed on the upper left corner of each aperture card.

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The original and one duplicate set of aperture cards shall be filed with the Secretary of the Commission, ATTN: DLC/ERB. The remaining duplicate set of aperture cards shall be filed with the Commission's New York Regional Office.

Article 203. Within 4 months of the effective date of the license, the Licensee shall file with the Commission, for approval, an asset purchase agreement with the New York State Electric & Gas Corporation to acquire all the necessary property rights to the lands and project facilities for the construction, operation, and maintenance of the Waterloo and Seneca Falls Project.

Article 204. Pursuant to Section 10(d) of the Federal Power Act, a specified reasonable rate of return upon the net investment in the project shall be used for determining surplus earnings of the project for the establishment and maintenance of amortization reserves. The Licensee shall set aside in a project amortization reserve account at the end of each fiscal year one-half of the project surplus earnings, if any, in excess of the specified rate of return per annum on the net investment.

To the extent that there is a deficiency of project earnings below the specified rate of return per annum for any fiscal year, the Licensee shall deduct the amount of that deficiency from the amount of any surplus earnings subsequently accumulated, until absorbed. The Licensee shall set aside one-half of the remaining surplus earnings, if any, cumulatively computed, in the project amortization reserve account. The Licensee shall maintain the amounts established in the project amortization reserve account until further order of the Commission.

The specified reasonable rate of return used in computing amortization reserves shall be calculated annually based on current capital ratios developed from an average of 13 monthly balances of amounts properly includible in the Licensee's long-term debt and proprietary capital accounts as listed in the Commission's Uniform System of Accounts. The cost rate for such ratios shall be the weighted average cost of long-term debt and preferred stock for the year, and the cost of common equity shall be the interest rate on 10-year government bonds (reported as the Treasury Department's 10-year constant maturity series) computed on the monthly average for the year in question plus 4 percentage points (400 basis points).

Article 301. Within 3 months of the effective date of the

license, the Licensee shall file with the Commission, for approval, a foundation investigation plan to verify the adequacy of the foundation rock below the primary water retaining structures of the Seneca Falls development. The foundation investigation plan should:

- (1) include a subsurface investigation below each primary water retaining structure that includes foundation drilling and sampling;
- (2) provide verification, by drilling and sampling, of the length, depth, and condition of the north abutment cutoff wall, and verification of other foundation corrective work constructed at the north abutment in 1915;
- (3) evaluate the settlement at the Seneca Falls substation;
- (4) assess the extent of voiding under the dam and powerhouse and evaluate the impact of the voiding on the stability of these structures;
- (5) provide conclusive verification of, by drilling and testing, the passive resistance from foundation rock that was assumed in the sliding stability analyses;
- (6) assess piezometric levels and water quality in the foundation material; and
- (7) include any other investigations deemed appropriate to determine the present state of the foundation at the site.

The plan will be used to assess the adequacy of the foundation and determine any foundation remediation necessary to ensure the continuing safety and operability of the project.

The Licensee shall file the plan including three copies to the Director, Division of Dam Safety and Inspections, and one copy to the New York Regional Director.

The Commission reserves the right to require changes to the plan. No field investigations or construction activities shall begin until the Licensee is notified that the plan is approved. Upon Commission approval, the Licensee shall implement the plan, including any changes required by the Commission.

The final report summarizing the results and conclusions of the foundation investigation shall be filed with the Commission, for approval, within 1 year of the date the foundation investigation plan is approved.

Article 302. Within 6 months of the approval date of the final report required in Article 301, the Licensee shall file with the Commission, for approval, a plan for installing monitoring devices and continued monitoring of the Seneca Falls

Development foundation. The plan should be developed in consideration of the foundation investigation plan required by Article 301 and the available geotechnical information from previous studies. The monitoring plan should be comprehensive and serve as a baseline reference for the continued monitoring of the foundation rock during the license term.

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The plan shall monitor any changes in the physical characteristics of the foundation as it continues to undergo solutioning, such as monitoring seepage, water quality, piezometric pressures, subsidence, and void growth. The plan shall also include the locations of the monitoring devices and specifications for installing the monitoring devices.

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

Article 401. At least 90 days before the start of any land-disturbing or land-clearing activities, the Licensee shall file with the Commission, for approval, a plan to control erosion, to control slope instability and to minimize the quantity of sediment resulting from project construction and operation. The plan may be a component of the broader plans for the implementation of dam safety measures, the installation of downstream fish passage, and the construction of recreational facilities required under Articles 409 and 414.

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

- (1) a description of the actual site condition at laydown/mobilization areas and any other areas that the proposed construction would affect;

- (2) measures proposed to control erosion, to prevent slope instability, and to minimize the quantity of sediment resulting from project construction and operation;

(3) detailed descriptions, functional design drawings, and specific topographic locations of all control measures; and

(4) a specific implementation schedule and details for monitoring and maintenance programs for stabilization of water-retaining structures, fishways, and recreational facility construction and operation.

The measures shall be consistent with the most recent version of "Standard Specifications: Construction and Materials" issued by the New York State Department of Transportation.

The Licensee shall prepare the plan after consultation with the Natural Resources Conservation Service and the New York State Department of Environmental Conservation.

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

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

Article 402. The Licensee shall operate the project in a run-of-the-river mode for the protection and enhancement of water quality and aquatic resources in the Seneca River.

Run-of-the-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. If the flow is so modified, the Licensee shall notify the Commission as soon as possible, but no later than 10 days after each such incident.

Article 403. The Licensee shall release from the Waterloo Development a seasonal 7-day average minimum flow within the guidelines established by the New York State Department of Environmental Conservation (NYSDEC) in the 1988 agreement as follows:

December through March	50 cfs
April and November	60 cfs
May and October	70 cfs, and
June through September	100 cfs.

The Licensee shall provide a minimum flow of 2 cfs, subject

to field verification, to the bypassed reach at the Waterloo Development to maintain the existing wetland. This minimum flow should be released from Taintor gate No. 6. If the proposed improvements are made that reduce or eliminate leakage from Taintor gate No. 6, the Licensee shall submit a plan to the Commission, for approval, for an alternative structure to provide the minimum flow of 2 cfs to the Waterloo bypassed reach. The minimum flows are required within 60 days of installation of the stream flow monitoring equipment required by Article 406.

Any plan for an alternative structure to provide the minimum flow of 2 cfs to the Waterloo bypassed reach shall be prepared in consultation with the NYSDEC and the U.S Fish and Wildlife Service.

The Licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after they have been prepared and provided to the agencies, and specific descriptions of how the agencies comments are accommodated by the plans. The Licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the Licensee does not adopt a recommendation, the filing shall include the Licensee's reasons, based on site-specific information.

These flow requirements may be temporarily modified if required by operating emergencies beyond the control of the Licensee, and for short periods upon agreement between the Licensee and NYSDEC. If the flow is so modified, the Licensee shall notify the Commission as soon as possible, but not later than 10 days after each such incident.

Article 404. The Licensee shall install an automatic release mechanism at the Seneca Falls Development and shall reduce the height of the needlebeams along the Seneca Falls dam spillway 4.5 feet to elevation 431.00 Barge Canal Datum (BCD) in order to insure adequate releases downstream following a power outage. These measures to ensure downstream releases following power outages shall be in place within 60 days of installation of the stream flow devices required under Article 406.

Within 90 days of completion of installation of the automatic release mechanism and reduction in height of the needlebeam, the Licensee shall file with the Commission, for approval, as-built drawings of the dam.

Article 405. The Licensee shall operate the Waterloo and Seneca Falls Project to control fluctuations of the reservoir surface elevation at each development for the protection of wetlands, wildlife, and fish habitat and recreational opportunities in the project impoundments. The Licensee shall act at all times to maintain the impoundment water surface elevations, as measured immediately upstream of each project dam,

as follows:

Maintain the Seneca Lake impoundment within 0.1 foot of the seasonal target elevations of 446.0 feet BCD during the summer and at 445.0 feet BCD during the winter;

Maintain Van Cleef Lake impoundment at a target elevation of 430.5 feet BCD with a maximum daily water level fluctuation of +0.25 foot;

The seasonal fluctuations shall be in accord with the rule curve developed by the New York State Thruway Authority (NYSTA) and the New York State Electric & Gas Corporation; and

Management of reservoir fluctuations is required within 60 days of installation of the reservoir level gages required by Article 406.

The Seneca Falls Power Company (SFPC) may vary from the recommended water level management regime due to circumstances beyond the control of SFPC (emergency conditions) and for short periods of time upon mutual agreement with the NYSTA and the New York State Department of Environmental Conservation. If the water level management regime is so modified, the Licensee shall notify the Commission as soon as possible, but not later than 10 days after each such incident.

Article 406. Within 6 months of the effective date of the license, the Licensee shall file with the Commission, for approval, a plan to monitor the project impoundment levels and outflow from the project developments downstream of the tailraces to document compliance with run-of-the-river operation required by Article 402, minimum flows required by Article 403 and 404 and management of impoundment water level elevations required by Article 405.

The plan shall include, at a minimum:

- (1) the specific methods to provide the specified run-of-the-river flows;
- (2) a schedule for installing all flow and headpond measuring devices including the installation and maintenance of a U.S. Geological Survey (USGS) gaging station, or an appropriate alternative gaging station;
- (3) the planned locations of the flow and headpond measuring devices;
- (4) the design of the flow and headpond measuring devices, including any pertinent hydraulic calculations; and
- (5) the method of flow and headpond level data collection, and provisions for providing data to the regulatory

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agencies in a timely manner.

The Licensee shall prepare the plan after consultation with the U.S. Fish and Wildlife Service (FWS), the U.S. Geological Survey, and the New York State Department of Environmental Conservation (NYSDEC).

The Licensee shall include with the plan documentation of agency consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The Licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the Licensee does not adopt a recommendation, the filing shall include the Licensee's reasons, based on site-specific information.

The Commission reserves the right to require changes to the plan. Upon Commission approval, the Licensee shall implement the plan, including any changes required by the Commission.

Article 407. Within 6 months of the effective date of the license, the Licensee shall file with the Commission, for approval, a plan to monitor dissolved oxygen (DO) and temperature levels in the Seneca River upstream and downstream of the powerhouses twice a day from June through October during at least the first year following license issuance.

The purpose of this monitoring plan is to ensure that streamflows below the project, as measured immediately downstream of the project tailraces, maintain New York State water quality standards.

The monitoring plan shall include a schedule for:

- (a) implementation of the program within 12 months from the date of issuance of this license;
- (b) consultation with the New York Department of Environmental Conservation (NYSDEC) concerning the results of the monitoring and the need for subsequent sampling or remedial measures if the water quality standards are not met; and
- (c) filing the results, agency comments, and Licensee's response to agency comments with the Commission.

The Licensee shall prepare the plan after consultation with the villages of Waterloo and Seneca Falls and the W.R. Grace Company (point source dischargers to the Seneca River between Seneca and Cayuga lakes) and the NYSDEC.

The Licensee shall include with the plan documentation of

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consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the entities identified above, and specific descriptions of how the entities' comments are accommodated by the plan. The Licensee shall allow a minimum of 30 days for the entities to comment and make recommendations before filing the plan with the Commission. If the Licensee does not adopt a recommendation, the filing shall include the Licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. Upon Commission approval, the Licensee shall implement the DO and temperature monitoring plan, including any changes required by the Commission.

If water quality-related conditions of the license are temporarily not achievable due to emergencies beyond the control of SFPC, then SFPC should notify the Commission and NYSDEC as soon as possible, but no later than 10 days after each such incident.

Article 408. At least 1 year before the existing trashracks are to be replaced, the Licensee shall file with the Commission, for approval, a plan for the replacement of existing trashracks (1-3/16 inch clear bar spacing at Waterloo and 1-3/8 clear bar spacing at Seneca Falls) with 1-inch clear spacing trashracks at both developments, unless a better, practical technology to reduce fish entrainment becomes available.

The plan shall include, at a minimum, the following items:

- (1) functional design drawings of 1-inch clear bar trashracks;
- (2) provisions for measuring the maximum intake approach velocity and if it exceeds 2 feet per second how impingement studies would be planned and implemented; and
- (3) a description of the methods and a schedule for installing the trashracks.

The Licensee shall prepare the aforementioned plan and schedule after consultation with the U.S. Fish and Wildlife Service and the New York State Department of Environmental Conservation.

The Licensee shall include with the plan documentation of agency consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The Licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If

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

The Commission reserves the right to require changes to the plan. Upon Commission approval, the Licensee shall implement the plan, including any changes required by the Commission.

Article 409. within 2 years of the effective date of the license, the Licensee shall file with the Commission, for approval, detailed design drawings of the Licensee's proposed permanent downstream fish passage facilities together with a schedule to install the facilities during the third year of operation following license issuance.

The fishway passage design shall: (1) use the existing trashracks to direct fish to the fishway entrance; (2) provide 2 percent of the station's maximum hydraulic capacity (33 cfs at Waterloo and 50 cfs at Seneca Falls) as an attraction flow; and (3) provide for continuous operation when the project is operating and one-half hour before and after periods of generation.

The Licensee shall prepare the drawings and schedule after consultation with the U.S. Fish and Wildlife Service and the New York State Department of Environmental Conservation.

The Licensee shall include with the drawings documentation of agency consultation, copies of comments and recommendations on the completed drawings after they have been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the Licensee's facilities. The Licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the drawings and schedule with the Commission. If the Licensee does not adopt a recommendation, the filing shall include the Licensee's reasons, based on site-specific information.

The Commission reserves the right to require changes to the proposed facilities and schedule. No construction of downstream fish passage facilities shall begin until the Licensee is notified by the Commission that the drawings and schedule are approved. Upon Commission approval, the Licensee shall implement the plan, including any changes required by the Commission.

Article 410. within 2 years of the effective date of the license, the Licensee shall file with the Commission, for approval, a plan for post-construction studies to monitor the effectiveness of the downstream fish passage facilities pursuant to Article 409 of this license to reduce entrainment of fish in the project turbines and to allow for downstream fish passage. The results of these studies shall be submitted to the agencies listed below and shall provide the basis for recommending future structural or operational changes at the project.

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The monitoring plan shall include a schedule for:

- (1) implementation of the plan;
- (2) consultation with the appropriate federal and state agencies concerning the results of the monitoring; and
- (3) filing the results, agency comments, and Licensee's response to agency comments with the Commission.

The Licensee shall prepare the plan after consultation with the U.S. Fish and Wildlife Service (FWS) and the New York State Department of Environmental Conservation (NYSDEC).

The Licensee shall include with the plan documentation of agency consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The Licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the Licensee does not adopt a recommendation, the filing shall include the Licensee's reasons, based on site-specific information.

The Commission reserves the right to require changes to the fishway effectiveness plan. Upon Commission approval, the Licensee shall implement the plan, including any changes required by the Commission.

If the results of the monitoring indicate that changes in project structures or operations are necessary to protect fish resources, the Licensee shall first consult with the agencies listed above to develop recommended measures for amelioration and then file its proposal with the Commission for approval.

The Licensee may also conduct studies to determine if alternative attraction and conveyance flows would also be effective for the downstream passage facilities. If such studies are conducted, the study plans and any proposed alternative fishway flows based on the studies, shall be developed in consultation with FWS and NYSDEC and submitted to the Commission for approval. The Commission reserves its authority to require the Licensee to modify project structures or operations.

Article 411. Authority is reserved by the Commission to require the Licensee to construct, operate, and maintain, or to provide for the construction, operation, and maintenance of, such fishways as may be prescribed by the Secretary of the Interior under Section 18 of the Federal Power Act.

Article 412. Within 6 months of the effective date of the license, the Licensee shall file with the Commission, for

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approval, a plan for qualitative monitoring of wetland vegetation in the Waterloo bypassed reach during the growing season for the first five years of operation following license issuance.

The wetland monitoring plan should incorporate measures to detect potential changes in plant species diversity and areal coverage in the 0.4 acre scrub-shrub Waterloo bypassed reach wetland. The results of this monitoring should be used in conjunction with the bypassed reach flow monitoring to confirm the adequacy of releases to this wetland.

The monitoring plan shall include a schedule for:

- (1) implementation of the plan;
- (2) consultation with the appropriate federal and state agencies concerning the results of the monitoring; and
- (3) filing the results, agency comments, and Licensee's response to agency comments with the Commission.

The Licensee shall prepare the plan after consultation with the U.S. Fish and Wildlife Service and the New York State Department of Environmental Conservation.

The Licensee shall include with the plan documentation of agency consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The Licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the Licensee does not adopt a recommendation, the filing shall include the Licensee's reasons, based on site-specific information.

The Commission reserves the right to require changes to the plan. Upon Commission approval, the Licensee shall implement the plan, including any changes required by the Commission.

If the results of the monitoring indicate that changes in project structures or operations are necessary to protect wetlands, the Licensee shall first consult with the agencies listed above to develop recommended measures for amelioration and then file its proposal with the Commission for approval.

Article 413. The Licensee shall implement the "Programmatic Agreement Among the Federal Energy Regulatory Commission, the Advisory Council on Historic Preservation, and the New York State Historic Preservation Officer for Managing Historic Properties That May Be Affected By A License Issuing to the Seneca Falls Power Corporation For the Continued Operation of the Waterloo and Seneca Falls Hydroelectric Project, Project No. 2438," executed on September 11, 1996, including but not limited to the Cultural

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Resources Management Plan (CRMP) for the project. In the event that the Programmatic Agreement is terminated, the Licensee shall implement the provisions of its approved CRMP. The Commission reserves the authority to require changes to the CRMP at any time during the term of the license. If the Programmatic Agreement is terminated prior to Commission approval of the CRMP, the Licensee

shall obtain approval before engaging in any ground disturbing activities or taking any other action that may affect any historic properties within the project's area of potential effect. The CRMP shall include the Licensee's proposed plan and schedule for rehabilitating and opening the Seneca Falls powerhouse as a museum grade operating powerhouse with existing equipment intact.

Article 414. Within 6 months of the effective date of the license, the Licensee shall file with the Commission, for approval, a final recreation plan.

The final plan shall provide for the following recreational enhancements at the project: (1) a car-top boat access point on Van Cleeef Lake with temporary docking for at least five boats; (2) upgrading the existing boat launch and shoreline angling access at Oak Street Island Park, making all improvements accessible for persons with disabilities; (3) allowing continued public access to project-related lands within the constraints of public safety and project security; (4) rehabilitating and opening the Seneca Falls powerhouse to the public as a "museum grade" operating powerhouse with the existing equipment intact, including nearby parking for at least two school busses and development of an interpretive brochure; and (5) signage at facilities to direct boaters to the Elizabeth Cady Stanton House and the Seneca Falls powerhouse museum.

The final plan shall include, at a minimum, the following: (1) final site plans for the recreation facilities cited above; (2) design drawings of the directional signs and a description of where they will be located; (3) a discussion of how the facilities will conform to the guidelines established by the Architectural and Transportation Barriers Compliance Board (Federal Register, Vol. 56, No. 144); (4) erosion and sediment control measures, designed in consultation with the Natural Resources Conservation Service and consistent with the provisions contained in Article 401, which shall be implemented during construction and which shall minimize destruction of the area's natural vegetation, and provide for revegetation, stabilization, and landscaping of new construction areas and slopes damaged by erosion as provided pursuant to Article 401 of this license; and (5) the implementation schedule.

The Licensee shall prepare the plan after consultation with the New York State Department of Environmental Conservation, the Natural Resources Conservation Service, the New York State Thruway Authority, the National Park Service, the U.S. Fish and Wildlife Service, the New York Urban Cultural Park, New York

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State Historic Preservation Office, the Seneca Falls Historical Society, and the villages of Waterloo and Seneca Falls.

The Licensee shall include with the plan documentation of agency consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The Licensee shall allow a minimum

of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the Licensee does not adopt a recommendation, the filing shall include the Licensee's reasons, based on site-specific information.

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

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

(b) The type of use and occupancy of project lands and water for which the Licensee may grant permission without prior Commission approval are:

- (1) landscape plantings;
- (2) non-commercial piers, landings, boat docks, or similar structures and facilities that can

accommodate no more than 10 watercraft at a time and where said facility is intended to serve single-family type dwellings;

- (3) embankments, bulkheads, retaining walls, or similar structures for erosion control to protect the existing shoreline; and
- (4) food plots and other wildlife enhancement.

To the extent feasible and desirable to protect and enhance the project's scenic, recreational, and other environmental values, the Licensee shall require multiple use and occupancy of facilities for access to project lands or waters. The Licensee shall also ensure, to the satisfaction of the Commission's authorized representative, that the use and occupancies for which it grants permission are maintained in good repair and comply with applicable state and local health and safety requirements. Before granting permission for construction of bulkheads or retaining walls, the Licensee shall:

- (1) inspect the site of the proposed construction;
- (2) consider whether the planting of vegetation or the use of riprap would be adequate to control erosion at the site; and
- (3) determine that the proposed construction is needed and would not change the basic contour of the reservoir shoreline.

To implement this paragraph (b), the Licensee may, among other things, establish a program for issuing permits for the specified types of use and occupancy of project lands and waters, which may be subject to the payment of a reasonable fee to cover the Licensee's costs of administering the permit program. The Commission reserves the right to require the Licensee to file a description of its standards, guidelines, and procedures for implementing this paragraph (b) and to require modification of those standards, guidelines, or procedures.

(c) The Licensee may convey easements or rights-of-way across, or leases of, project lands for:

- (1) replacement, expansion, realignment, or maintenance of bridges or roads where all necessary state and federal approvals have been obtained;
- (2) storm drains and water mains;
- (3) sewers that do not discharge into project waters;
- (4) minor access roads;
- (5) telephone, gas, and electric utility distribution lines;
- (6) non-project overhead electric transmission lines that do not require erection of support structures within the project boundary;
- (7) submarine, overhead, or underground major telephone distribution cables or major electric distribution lines (69-kv or less);

and

- (8) water intake or pumping facilities that do not extract more than one million gallons per day from a project reservoir.

No later than January 31 of each year, the Licensee shall file three copies of a report briefly describing for each conveyance made under this paragraph (c) during the prior calendar year, the type of interest conveyed, the location of the lands subject to the conveyance, and the nature of the use for which the interest was conveyed.

(d) The Licensee may convey fee title to, easements or rights-of-way across, or leases of project lands for:

- (1) construction of new bridges or roads for which all necessary state and federal approvals have been obtained;
- (2) sewer or effluent lines that discharge into project waters, for which all necessary federal and state water quality certification or permits have been obtained;
- (3) other pipelines that cross project lands or waters but do not discharge into project waters;
- (4) non-project overhead electric transmission lines that require erection of support structures within the project boundary, for which all necessary federal and state approvals have been obtained;
- (5) private or public marinas that can accommodate no more than 10 watercraft at a time and are located at least one-half mile (measured over project waters) from any other private or public marina;
- (6) recreational development consistent with an

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approved Exhibit R or approved report on recreational resources of an Exhibit E; and

- (7) other uses, if: (i) the amount of land conveyed for a particular use is five acres or less; (ii) all of the land conveyed is located at least 75 feet, measured horizontally, from project waters at normal surface elevation; and (iii) no more than 50 total acres of project lands for each project development are conveyed under this clause (d)(7) in any calendar year.

At least 60 days before conveying any interest in project

lands under this paragraph (d), the Licensee must submit a letter to the Director, Office of Hydropower Licensing, stating its intent to convey the interest and briefly describing the type of interest and location of the lands to be conveyed (a marked exhibit G or K map may be used), the nature of the proposed use, the identity of any federal or state agency official consulted, and any federal or state approvals required for the proposed use. Unless the Director, within 45 days from the filing date, requires the Licensee to file an application for prior approval, the Licensee may convey the intended interest at the end of that period.

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

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

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

(3) The instrument of conveyance must include the following covenants running with the land: (i) the use of the lands conveyed shall not endanger health, create a nuisance, or otherwise be incompatible with overall project recreational use; (ii) the grantee shall take all reasonable precautions to 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; and (iii) the grantee shall not unduly restrict public access to project waters.

(4) The Commission reserves the right to require the

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Licensee to take reasonable remedial action to correct any violation of the terms and conditions of this article, for the protection and enhancement of the project's scenic, recreational, and other environmental values.

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

proposals to exclude lands conveyed under this article from the project shall be consolidated for consideration when revised exhibit G or K drawings would be filed for approval for other purposes.

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

(E) 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.

(F) This order is issued under authority delegated to the Director and constitutes final agency action. Requests for rehearing by the Commission may be filed within 30 days of the date of issuance of this order, pursuant to 18 C.F.R. Section 385.713. The filing of a request to rehearing does not operate as a stay of the effective date of this order or of any other data specified in this order, except as specifically ordered by the Commission. The Licensee's failure to file a request for rehearing shall constitute acceptance of this order.

Kevin P. Madden
Acting Director
Office of Hydropower Licensing

ATTACHMENT TO LICENSE

WATER QUALITY CERTIFICATION ISSUED BY
THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
FOR THE
WATERLOO-SENECA FALLS HYDROELECTRIC PROJECT
ON NOVEMBER 3, 1994

GENERAL CONDITIONS

OVERSIGHT AND ADMINISTRATION

1. Inspections: The project, including relevant records, is subject to inspection at reasonable hours and intervals, upon reasonable notice to the Certificate holder, by an authorized representative of the Department to determine whether the applicant is complying with this certification. A copy of this

certification, including all referenced maps, drawings, and special conditions, must be available for inspection by the Department during such inspections at the project.

2. Certification Changes: The Department reserves the right to modify, suspend or revoke this certification in accordance with 6NYCRR §621.14.
3. Compliance: The Certificate holder shall be responsible for complying with the terms of this certification and for its actions, and those of its contractors, agents and representatives in undertaking such compliance. The Certificate holder shall indemnify, and hold harmless the State of New York from suits and claims arising only from acts or omission of the Certificate holder in undertaking such compliance. The Certificate holder shall notify the Department of any occurrence which prevents or inhibits compliance with this certificate within twenty four (24) hours of the occurrence.
4. Rights: This certification does not convey to the Certificate holder any right to trespass upon the lands or interfere with the riparian rights of others, nor does it authorize the impairment of any rights, title, or interest in real or personal property held or vested in a person not a party to this certification.
5. Other Approvals: The Certificate holder is responsible for obtaining any permits, approvals, lands, easements and rights-of-way that may be required for this project. The Federal Energy Regulatory Commission (FERC) has concurrent jurisdiction over the project.

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SPECIAL CONDITIONS

A. OPERATING CONDITIONS

6. Impoundment Fluctuation(s):
Seneca Lake: The daily fluctuation of Seneca Lake shall not exceed 0.1 feet from the daily target elevation set by the New York State Thruway Authority. Seasonal fluctuations shall be in accord with the rule curve developed by the New York State Department of Transportation and the New York State Electric and Gas Corporation in the late 1970's in response to concerns of the Seneca Lake Waterways Association.

Van Cleef Lake: The daily fluctuation of Van Cleef Lake shall not exceed 0.25 feet, seasonal fluctuation shall be in accord with the schedule and limits established by the New York State Thruway Authority.
7. Minimum Flows to Bypassed Reach: The Certificate holder shall ensure that the minimum flow released to the Waterloo bypassed reach is 10 cfs.

8. Flow Monitoring: The Certificate holder shall submit a flow monitoring plan for Department approval within three (3) months of the issuance of this certificate. This flow monitoring plan will provide for the installation and maintenance of a U.S. Geological Survey (USGS) gaging station, unless justification for an alternative gaging system is provided. The flow monitoring plan shall include all gages and/or equipment for the purpose of:

- a. determining the stage and/or flow of the stream or streams on which the project is located;
- b. determining all other project flows including flow through the turbine(s) and any other bypass/diversion flows, and;
- c. determining project headpond and tailwater elevation.

The Licensee shall keep accurate and sufficient records of the foregoing flow/stage data to the satisfaction of the Department and shall provide such data in a format and interval as the Department may prescribe.

All gaging equipment associated with the project, including the headpond, tailwater and intake canal gages shall be made operational upon commencement of operations. All gages and ancillary equipment shall be fully calibrated within 12 months of commencement of operations.

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A gage calibration plan shall be submitted to the Department for review and approval. Ongoing calibration of all gaging equipment shall be performed at least quarterly to the satisfaction of the Department and/or its authorized representative.

Permanent staff gages shall be installed to allow independent verification of headpond and tailwater elevations. Allowable operating ranges and stage vs. discharge ratings shall be calibrated at least annually, or when rating changes occur, and maintained for these sites. Access to staff gages shall be provided to the Department and/or its authorized representative.

Headpond and tailwater elevations shall be gaged and recorded to the nearest 0.01 ft.

9. Fish Protection: The existing trashracks with adjacent bars spaced one and three eights inches apart are, for the present, satisfactory to protect fish from entrainment. However, on replacing the existing racks for any reason, the Certificate holder shall also install exclusionary devices to prevent fish from

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entering the project turbines, while minimizing subsequent losses due to impingement. To minimize entrainment/impingement of fish, the following design criteria will be met:

All water entering the turbines must pass through the exclusionary devices.

The maximum width of any opening in the device will not exceed one (1) inch (e.g., 1 inch clear-spaced trashracks, 1 inch clear-spaced louvers, plate overlays with 1 inch circular openings, etc).

The approach flow velocity, as measured approximately 1 foot in front of the device, will be maintained at 2 feet per second or less.

If the approach velocity exceeds 2.0 feet per second, the Certificate holder must satisfactorily demonstrate to the Department that excessive fish impingement is not occurring on the surface of the exclusionary device. For the purposes of the demonstration, excessive impingement is that greater than what is observed when approach velocities are two (2) feet per second at each site. Upon installation of the exclusionary device, approach flow velocities will be immediately verified and provided to the Department. An assessment plan should be

submitted within 6 months of completed installation if the velocities encountered following installation of the exclusionary devices noted above are greater than 2.0 fps. The impingement assessment must be completed within two years of the installation of the appropriate exclusionary device(s). The exclusionary devices will be considered acceptable if excessive impingement as described above does not occur. If the results of the assessment indicate that excessive impingement occurs, then intake velocities must be reduced and re-evaluated to assure that the problem of excessive impingement is eliminated.

10. Fish Passage: The Department accepts the fish passage structure proposed by Seneca Falls Power Corporation (SFPC) in their license application. SFPC must continuously pass 2 percent of maximum station hydraulic capacity through the fish bypass facility at each station during salmonid migrations, as an attraction/conveyance flow. These periods will be in the spring from March 1 through May 15, and in the fall from October 1 through December 15.

During periods other than the salmonid migratory

period, the fish passage facility must be continuously operated with 2 percent of maximum station hydraulic capacity during all periods of hydroelectric generation. The facility must begin to operate at least one half hour before the station units are brought on-line to give fish which have accumulated in the vicinity of the trashracks an outlet prior to start-up. Operation of the fish passage facility should conclude no sooner than one half hour following the end of any period of hydroelectric generation.

B. PROJECT MAINTENANCE AND CONSTRUCTION

11. Maintenance Dredging: The Certificate holder shall curtail generation and install stoplogs or otherwise shut off flow through the turbine(s) prior to commencing any maintenance dredging activities in the intake/forebay area.
12. Sediment Analysis and Disposal: The Certificate holder must sample any sediments to be disturbed or removed from the project waters and test them for contaminants. Sampling and testing shall be accomplished according to a protocol submitted to and approved by the Department beforehand. Prior to dredging or other excavation, the Certificate holder must secure Department approval for all disposal locations for any sediments to be removed from the project waters.
13. Erosion and Sediment Control: Prior to commencing activities which could adversely affect water quality, the Certificate holder must receive Department approval of an Erosion and Sediment Control Plan. This plan must be submitted at least 90 days before the intended date for commencing work. At minimum, the Certificate holder must accomplish the following objectives:
 - a. Isolate instream work from the flow of water and prevent discolored (turbid) discharges and sediments from entering the waters of the river due to excavation, dewatering and construction activities.
 - b. Exclude heavy construction equipment from below the mean high water line until the work area is protected by an approved structure and dewatered.
 - c. Stabilize any disturbed banks by grading to an appropriate slope, followed by armoring or vegetating as appropriate, to prevent erosion and sedimentation into the waterbody.
 - d. Minimize soil disturbance, provide appropriate grading and temporary and permanent revegetation of stockpiles and other disturbed areas to minimize erosion/sedimentation potential.

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- e. Protect all waters from contamination by deleterious materials such as wet concrete, gasoline, solvents, epoxy resins or other materials used in construction, maintenance and operation of the project.
 - f. Install effective erosion control measures on the downslope of all disturbed areas and maintain them in a fully functional condition. These erosion control measures are to be installed before commencing any other activities involving soil disturbance.
 - g. Ensure complete removal of all dredged and excavated material, debris, or excess materials from construction, from the bed and banks of all water areas to an approved upland disposal site.
 - h. Ensure that all temporary fill and other materials placed in the waters of the river are completely removed, immediately upon completion of construction, unless otherwise directed by the Department.
14. Placement of cofferdams, construction of temporary access roads or ramps, or other temporary structures

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which encroach upon the bed or banks of the river: The design of all such structures must be approved by the Department prior to installation. These designs will be developed in accordance with Condition #14 (above).

- 15. Maintenance of River Flow: During all periods of construction, the Certificate holder shall maintain adequate flows immediately downstream of worksites to ensure that the water quality standards established for the water body are met.
- 16. Turbidity Monitoring: The Certificate holder will monitor the waters of the river at a point immediately upstream of project activities and at a point no more than 100 feet downstream from any discharge point or other potential source of turbidity. Certificate holder specifically agrees that if at any time, turbidity measurements from the downstream locations exceed the measurements from the locations upstream of the work areas, all related construction on the project will cease until the source of the turbidity is discovered and the situation is corrected.
- 17. Notifications: The Department contact specified in this certificate must be notified in writing at least two weeks prior to commencing any work performed under the authority of this certificate.

C. PUBLIC ACCESS

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18. Recreational Access: The Certificate holder will provide public access to project waters as proposed in the application for federal license submitted in support of the application for this certificate.

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