

79 FERC 1 62, 095UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSIONNiagara of Wisconsin Paper Corporation) Project No. 2536-009ORDER ISSUING NEW LICENSE
(Major Project)
(Issued May 7, 1997)

I. INTRODUCTION

Pursuant to Part I of the Federal Power Act (FPA), 16 U.S.C. § 791 et seq., applications for new licenses were filed with the Commission for continued operation and maintenance of four existing hydroelectric projects on the Menominee River in Michigan and Wisconsin. ^{1/} On October 11, 1996, Commission staff issued a final Environmental Impact Statement (EIS) that evaluated environmental resource impacts resulting from the continued operation of the four projects, and recommended specific measures to enhance these resources.

Concurrently with this order, I am issuing companion license orders for the other three Menominee River projects. I find that the projects with the environmental enhancement measures that I am requiring will be best adapted to the comprehensive development of the Menominee River.

II. BACKGROUND

Niagara of Wisconsin Paper Corporation (Niagara or licensee) filed for a new license, pursuant to Section 15 of the FPA, 16 U.S.C. § 807, for the continued operation of the 9.1-megawatt (MW) Little Quinnesec Falls Project, located on the Menominee River, ^{2/} in Marinette County, Wisconsin and Dickinson County, Michigan. The project, as proposed by Niagara, would produce

1/ The projects and license applicants are as follows:

Little Quinnesec Falls Project, No. 2536, Niagara of Wisconsin Paper Corporation; Chalk Hill Project, No. 2394, and White Rapids Project, No. 2357, Wisconsin Electric Power Company; and Grand Rapids Project, No. 2433, Wisconsin Public Service Corporation.

2/ The pertinent portion of the Menominee River is a navigable waterway of the United States. Section 23 (b) of the FPA, 16 U.S.C. § 817 (b), therefore, requires that the project be licensed. 3 FPC page 449 (1943).

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about 69.6 gigawatt-hours (GWh) of electricity annually. 3/ Niagara proposes no new capacity and no new construction at the Little Quinnesec Falls Project. The original license for this project expired on June 30, 1993. 4/ Since then, Niagara has operated the project under annual license.

Notice of the application was published on August 16, 1991. Two motions to intervene were filed in response to the notice; both were granted. 5/

The entities listed below filed untimely motions to intervene on the following dates: Michigan Department of Natural Resources, (Michigan DNR), October 24, 1991; U.S. Department of the Interior (Interior), April 15, 1992; Michigan Hydro Relicensing Coalition and Izaak Walton League, which filed jointly on October 27, 1994; and River Alliance of Wisconsin on February 13, 1996. The late-filed motions were unopposed. Michigan DNR, Michigan Hydro Relicensing Coalition, the Izaak Walton League and River Alliance of Wisconsin have an interest in the proceeding that is not represented by any other party, and their late interventions will not delay or disrupt the proceeding.

Further, on April 7, 1992, and April 10, 1992, Michigan DNR and Wisconsin Department of Natural Resources (Wisconsin DNR), respectively, each filed another motion to intervene and requested a rehearing regarding the Order Establishing Minimum Flow Requirement issued January 7, 1992.

No agency, organization, or individual filed a motion to intervene in opposition to the project. All comments received

3/ The Commission issued the original license for the Little Quinnesec Falls Project on April 29, 1975. See 58 FPC 2771.

4/ The Commission amended Niagara's original license on January 7, 1992, in an order establishing a minimum instream flow requirement of 1,000 cfs downstream of the Little Quinnesec Falls Project during periods of project operation (58 FERC ¶ 62,008).

5/ The entities listed below filed timely motions to intervene on the following dates: Wisconsin Department of Natural Resources (Wisconsin DNR), September 10, 1991; and Wisconsin Electric Power Company (Wisconsin Electric), October 15, 1991.

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have been fully considered in determining whether or under what conditions to issue this license.

The Commission staff issued a draft EIS for this project on November 27, 1995. Comments on the draft EIS were addressed in the final EIS. Staff also prepared a Safety and Design Assessment, which is available in the Commission's public file for this project.

III. PROJECT DESCRIPTION

The existing Little Quinnesec Falls Project consists of: a 24-foot-high, 278-foot-long, concrete gravity dam; forebay; a reservoir with a surface area of 370 acres; six generating units with a total capacity of 9.1 MW which are contained in a structure that houses non-project paper and pulp processing equipment; and, electrical transmission facilities. The project boundary encompasses project facilities and approximately 370 acres that correspond to the maximum water surface elevation of the reservoir pool.

The licensee has historically operated the project in a peaking mode, producing about 69.6 GWh of electricity annually. Niagara proposes to continue operating the project as a peaking facility, and would produce about 69.6 GWh of electricity annually.

A more detailed project description is presented in ordering paragraph B(2).

IV. LICENSEE'S PLANS AND CAPABILITIES

In accordance with Sections 10 and 15 of the FPA, staff evaluated Niagara'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 modification; and (8) compliance record. I accept the staff's findings in each of these areas.

Here are the findings.

1. Conservation Efforts

Section 10(a)(2)(C) does not apply to Niagara. The licensee is not a state or municipality, nor is it an electric utility; therefore, Niagara does not have retail customers. Power

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generated by the Little Quinnesec Falls Project provides about 25 percent of Niagara's paper and pulp processing and manufacturing power needs. The power is conveyed through Niagara's electric distribution system, controlled from the adjacent paper and pulp processing and manufacturing facilities. When the mill does not operate (about 5 days per year), power is sold to Wisconsin Electric Power Company.

There are no mandatory state or federal regulatory requirements for energy conservation, but Niagara has implemented programs to conserve energy, such as plans to purchase high-efficiency electric motors for replacement of existing motors. Its efforts in this area have reduced energy consumption at the Niagara mill per ton of paper produced by 23 percent since 1976. Therefore, Niagara is making a good faith effort to conserve electricity.

2. Ability to Comply with the New License

Niagara's license application demonstrates its ability to comply with the articles, terms, and conditions of any license issued, and with other applicable provisions of the FPA.

Niagara has, or can acquire, the resources and expertise necessary to carry out and comply with all articles, terms, and conditions of a new license.

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

Niagara owns and operates the Little Quinnesec Falls Project. The project dam and appurtenant facilities are subject to Part 12 of the Commission's Regulations concerning project safety. Staff reviewed Niagara's management, operation, and maintenance of the project pursuant to the requirements of Part 12 and the associated Engineering Guidelines, including all applicable safety requirements such as warning signs and boat barriers, Emergency Action Plan, and Independent Consultant's Safety Inspection Report. Staff concludes that the project is being safely managed, operated, and maintained.

4. Ability to Provide Efficient and Reliable Electric Service

Niagara ensures the efficiency and reliability of its electrical service by implementing an equipment maintenance program. The licensee determined that it is not economically feasible to increase the project's generating capacity at this

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time. The project currently uses all river flows that are available 58 percent of the time.

After reviewing the record of the licensee and its ability to provide efficient and reliable electric service, staff concludes that Niagara has operated the project in an efficient manner and will continue to provide efficient and reliable electric service for its manufacturing operations in the future.

5. Need for Power

To assess the need for power, staff reviewed Niagara's use of the project power to date and in the future, together with that of the operating region in which the project is located.

The Little Quinnesec Falls Project is in the Mid-American Interconnected Network (MAIN) region of the North American Electric Reliability Council (NERC). NERC annually forecasts electrical supply and demand in the nation and the region for a 10-year period. NERC's most recent report 6/ on annual supply and demand projections shows that, for the period 1995-2004, loads in the MAIN area will keep pace with planned capacity additions, resulting in unchanged reserve margins. These margins, though relatively stable, will remain below 20 percent throughout the forecast period.

The Little Quinnesec Falls Project has historically generated an annual average of 69.6 GWh of power. Project power has been and will continue to be used at Niagara's paper and pulp processing and manufacturing facilities. Surplus power is sold to Wisconsin Electric Power Company. In addition, project power displaces nonrenewable fossil-fired generation and contributes to diversification of the generation in the MAIN area.

The present and future use of the project's power, its low cost, its displacement of nonrenewable fossil-fired generation and contribution to a diversified generation mix, as well as a low-cost renewable power source for the paper manufacturing process at Niagara's paper mill, support a finding that the power from the Little Quinnesec Falls Project will help meet a need for power in the MAIN area in both the short- and long-terms. 7/

6/ Electric Supply and Demand 1995-2004, Summary of Electric Utility Supply and Demand Projections (June 1995).

7/ See final EIS at page 1-3.

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6. Impact of Relicensing on the Licensee's Transmission System

Niagara does not propose to change the transmission network affected by project operation. Licensing the project would have no effect on the existing or planned transmission system.

7. Whether the Licensee's Plans will be Achieved in a Cost-Efficient Manner

Niagara's plans to operate the project in a peaking mode and to implement various other environmental modifications. These plans can be achieved in a cost-effective manner. The project, as presently constructed and as the licensee proposes to operate it, fully develops and uses the economical hydropower potential of the site.

8. Compliance Record

Niagara's overall record of making timely filings and compliance with its license has been satisfactory. Niagara has generally complied with the terms and conditions of its original license. As of April 5, 1995, Niagara had paid all annual charges for which it had been billed.

V. WATER QUALITY CERTIFICATION

Under Section 401(a)(1) of the Clean Water Act, 33 U.S.C. § 1341(a)(1), the Commission may not issue a license for a hydroelectric project unless the state certifying agency has either issued water quality certification for the project or has waived certification by failing to act on a request for certification within a reasonable time, not to exceed one year.

The Little Quinnesec Falls Project is located in the States of Michigan and Wisconsin. Because the powerhouse discharges into the Menominee River on the Wisconsin side of the boundary, the State of Wisconsin has Section 401 authority in this case.

Niagara, on August 24, 1990, requested from Wisconsin DNR water quality certification for the Little Quinnesec Falls Project. By letter dated August 31, 1990, Wisconsin DNR waived issuance of the Section 401 water quality certification.

VI. COASTAL ZONE MANAGEMENT ACT

Under Section 307(c)(3)(A) of the Coastal Zone Management Act (CZMA), the Commission cannot issue a license for a

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hydroelectric power project within or affecting a state's coastal zone unless the state CZMA agency concurs with the license applicant's certification of consistency with the state's CZMA Program (which has been approved by the Secretary of Commerce), or the agency's concurrence is conclusively presumed by its failure to act within 180 days of its receipt of the applicant's certification.

Niagara, on August 28, 1995, requested CZMA certification from the Wisconsin Department of Administration (WDA), which administers Wisconsin's CZMA program. 8/ On September 25, 1995, WDA requested additional information from Niagara to initiate its review of the project. In its letter dated November 22, 1995, WDA informed Niagara that its September information request was satisfied and indicated that the 180-day time period to complete its consistency determination began on October 31, 1995, when WDA confirmed that sufficient project information was available. The review period ended, therefore, on April 28, 1996.

On April 26, 1996, WDA issued a letter concurring in the CZMA consistency certification for the project, conditioned on the project license including seven conditions, 9/ one of which is that Niagara must pay at least \$22,000 annually into a fund to be used in the Menominee River basin to compensate for fish mortality at the project. 10/ WDA based the \$22,000

8/ On the same date, Niagara also requested CZMA certification from the State of Michigan. Because the Michigan Department of Environmental Quality did not file any response addressing the project's consistency with the Michigan Coastal Management Program, its consistency concurrence is presumed.

9/ The conditions were developed pursuant to discussions at the dispute-resolution meetings held on April 22 and 23, 1996, between staff and fish and wildlife agencies pursuant to Section 10(j) of the FPA (see section VIII, below). The conditions were referred to in WDA's April 26, 1996 letter and reiterated and written out in its letter of July 2, 1996.

10/ The condition reads:

To make up for fish which are lost through turbine-induced mortality, a replacement fund of at least \$22,000 per annum shall be paid by the licensee. The fund shall be adjusted annually according to the consumer price index. The fund shall be used within
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"compensatory mitigation" payment on the draft EIS's estimate of annual fish mortality (38,611 fish) and replacement costs. 11/

The consistency certification provisions of Section 307(c)(3)(A) of the CZMA make no reference to the inclusion of conditions on a state's consistency determination. Therefore, the CZMA does not provide that certification conditions become license conditions.

In any event, pursuant to discussions at the April 22 and 23, 1996, Section 10(j) dispute-resolution meetings, on July 19, 1996, Niagara filed more accurate data showing a lower annual mortality rate of 4,256 fish. 12/ The final EIS, therefore, recommended the correspondingly lower base payment of \$3,000. 13/ In response, on October 26, 1996, WDA filed a letter stating that, pursuant to Section 930.51(b)(3) of Department of Commerce's National Oceanic and Atmospheric Administration's (NOAA) regulations, it considered the reduction in the annual compensatory mitigation payment a substantial change to the project that triggered a new six-month CZMA consistency review period. 14/ However, it is clear that

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the Menominee River basin, and may be used for fish protection. If the \$22,000 per annum fund is to be re-evaluated, it shall be subject to approval by the WCMP [Wisconsin Coastal Management Program].

Variations of the quoted condition were included as recommendations for license conditions under Section 10(j) in the three other Menominee relicensing proceedings. The six other conditions included in WDA's CZMA certification concurrence for the Little Quinnesec Falls Project are included in the project license, because I am adopting them pursuant to the FPA Section 10(j) process. They concern mode of operation (Article 401), reservoir refilling (Article 401), reservoir levels (Article 401), land and wildlife management plans (Articles 411 and 412), endangered species management plan (Articles 410 and 411), and increased public recreation access (Article 413).

11/ See page C-6 of Appendix C in the draft EIS.

12/ See Table C-1 at p. C-6 of the final EIS.

13/ Id. at Table 5-10, p. 5-37.

14/ Section 930.51(b)(3) of NOAA's regulations defines the
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reducing the compensatory mitigation annual payment from \$22,000 to \$3,000, or even to zero, has absolutely no bearing on the project's impact on Wisconsin's coastal zone. There can therefore be no way that a new six-month consistency review period has been triggered ^{15/}. Accordingly, WDA's letter, filed April 7, 1997, finding that the project is inconsistent with Wisconsin's CZMA program, is of no effect.

In any event, as discussed in Section VIII, entitled "Recommendations of State and Federal Fish and Wildlife Agencies," *infra*, the compensatory mitigation remedy lacks adequate evidentiary support and, therefore, must be rejected.

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phrase "Federal license or permit" (for certification purposes) as including "major amendments of Federal license and permit activities previously reviewed by the State agency which will cause coastal zone effects substantially different than those originally reviewed by the State agency."

15/ NOAA's rulemaking promulgating the regulation states that Section 930.51(b):

is founded on the principle that an applicant does not have a vested right to receive approval of a renewal or major amendment without first complying with the law existing at the time approval is sought. However, this principle must operate in the context of avoiding unnecessary State agency review. Therefore, subparagraph (1) assures that State agency of an opportunity to review licenses and permits which were originally approved by the Federal government prior to management program approval and are subject to major amendment or renewal following management program approval. In the event the State agency has previously reviewed a license or permit activity, further review is limited to cases where change in management program provisions necessitate reevaluation of the activity (subparagraph (2)), or the activity will be modified substantially causing new coastal zone effects (subparagraph (3)). [See 44 FR 37,142 at p. 37,150; emphasis added.]

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VII. SECTION 18 OF THE FPA - FISHWAY PRESCRIPTION

Section 18 of the FPA authorizes the Secretary of the Interior or the Secretary of Commerce to prescribe fishways at Commission-licensed projects. 16/

Interior, by letter dated October 7, 1994, requested the Commission to reserve the Secretary of the Interior's authority to prescribe the construction, operation, and maintenance of fishways for the Little Quinnesec Falls Project pursuant to Section 18 of the FPA.

The Commission recognizes that future fish passage needs cannot always be determined at the time of project licensing. The Commission's practice has been to include a license article that reserves the Secretary of the Interior's authority to prescribe facilities for fish passage. 17/ Therefore, consistent with Commission practice, Article 407 of this license reserves the Commission's authority to require the licensee to construct, operate, and maintain such fishways as may be prescribed by the Secretary of the Interior pursuant to Section 18 of the FPA.

VIII. RECOMMENDATIONS OF STATE AND FEDERAL FISH AND WILDLIFE AGENCIES

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

Wisconsin DNR, Michigan DNR, and Interior filed numerous fish and wildlife recommendations pursuant to Section 10(j) of

16/ Section 18 of the FPA states: "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 the Interior, as appropriate."

17/ The Commission has specifically sanctioned the reservation of fishway prescription authority at relicensing. See Wisconsin Public Service Corporation, 62 FERC ¶ 61,095 (1993); affirmed, Wisconsin Public Service Corporation v. FERC, 32 F.3d 1165 (1994).

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the FPA. 18/ The new license issued herein contains conditions consistent with the agencies' recommendations that Niagara implement the following measures.

- (1) Maintain the existing telemetered U.S. Geological Survey (USGS) gage downstream of the project (Article 403).
- (2) Maintain automatic water level sensors at the headwater and tailwater (Article 403).
- (3) Install and maintain a staff gage in the reservoir clearly visible to the public (Article 403).
- (4) Coordinate with agencies on all emergency and planned maintenance drawdowns (Article 404).
- (5) Sluice downstream all woody debris (Article 408).
- (6) Implement a program to monitor and control the spread of purple loosestrife and Eurasian milfoil in the flowage (Article 410).

Pursuant to Section 10(j), Commission staff made a preliminary determination in the draft EIS for the Menominee River projects that several resource agency recommendations that were considered to be within the scope of Section 10(j) were inconsistent with the purpose and requirements of Part I of the FPA. If the Commission finds that any such recommendation may be inconsistent with the purposes and requirements of Part I of the FPA or other applicable law, Section 10(j)(2) requires the Commission and the agencies to attempt to resolve the inconsistency, giving due weight to the recommendations, expertise, and statutory responsibilities of such agencies. If the Commission then does not adopt a recommendation, it must explain how the recommendation is inconsistent with applicable law and how the conditions selected by the Commission adequately and equitably protect, mitigate damages to, and enhance fish and wildlife.

18/ A number of recommendations do not qualify for processing under Section 10(j) because they involve studies that could have been performed prior to licensing, or do not otherwise qualify as specific measures to protect, mitigate damages to, or enhance fish and wildlife. These were instead considered under Section 10(a)(1), pursuant to which the Commission considers all aspects of the public interest.

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A meeting was held on April 22 and 23, 1996 to attempt to resolve any Section 10(j) inconsistencies. At the meeting, Commission staff and the agencies resolved many, but not all, of the inconsistencies. A number of other issues not identified in the draft EIS as Section 10(j) inconsistencies, but of concern to the fish and wildlife agencies, also were discussed at the meeting.

On October 11, 1996, the Commission issued the final EIS for the Menominee River projects. Subsequent to issuance of the final EIS, the fish and wildlife agencies filed letters with the Commission dated November 12, 1996 (Michigan DNR), November 8, 1996 (Wisconsin DNR), and November 15, 1996 (Interior). These letters raised a number of concerns regarding staff's recommendations in the final EIS. The agencies also requested another 10(j) meeting and subsequent issuance of a revised or supplemental final EIS.

In the following paragraphs, I address each of the substantive issues discussed at the Section 10(j) meeting or raised in the agencies' final EIS comment letters.

1. Operation Mode and Target Reservoir Elevation

The resource agencies recommended that the licensee operate the project in run-of-river mode, with outflows, as measured immediately downstream of the tailrace, being within 5 percent of inflows to the impoundment, corrected for time of travel and accretion. The agencies further recommended that the licensee maintain a target reservoir elevation of 943.0 feet NGVD.

Staff concluded in the draft EIS that the Little Quinnesec Falls Project should continue to operate in a peaking mode as long as the existing upstream Big Quinnesec Falls Project (No. 1980) is operated in a peaking mode. Staff concluded that changing Little Quinnesec Falls Project to a run-of-river operating mode: would not yield any substantial environmental benefits to downstream fish resources and habitat; would lead to greater downstream river fluctuations and, therefore, would cause greater environmental impacts than current operations. In addition, converting the project to run-of-river operation would cost the licensee about \$100,000 annually because of increased dependable power costs associated with the purchase of replacement power from local utility suppliers.

In the draft EIS, staff recommended a reservoir target elevation of 943.0 feet, with a maximum daily fluctuation of 1.2 feet. This was based on Niagara's operation records

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indicating that: the reservoir typically fluctuates 0.6 foot per day; however, at times, the daily fluctuation may be as much as 1.2 feet. In its comments on the draft EIS, Niagara informed staff that the 943.0 foot elevation actually refers to the forebay elevation. The target reservoir elevation is actually 944.5 feet.

At the Section 10(j) meeting, the resource agencies stated that, as long as the upstream Big Quinnesec Falls Project operates in a peaking mode, they prefer that the Little Quinnesec Falls Project serves as a re-regulating project. The resource agencies concluded that they would agree with staff's operation recommendation as long as it is identified as an "interim" operation, subject to review upon relicensing of the Big Quinnesec Falls Project.

The resource agencies further recommended that the daily reservoir fluctuation be limited to a maximum 0.5 foot, similar to the other projects being relicensed as part of this proceeding. Staff noted that the other three projects would be operated run-of-river, rather than as peaking projects. Therefore, staff concluded that a 0.5-foot reservoir fluctuation would be inconsistent with operation of the Little Quinnesec Falls Project in a peaking mode. Michigan DNR suggested a compromise whereby a 0.6-foot fluctuation would be required on the order of 95 to 99 percent of the time. This would allow a 1.2-foot fluctuation to occur the remaining time.

Staff noted that selecting any percentage of time for the 0.6-foot fluctuation limit would be arbitrary without a detailed review of project operating records. The resource agencies then suggested a two-year test period to determine the project's ability to operate within a \pm 0.6-foot reservoir fluctuation. Staff agreed to recommend: the 0.6-foot daily reservoir fluctuation limit for ordinary project operations; up to 1.2 feet per day fluctuation for extraordinary project operations; and that the licensee conduct a study to define ordinary and extraordinary operating conditions.

The resource agencies further recommended that the license article regarding project operation specifically stipulate that the project reservoir be refilled on a daily basis to the extent possible, rather than gradually drawn down during the week and refilled on weekends. This procedure would protect weekend summer whitewater activities that occur downstream of the project. Although there is no evidence that the licensee draws down the reservoir during the week and refills it on weekends,

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staff agreed to recommend this stipulation in the project operation article.

Therefore, Article 401 requires the licensee to continue operating the project in a peaking mode, with a normal reservoir target elevation of 944.5 feet plus and minus 0.6 foot. The licensee shall be permitted to increase the reservoir water surface operating range to plus and minus 1.2 feet during extraordinary operating conditions. To protect weekend whitewater boating activities downstream of the project, the licensee shall not refill the reservoir on weekends. In addition, weekend operations shall not vary from weekday operations when inflow to the project is sufficient for continued peaking operation.

Article 403 requires that the licensee prepare an operational compliance plan that defines specific criteria for operating the project. As part of this plan, the licensee shall conduct a two-year test to determine the licensee's ability to limit daily reservoir fluctuations to 0.6 foot.

In addition, Article 401 requires that project operation be identified as an "interim operating strategy" until the Big Quinnesec Falls Project is relicensed. The licensee will be required to file a revised operating plan within six months following the relicensing of the Big Quinnesec Falls Project, if that project changes its currently licensed peaking operating mode.

2. Maintain Daily Record of Operation on a 30-minute Basis

The agencies recommended that Niagara maintain a daily record of project operation, including turbine operation, headwater and tailwater elevations, and flow releases through the powerhouse and spillway, and provide the data to the agencies upon request. The agencies also recommended data be collected on a 30-minute basis. Niagara's entire system operation data log currently records data on a 60-minute basis. Consequently, the licensee proposed to continue to record data within that time interval.

Staff determined in the draft EIS that Niagara's 60-minute interval for recording project operational data would provide sufficient information to monitor project operation, and, therefore, concluded that additional data would not lead to improved project operation.

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At the Section 10(j) meeting, the resource agencies concurred with staff's conclusion that a 60-minute monitoring interval would provide adequate data to protect fish and wildlife resources.

Therefore, Article 403 requires that the licensee, as part of the project's operational compliance plan, record headwater, tailwater, and generation data on a 60-minute time interval basis. The plan will also require the licensee to establish provisions for providing this information to the agencies in a timely manner, when requested.

3. Pass River Inflow Instantaneously or Within a Few Minutes in Case of Plant Blackout

The agencies recommended that, in the case of plant blackout, Niagara reestablish flow instantaneously or within a few minutes in order to prevent the dewatering of aquatic resources downstream of the project.

The draft EIS supported the agency recommendation for ice-free periods, stating that downstream flows should be reestablished within 10 minutes or as soon as practicable, within the parameters of the project's safe operation. However, staff concluded that, during periods of ice cover, there should be no specific time requirements for reestablishing flows; instead, flows should be reinitiated as soon as practicable, at the discretion of the plant operators in a manner that does not pose a potential hazard to the public, operator safety, project equipment, or property.

At the Section 10(j) meeting, the agencies concluded that staff's recommendation for reestablishing flow during ice-free periods was acceptable. Staff and the agencies also concluded that specific procedures for reestablishing flow during periods of ice conditions should be developed as part of the operational compliance plan for the project, and that the plan should identify procedures to be taken by the plant operator necessary to reinitiate downstream flows as soon as practicable, while ensuring that gate operations would not pose the hazards noted above.

Therefore, Article 403 requires that procedures for reestablishing flows in case of project shutdown during periods of ice cover be included as an element of the project's operational compliance plan. Further, these procedures shall be developed in consultation with the resource agencies.

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4. Water Quality Standards and Monitoring

Michigan DNR recommended that the licensee maintain state water quality standards for dissolved oxygen (DO) and temperature whenever river flow is greater than or equal to the 95 percent exceedance flow. Wisconsin DNR recommended that the licensee maintain state water quality standards for DO, pH, and temperature, except when natural conditions prohibit attainment of the standards.

Michigan DNR also recommended that the licensee prepare a plan to implement various water quality monitoring measures, including:

- (1) monitoring DO continuously upstream and downstream of the dam from May 15 to October 15;
- (2) monitoring temperature upstream and downstream of the dam year-round with frequencies to be determined by the resource agencies;
- (3) monitoring temperature and DO profiles in the impoundment every two weeks from June 1 through August 31 and mid-month during February, April, September, and October;
- (4) preparing and implementing a water/sediment/fish monitoring plan; and
- (5) establishing procedures for mitigating conditions that deviate from state standards.

Wisconsin DNR recommended that the licensee implement water quality monitoring five years after license issuance that includes:

- (1) DO, pH, and temperature readings in the project tailrace at 30-minute intervals between July 1 through September 30 and
- (2) DO and temperature profiles of the reservoir using weekly intervals from July 1 through September 30.

Interior recommended that the licensee:

- (1) maintain applicable state water quality standards for DO, temperature, pH, and other variables;

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(2) monitor DO, temperature, and other water quality variables according to a schedule approved by the state agencies; and

(3) develop mitigation measures jointly with the state agencies that would be implemented if violations of the state surface water quality standards occur.

Michigan DNR's recommended monitoring program would be conducted each year for three years, after which time the frequency of monitoring could be modified, whereas Wisconsin DNR's monitoring program would be conducted at five year intervals over the term of the license.

In the draft EIS staff recommended that the Commission adopt the agencies' conditions for water quality standards and monitoring. The issue, as it pertains to the Little Quinnesec Falls Project, therefore, was not discussed at length at the 10(j) meeting.

In the final EIS, staff concluded that the combined water quality monitoring desired by the agencies is more extensive than needed to determine if the project complies with state water quality standards. 19/ I concur with staff that the combined monitoring recommended by the agencies appears to be more extensive than necessary at a project such as this where historical sampling has shown that project operation does not significantly affect water quality. However, I am requiring in Article 406 that the licensee further consult with the agencies to determine the appropriate scope of water quality monitoring at this project. Because there are different, and sometimes conflicting, details associated with the Michigan DNR and Wisconsin DNR recommendations, it is necessary that further consultation take place to develop an overall monitoring plan. 20/

Subsequent to further agency consultation, the licensee shall prepare and implement a water quality monitoring plan. Although the Commission will retain its authority to approve the

19/ See final EIS at page 4-51.

20/ Providing for a post-licensing water quality monitoring plan that includes additional agency consultation regarding the details of the plan is consistent with a recent Commission order concerning a similar project in Michigan [See Mead Corporation, Publishing Paper Division, 72 FERC ¶ 61,027 (1995)].

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plan, it is appropriate that any subsequent monitoring recommendations by Michigan and Wisconsin DNR be given due consideration. To be consistent with the Commission's balancing responsibilities under the FPA, however, any monitoring requested by the agencies should be within the overall scope and cost of their original Section 10(j) terms and conditions. These terms and conditions were deemed consistent with the FPA in the draft EIS, and, given the lack of further discussion at the Section 10(j) meeting, it is appropriate that they be the basis for Commission review of the plan required in Article 406.

It is apparent that a reasonable, cost-effective monitoring plan can be developed by the licensee and agencies that will satisfy the need to document compliance with water quality standards. By focusing on critical locations, parameters, and seasons, a plan can be readily developed that falls well within the overall scope and cost of the agencies' original recommendations.

Article 406 also includes Michigan and Wisconsin standards for DO, temperature, and pH, with the exception that Article 406 does not include the requirement that the water temperature downstream of the project not be raised by more than 5°F relative to the temperature upstream of the project. This approach is consistent with a recent Commission order concerning a similar project in Michigan. 21/ Article 406 requires the licensee to establish procedures for consulting with the agencies to address water quality conditions that deviate from the standards included in the license.

5. Provide Downstream Fish Passage and Protection from Entrainment

The resource agencies recommended that Niagara provide downstream fish passage and protection from entrainment at the Little Quinnesec Falls Project. The agencies also recommended that the licensee pay compensatory mitigation to the states at an

21/ See Mead Corporation, Publishing Paper Division, 72 FERC ¶ 61,027 (1995). Michigan DNR has provided no evidence of the need for this recommendation. Fish and aquatic resources residing downstream of the dam are affected by water temperatures occurring in their local habitat, rather than by any difference between temperatures there and upstream of the project. Maintaining average and maximum temperature standards, and minimum DO standards, downstream of the dam will adequately protect the fishery.

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amount equivalent to the restitution value of any lost fishery resources caused by turbine entrainment mortality. 22/

In the draft EIS, staff concluded that fish resources found upstream and downstream of the Little Quinnesec Falls Project exhibit characteristics of healthy and vigorous populations and that project operation is not significantly affecting the fish resources of the river. Although the Niagara's studies indicate that fish are subject to entrainment and increased mortality, 23/ there is no evidence that this loss of fish adversely affects fish populations or the quality of recreational fisheries.

Based on this finding, staff did not recommend that a measure requiring the installation of downstream fish protection be adopted. Staff also concluded that the licensee should not be required to provide compensatory mitigation for turbine entrainment mortality.

Based on comments and additional information received on the draft EIS, staff indicated at the Section 10(j) dispute-resolution meeting that it would recommend that, to compensate for turbine entrainment mortality, the licensee be required to fund measures consistent with fisheries management goals and plans for the Menominee River. Pursuant to discussions at the April 22 and 23, 1996, Section 10(j) meeting, on July 19, 1996, Niagara filed more accurate data (additional net sampling information), 24/ showing a lower annual mortality rate of 4,256

22/ The recommendations to fund, conduct, and complete a fishery damage assessment, or pay restitution value for lost fishery resources, are not within the scope of Section 10(j) because they are not specific measures for fish and wildlife

23/ Based on Niagara's studies, the draft EIS estimated annual fish losses at 38,611 fish at a replacement cost of \$22,000. See pages C-1 through C2 and C-6 of Appendix C in the draft EIS.

24/ In its November 8, 1996 comment letter on the final EIS, Wisconsin DNR asserted that it had not been provided an opportunity to review and comment on Niagara's information prior to its submittal to the Commission. Michigan DNR expressed similar concerns in a November 12, 1996 letter. However, Niagara's July 19 filing was served on the agencies, but they failed to avail themselves of the opportunity to provide any comments. Moreover, the agencies did not provide information or analysis in these letters to
(continued...)

fish. 25/ The final EIS, therefore, recommended the correspondingly lower base payment of \$3,000. 26/

However, the compensatory mitigation remedy lacks adequate evidentiary support, using either the fish mortality levels found in the draft EIS or those in the final EIS. Both the draft and final EIS find that the projected mortality levels at the projects, either individually or cumulatively, will not adversely affect fish populations. The draft EIS and final EIS each states, at pp. 4-3 and 4-4, respectively:

Fish entrainment and turbine-induced mortality by the four projects would not significantly impact fisheries resources of the lower Menominee River. Only a small proportion of the fish entrained at each project dam would be killed by turbine passage, and the impacts of these losses would probably not have a substantial impact on the fish populations and recreational fisheries. Because of the fragmentation of the river by multiple dams and the absence of upstream passage facilities at these dams, there is currently no significant use of the river by anadromous fish that depend on upstream spawning migration past the existing dams and subsequent downstream dispersal of juveniles or adults through the same dams for completion of their life cycles. Therefore, there is no basis to conclude that fish surviving entrainment at any one project would be any more likely to become entrained at the next downstream dam. [27/]

(...continued)

refute staff's revised entrainment mortality estimates in the final EIS. In any event, as described in this order, the result here would be the same, even if we disregarded the conclusions on mortality in the final EIS and used the higher mortality rate found in the draft EIS.

25/ See Table C-1 at p. C-6 of the final EIS.

26/ Id. at Table 5-10, p. 5-37.

27/ See also the respective Appendices C attached to the draft EIS and the final EIS, both entitled "Review and Extrapolation of Fish Entrainment and Turbine Mortality Study Results for the Menominee River," and the respective findings of minor project impacts on fishery populations in
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Since fish mortality at the Little Quinnesec Project has no significant adverse effect on the fishery resources, the compensatory mitigation requirement is not supported by substantial evidence, as required by Section 313 of the FPA, and therefore is not being included in the new license for the Little Quinnesec Falls Project. 28/

6. Bald Eagle Protection Recommendations

The agencies recommend that the licensee implement its bald eagle protection plan in consultation with the agencies and include the plan as a section to the project land management plan. In addition, the agencies recommend that the licensee preserve all large canopy trees within the project boundary as available nest sites for bald eagles.

Staff reviewed the licensee's proposed bald eagle protection plan and determined that it addressed lands and nest sites both within and outside the project boundary. Therefore, the agencies' recommendation would require the licensee to implement bald eagle protection measures on lands outside the project boundary and not subject to this license order. In addition, the existing project boundary does not include any lands that contain super canopy trees because the boundary is located at the high water mark along the reservoir shoreline.

Staff, however, agrees that the bald eagle and super canopy tree protection provisions should be made applicable to this project. Staff recommends that a variable-width buffer zone be added to the project. Article 412 requires the licensee to establish a variable-width buffer zone and include these lands within the project boundary. This buffer zone would encompass lands that could contain bald eagle habitat and nests as well as super canopy trees. Therefore, staff concludes that the licensee's bald eagle protection plan and measures to protect super canopy trees should be applied to those lands that would be included in the modified project boundary. I agree.

Article 411 requires that the licensee implement its bald eagle protection plan and measures to protect super canopy trees

(...continued)

the draft EIS and final EIS, respectively, at pp. 4-18 through 4-22 and 4-22 through 4-26.

28/ See *City of New Martinsville v. FERC*, 102 F.3d 567 (D.C. Cir. 1996).

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on lands within the variable-width buffer zone required in Article 413.

7. Develop and Implement a Wildlife Management Plan

Michigan DNR recommended that the licensee develop and implement wildlife management measures as part of a comprehensive land management plan which would:

- protect and enhance wildlife habitat on project lands;
- provide for the protection of environmentally sensitive areas on project lands;
- provide for cavity nesting birds by leaving all dead trees on project lands;
- provide two osprey nesting platforms on the project reservoir;
- provide wildlife plantings on project lands;
- provide a 200-foot no-cut zone around all riparian lands;
- provide for the protection and enhancement of habitat for any federal- or state-designated threatened or endangered species;
- provide for annual consultation with resource agencies.

Staff agrees with the agencies' recommendation for a wildlife management plan provided that the following modifications are included.

- The wildlife management plan would only apply to lands within the project boundary, as modified by Article 412 to include a variable-width buffer.
- The 200-foot no-cut zone would allow timber harvest to occur for maintaining forest health and habitat management purposes, consistent with the agreement between staff and the agencies during the Section 10(j) meeting.
- Consultation with agencies would only be required at intervals of at least once every five years, which provides the agencies with adequate opportunity to review and modify ongoing wildlife management programs.

Therefore, Article 411 requires the licensee to develop a wildlife management plan consistent with the above recommendations for project lands within the variable-width buffer.

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8. Establish One Wood Duck Nest Box per Acre of Emergent Wetland

Interior recommended that the licensee install one wood duck nest box per acre of emergent wetland in the project area. In the draft EIS, staff concluded that wood duck nest boxes were appropriate, but recommended a density of 1.2 nest boxes per acre of lumbered oak/pine forest occurring within the project boundary. This recommendation was based on existing literature indicating that this nest density is appropriate for this region.

At the Section 10(j) meeting, Interior concurred with staff's recommendation. Therefore, Article 411 requires the licensee to provide wood duck boxes at the project at a density of 1.2 per acre of useable terrestrial habitat. The licensee must include installation and maintenance of these structures in the wildlife management plan for the project.

9. Project Boundary and Land Management

The resource agencies recommended that the licensee:

- include within the project boundary the 1,258 acres owned by the licensee that are contiguous to the project;
- manage these 1,258 acres in accordance with a land management plan; and
- maintain a 200-foot no-timber-harvest buffer zone around the project flowage.

In the draft EIS, staff recommended that the licensee prepare a land management plan that includes measures for protecting habitat and species within the existing project boundary. Staff concluded that including the 1,258 acres of Niagara-owned land in the project boundary is not needed either for project operation or protection of project-related environmental resources. Staff disagreed with the agency-recommended 200-foot no-timber-harvest buffer zone recommendation because it prohibited the removal of trees under any circumstances.

Based on further evaluation, comments received on the draft EIS, and discussions at the Section 10(j) meeting, staff revised its project boundary recommendation. Staff agreed that the project boundary should be enlarged to include a buffer zone on Niagara-owned lands that are not currently developed.

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At the Section 10(j) meeting, Interior stated that there may be areas beyond a 200-foot buffer where additional protection may be appropriate. Staff concluded that it would recommend in the final EIS that the licensee, in consultation with the agencies, determine the exact buffer zone boundary. In areas where industrial activities occur adjacent to the reservoir, there would be no buffer; in other areas, such as land occupied by oak/savanna habitat, the buffer zone width could be as large as 400 feet.

Regarding the no-timber-harvest recommendation, the draft EIS supported this recommendation in general but added that selective timber removal for forest management purposes should be allowed. At the Section 10(j) meeting, the resource agencies agreed with the draft EIS recommendation that flexible management within the buffer zone is appropriate.

The agencies also requested an article stating that the licensee not be required to remove shoreline trees that fall down due to natural causes. Staff agreed that trees that fall in the reservoir should not be removed, unless they pose a hazard to project operation or safety. I have not included an article regarding shoreline tree removal, however, because standard Form L-3 Article 20 only requires removal of dead trees that pose a hazard to project operation, public safety, or navigation. 29/

Therefore, Article 412 requires that the licensee: (1) revise the project boundary to include a variable-width buffer zone; and (2) develop and implement a land management plan that addresses land use policies within the buffer zone, and protection of reservoir-dependent species. The buffer shall be designated as a no-timber-harvest zone. However, timber removal for the purpose of promoting forest health and achieving other wildlife management objectives, would be allowed within this zone.

The agencies also recommended that the licensee: (1) ~~continue to allow public use of project lands~~, and (2) provide to the agencies, prior to Commission approval, an opportunity to review and comment on any proposal to remove project lands. These recommendations are not specific measures to protect fish and wildlife.

29/ See Montana Power Company and Granite County, Montana, 62 FERC ¶ 61,166 at p. 62,140 (1993).

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Standard Form L-3 Article 18 requires the licensee to continue allowing public use of project lands except in environmentally sensitive areas or in the immediate vicinity of project facilities that pose a threat to public safety. 30/ The Commission's standard land use article (Article 415) provides for agency consultation before the Commission approves project boundary or land use changes. 31/

Therefore, I find no need to require additional specific license articles to address these two recommendations.

10. Emergency and Planned Maintenance Drawdowns

Michigan DNR and Wisconsin DNR recommended that Niagara be required to notify the resource agencies at least two months in advance of planned reservoir drawdowns. In the draft EIS, staff recommended that this be adopted as a condition of license issuance.

In draft EIS comment letters, however, the resource agencies concluded that two months would not provide adequate time for them to respond to notification of a planned drawdown.

At the Section 10(j) meeting, Michigan DNR stated that it would prefer that the licensee be required to develop and implement a post-license drawdown plan establishing procedures for both emergency and planned drawdowns. The plan should include appropriate time frames for notifying the agencies and provide a reasonable opportunity for their response. Staff concurred with this approach, and the final EIS recommends this measure.

Article 404 requires that the licensee prepare and file a reservoir drawdown plan that discusses when drawdowns would occur; their duration, frequency, and extent; describes other measures that are needed to avoid adverse impacts on the environment; and establishes coordination procedures among the licensee and the resource agencies regarding emergency and planned drawdowns.

30/ See final EIS at page 4-65 and 5-38.

31/ See final EIS at page 5-38.

11. Reservation of State Authority for Fish Passage

Wisconsin DNR's recommendation that the Commission reserve the State's authority to require Niagara to prepare an upstream fish passage plan is not a specific measure to protect fish and wildlife. At the Section 10(j) meeting, Wisconsin DNR clarified that its recommendation was not to install fish passage facilities at this time, but to reserve state authority to require the licensee to prepare a fish passage plan in the future, if deemed necessary. Staff stated that the Secretary of Interior is the only party that can be granted such reservation of authority. The state agencies may make such a request through the Secretary of Interior's Section 18 reservation of authority or by requesting project modification in accordance with Standard L-3 Form Article 15.

Accordingly, if Michigan DNR or Wisconsin DNR determines in the future that fish passage facilities are warranted at the Little Quinnesec Falls Project, either resource agency's request for fish passage, including supporting documentation, should be submitted to the Commission for consideration under the provisions provided for in Article 15 of Standard Form L-3 attached to this license. 32/

12. Turtle and Mussel Surveys

At the Section 10(j) meeting, the agencies requested that the licensee conduct inventory surveys and impact analysis for wood turtles and three state-designated species of freshwater mussels. These recommendations were not included in their original terms and conditions for the Little Quinnesec Falls Project. These recommendations are not specific measures to protect fish and wildlife, and are requests for post-licensing studies that could have been conducted during the license application process.

At the Section 10(j) meeting, staff suggested that, instead of requiring surveys and conducting an impact analysis that would eventually be followed by management prescriptions to protect wood turtle species, it would instead recommend that the project's shoreline be managed consistent with turtle protection guidelines. Therefore, Article 411 requires that the licensee,

32/ Article 408 of this license reserves authority to the Commission to require the licensee to construct, operate, and maintain such fishways as may be prescribed by Interior pursuant to Section 18 of the FPA.

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as part of the wildlife management plan, establish shoreline management measures to protect these turtles. 33/

Although staff indicated at the Section 10(j) meeting that it planned to recommend mussel surveys for all four projects, in the final EIS staff concluded that the mussel surveys are not necessary because these species would not be adversely affected by project operation. Mussel populations upstream of the project reservoir would be unaffected by project operation. The project's reservoir does not contain the kind of riffle habitat that mussels inhabit. Any mussel habitat that exists downstream of the project also would be unaffected by the interim peaking operation because it dampens flow fluctuations from the upstream Big Quinnesec Falls Project (Project No. 1980). 34/ Consequently, staff concluded that Niagara should not be required to conduct the surveys.

Staff does recommend that Niagara implement applicable provisions of the purple wartyback mussel recovery plan when it is completed by the agencies. To address agency concerns regarding mussel surveys and recovery plans, I am including Article 410 (purple wartyback mussel recovery plan) in this license. I am also providing for additional opportunity for future protection measures related to any federal and state threatened, endangered, or sensitive species, including mussels, in the wildlife management plan (Article 411).

13. Erosion Inventory and Control

The recommendation that the licensee develop and implement a plan to inventory, control, and repair present and future erosion sites on project lands and within the project's influence zone is not a specific measure to protect fish and wildlife. Article 405 requires that the licensee fund and implement erosion control measures along Niagara-owned portions of the shoreline to control identified erosion zones. If shoreline erosion adversely affects properties that are not owned by Niagara, Article 405 requires that Niagara cooperate with the resource agencies and property owners to address and correct such erosion. Niagara would not be required to fund or implement shore protection measures on lands outside of the project boundary owned by others unless it can be

33/ See final EIS at pages 4-63 and 4-64.

34/ See final EIS at page 4-59.

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demonstrated that there are adverse effects attributable to the project. 35/

14. Recreation Enhancements

The agencies' recommend that the licensee: (1) provide for various recreation facilities enhancements, including specified barrier-free facilities, (2) continue to operate and maintain all recreation facilities associated with this project, (3) submit recreation facility designs to Michigan DNR and Wisconsin DNR for review, (4) implement all recreation enhancements in accordance with a schedule approved by the agencies, (5) conduct periodic recreation reviews with the agencies, (6) operate the project in a run-of-river mode to benefit whitewater activities, and (7) install an "800" phone number for the public to obtain flow release information. These are not measures to protect fish and wildlife.

Article 413 requires some, but not all, of the eight recommended facility enhancements. 36/ Article 413 also requires the licensee to include a discussion in its plan of how the needs of the disabled are accommodated by the plan. Standard Form L-3 Article 17 indicates that the licensee is ultimately responsible for the operation and maintenance of all project recreation sites throughout the license period. Niagara, however, may elect to lease or subcontract the actual maintenance of the facilities, if desired. 37/ Regarding item 3 above, Article 413 requires the licensee to submit its recreation facility designs to Michigan DNR and Wisconsin DNR when it is preparing its final recreation plan. 38/

The recommendation for agency approval of the schedule conflicts with the Commission's authority to administer the license. Article 413 requires the licensee to prepare and file a final recreation plan specifying the recreation enhancements and schedule for their development. 39/ The plan and schedule must be prepared in consultation with the agencies. Regarding recreation reviews, I am not requiring additional reviews beyond

35/ See final EIS at pages 4-48 and 5-38.

36/ See final EIS at pages 4-65 to 4-67; 4-72; and 5-38 to 5-39.

37/ See final EIS at pages 4-65 and 5-39.

38/ See final EIS at pages 4-67 and 5-39.

39/ See final EIS at pages 4-65 and 5-39.

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what is required pursuant to the Commission's regulations and the Form 80 reviews, which occur on a 6-year cycle. 40/

For reasons discussed earlier in this order, I am not requiring the project to operate in run-of-river mode. 41/ Article 413 requires the licensee to install a toll-free phone number to enable recreationists to obtain daily flow release information. This measure must be included in the licensee's recreation plan. 42/

15. Compliance with Various State Statutes and Codes

Wisconsin DNR's recommendations that the licensee comply with chapters 30 and 31, Wisconsin Statutes and portions of NR 330, 333, and 116 of the Wisconsin Administrative Code concerning project safety are not specific measures to protect fish and wildlife resources. Moreover, federal authority preempts state regulations in this area. I further conclude that the Commission's safety regulations provide sufficient protective measures; therefore, this measure will not be included in the license. 43/

16. Project Decommissioning

The recommendation that the licensee conduct a study to determine the cost of project retirement, and establish a project retirement fund is not a specific measure to protect fish and wildlife resources.

In its December 14, 1994 Policy Statement on project retirement (RM93-23000), the Commission stated that:

"In light of the practical problems involved in trying to deal with events far in the future, and because in many cases the time horizon and general financial strength of the licensee may be such that there is not substantial need for a pre-retirement funding program, the Commission will not act generically to impose such programs on all licensees There may be particular facts on the record in

40/ See final EIS at pages 4-65 and 5-39.

41/ See final EIS at pages 4-66 and 5-39.

42/ See final EIS at pages 4-67 and 5-39.

43/ See final EIS at page 5-39.

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individual cases, however, that will justify license conditions requiring the establishment of decommissioning cost trust funds in order to assure the availability of funding when decommissioning occurs..." 44/

Although several agencies and intervenors requested that the licensee perform studies to determine the cost associated with dam retirement and establish a fund to cover such costs if the project is ever retired, no entities have advocated dam retirement at this time. Therefore, there are no particular facts on the record to justify establishing a decommissioning cost trust fund for this project. I am not requiring this measure as a license condition. 45/

17. Fish and Wildlife Reopener

The agencies recommend that the license include an article reserving the Commission's authority to reopen the license for the purpose of addressing any new fish and wildlife issues. The standard reopener, Standard Form L-3, Article 15, is included in this license. 46/

IX. COMPREHENSIVE PLANS

Section 10(a) of the FPA, 16 U.S.C. § 803(a)(2)(A), requires the Commission to consider the extent to which a project is consistent with federal or state comprehensive plans for improving, developing, or conserving waterways affected by the project. Under Section 10(a)(2)(A) of the FPA, federal and state agencies filed a total of 115 comprehensive plans for Michigan and Wisconsin that address resources in these states. Of these, staff identified and reviewed seven plans relevant to the Menominee River. 47/

44/ Project Decommissioning at Relicense; Policy Statement, RM93-23000, slip op. cit. pp. 33-34, issued December 14, 1994.

45/ See final EIS at pages 2-29, 2-30, and 5-39.

46/ See final EIS at pages 4-56 and 5-52.

47/ Michigan: MDNR, (1991) *1991-1996 Michigan Recreation Plan*; Wisconsin: WDNR, (1991) *Wisconsin Statewide Comprehensive Outdoor Recreation Plan for 1991-1996*; WDNR, (1993) *Upper Green Bay Basin Water Quality Management Plan*; Michigan and
(continued...)

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Based on staff's review of these plans, Niagara's project, as licensed in accordance with conditions adopted herein, is consistent with these plans for the most part. There are two exceptions. The first is an inconsistency with two objectives of the Menominee River Fisheries Plan: (1) the project would not eliminate fish turbine mortality losses; and (2) the project would not reestablish natural flow conditions on the Menominee River downstream of the project.

In addition, the project, as licensed, is inconsistent with the Fisheries Division Strategic Plan's goal to immediately enhance natural reproduction and movement of native fish.

Staff's analysis determined that although, (1) the operation of this project would result in the loss of fish resources from turbine entrainment mortality; and (2) the project would not immediately enhance natural production and movement of native fish, the project would not produce a significant adverse impact on fish populations or recreational fishing opportunities of the Menominee River.

Studies performed at several locations along the lower Menominee River indicate that the overall fishery of the river is diverse and healthy, and supports a desirable mix of game and panfish species. In addition, growth rates of these species compare favorably to non-project waters elsewhere in Wisconsin and the Lake Michigan drainage. Therefore, although the continued loss of fish due to turbine mortality is not consistent with a specific objective of the two plans, these losses are not preventing the realization of the two plans' overall fisheries management goals. 48/

Staff's analysis also determined that modifying the Little Quinnesec Falls Project operation would not achieve the plan's goal to reestablish natural flow conditions on the Menominee River downstream of the project. Because of hydrologic influences associated with the operation of the upstream Big

(...continued)

Wisconsin: WDNR and MDNR (1993) *Menominee River Fisheries Management Plan*; WDNR and MDNR, (1990) *Lower Menominee River Remedial Action Plan*; Michigan: MDNR, (1994) *Fisheries Division Strategic Plan*; U.S. Fish and Wildlife Service and Canadian Wildlife Service (1994) *North American Waterfowl Management Plan*.

48/ See final EIS at page 5-27.

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Quinnesec Falls Project (No. 1980), the river downstream of the project would continue to be subject to daily flow fluctuations. ^{49/} Therefore, I conclude that there is no action that can be taken to modify the operation of Niagara's project to achieve the plan's goal at this time.

X. 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 a project's power development purposes and to the purposes of energy conservation, the development of the waterway for the use or benefit of interstate commerce, the protection, mitigation of damage to, and enhancement of fish and wildlife, the protection of recreational opportunities, and the preservation of other aspects of environmental quality. Any license issued shall be such as in the Commission's judgement will be best adapted to a comprehensive plan for improving or developing the waterway or waterways for all beneficial public uses including irrigation, flood control, and water supply. The decision to license this project, and the terms and conditions included herein, reflect such consideration.

The EIS analyzes the effects associated with the issuance of four new licenses in the Menominee River basin. The EIS recommends a number of measures to protect and enhance environmental resources, which I adopt, as discussed herein. Many of these measures were recommended and supported by resource agencies and other commentors.

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

Under the Commission's approach to evaluating the economics of hydropower projects, as articulated in Mead Corporation, Publishing Paper Division, ^{50/} 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

^{49/} See final EIS at pages 4-19 and 4-20.

^{50/} 72 FERC ¶ 61,027 (1995).

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issuance date. The basic purpose of the Commission's economic analysis is to provide a general estimate of the potential power benefits and the costs of a project, and reasonable alternatives to project power. The estimate helps to support an informed decision concerning what is in the public interest with respect to a proposed license.

In addition, certain economic factors related to project decommissioning that are not present in the licensing of new projects may affect the decision to issue a new license. If an existing project is not issued a new license, or if the licensee declines to accept the new license, the project probably will have to be retired in one form or another. This could range from simply removing the generator at the project to major environmental restoration varying from minor measures to dam removal.

Based on current economic conditions, without future escalation or inflation, the Little Quinnesec Falls Project, if licensed as Niagara proposes, would provide an installed capacity of 9,100 kW and produce an average of 69.6 GWh of energy, at an annual cost of about 1.76 cents/kWh (17.6 mills/kWh). This is about 2.10 cents/kWh less than the current cost of an equivalent amount of capacity and energy using alternative power sources, which would cost about 3.86 cents/kWh (38.6 mills/kWh). ^{51/} If licensed in accordance with the conditions adopted herein, the project would produce about the same amount of energy and capacity at an annual cost of 1.80 cents/kWh (18.0 mills/kWh), or about 2.06 cents/kWh (20.6 mills/kWh) less than the cost of alternative power sources.

In any event, as noted above, it is Niagara that must make the business decision whether to pursue the license. As the Commission explained in Mead, supra, project economics is, moreover, only one of the many public interest factors the Commission considers in determining whether or not, and under what conditions, to issue a license.^{52/}

^{51/} The alternative source of power is a gas-fired combined-cycle combustion turbine.

^{52/} In analyzing public interest factors, the Commission takes 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 operations, benefits that
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Based on my review and evaluation of the project as proposed by the licensee, and with the additional enhancement measures I am adopting, I conclude that operating the project in the manner required by the license will protect and enhance fish and wildlife resources, water quality, recreational resources, and cultural resources. The electricity generated from renewable water power resources will be beneficial because it will continue to offset the use of fossil-fueled, steam-electric generating plants, thereby conserving nonrenewable resources and reducing atmospheric pollution. I, therefore, find that the Little Quinnesec Falls Project, with the required environmental enhancement measures, is best adapted to a comprehensive plan for the use, conservation, and development of the waterway for beneficial public purposes. The required enhancement measures are summarized below.

(1) Operate the project on an interim basis in a peaking mode, maintaining a target reservoir elevation of 944.5 feet NGVD with a normal daily operating range of ± 0.6 foot, and within ± 1.2 feet during extraordinary operating conditions (Article 401).

(2) Maintain a continuous minimum flow of 1,000 cfs or project inflow, whichever is less, when the reservoir surface is within the normal operating range of 944.5 feet ± 0.6 foot (Article 402).

(3) Develop and implement an operational compliance plan that includes:

- maintenance of a visible staff gage in the reservoir;
- maintenance of automatic water level sensors to monitor and record headwater and tailwater elevations;
- recording of project operation on a 60-minute basis;
- procedures for reestablishing flows during periods of plant blackout;
- methods for providing operational data to agencies upon request;
- procedures related to the minimum flow requirement; and
- provision for the licensee to submit a revised operating plan within six months following relicensing of the Big Quinnesec Falls Project (Article 403).

52/ (...continued)

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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- (4) Develop and implement a reservoir drawdown plan (Article 404).
- (5) Fund and implement erosion control measures along Niagara-owned portions of the shoreline to control identified erosion zones (Article 405).
- (6) Develop and implement a water quality monitoring plan (Article 406).
- (7) Reserve the Secretary of the Interior's authority to prescribe fish passage facilities (Article 407).
- (8) Develop and implement a plan providing large woody debris transport (Article 408).
- (9) Implement a program to monitor and control the spread of purple loosestrife and Eurasian milfoil in the reservoir (Article 409).
- (10) Upon completion of the state of Wisconsin's Purple Wartyback Mussel Recovery Plan, implement protective measures (Article 410).
- (11) Develop and implement a wildlife management plan that includes the following measures:
 - bald eagle and osprey protection and management;
 - provisions for snag management for protection of tree cavities;
 - policies for preservation of large canopy trees as bald eagle nesting sites;
 - provision for installation and maintenance of wood duck boxes;
 - wood turtle habitat protective measures;
 - provisions for protecting and enhancing habitat for any federal- or state-designated threatened, endangered, or sensitive species on project lands;
 - consultation with agencies regarding decisions affecting wildlife management on project lands; and
 - provisions for cooperating with the agencies in conducting wildlife surveys within the project boundary (Article 411).
- (12) Implement a land management plan for protection of shoreline resources that includes provisions to expand the existing project boundary to include a variable-width buffer zone on licensee-owned lands (dependent on shoreline uses);

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and maintenance of a no-timber-harvest buffer zone on project-owned lands (Article 412).

(13) Construct, maintain, and operate various recreation enhancements including:

- upgrading facilities at Riverside Park;
- providing upstream and downstream portage around the project;
- developing a new recreation site downstream of the project;
- installing a toll-free telephone hotline to provide information to the public 24 hours a day regarding daily flows discharging from the project;
- providing directional signs to the recreation facilities from major roadways in the area;
- providing signs at the project recreation sites and including information on each sign indicating the presence of disabled accessibility, potable water, and toilets; and
- providing directional signs from Highway 141 to the Boy Scout Camp that include the dates that the camp is open to the public and the amenities that are available at the campground (Article 413).

(14) Implement the December 30, 1993, "Programmatic Agreement Among the Federal Energy Regulatory Commission, the Advisory Council on Historic Preservation, the State of Wisconsin, State Historic Preservation Officer, and the State of Michigan, State Historic Preservation Officer, for Managing Historic Properties that may be Affected by New and Amended Licenses Issuing for the Continued Operation of Existing Hydroelectric Projects in the State of Wisconsin and adjacent Portions of the State of Michigan" to protect existing and future potential cultural resources (Article 414).

XI. LICENSE TERM

Section 15(e) of the FPA 53/ provides that any new license issued shall be for a term of not less than 30 years nor more than 50 years. The Commission's general policy is to establish 30-year terms for projects with little or no redevelopment, new construction, new capacity, or environmental mitigative and enhancement measures; 40-year terms for projects with a moderate

53/ 16 U.S.C. § 8098(e).

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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. Also, as an inducement for new license applicants to propose better balanced comprehensive development of a waterway, we will set a new license term at greater than 30 years to ease the impacts of large costs when the new license includes substantial environmental mitigation and enhancement measures. Accordingly, because this new license authorizes moderate enhancement measures, the license will have a term of 40 years.

XII. SUMMARY OF FINDINGS

Background information, analysis of impacts, support for related license articles, and the basis for the conclusions regarding significant beneficial impacts on the environment are contained in staff's final EIS for the Menominee River Projects.

I find that it is not necessary, as requested by Wisconsin DNR, Michigan DNR, and Interior in their letters on the final EIS, to convene a second Section 10(j) meeting or issue a revised or supplemental final EIS. This license contains adequate provision for additional agency consultation and involvement in all fish and wildlife related activities over the term of the license. This includes provision for upstream and downstream fish passage and protection, water quality monitoring measures, and other fish and wildlife surveys and protection plans.

The project will be safe if operated and maintained in accordance with the requirements of this license. Analysis of related issues is provided in the Safety and Design Assessment.

I conclude that the Little Quinnesec Falls Project does not conflict with any planned or authorized development, and is best adapted to the comprehensive development of the Menominee River for beneficial public use.

The Director orders:

(A) This license is issued pursuant to both Section 4(e) and Section 15 of the FPA to the Niagara of Wisconsin Paper Corporation (licensee) for a period of 40 years, effective the first day of the month in which it is issued, to continue to operate and maintain the Little Quinnesec Falls Project. This license is subject to the terms and conditions of the FPA, which is incorporated by reference as part of this license, and to the

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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, as shown on Exhibit G-1 (FERC Drawing Number 2536-14) of the application for new license, filed on June 26, 1991.

(2) Project works consisting of: (1) a 278-foot-long and 24-foot-high dam consisting of, from left to right looking downstream, (a) a 26-foot-long concrete gravity abutment section, (b) a 60-foot-long concrete spillway section with two 23.4-foot-wide by 12.0-foot-high Taintor gates, (c) a 52-foot-long concrete needle spillway containing two bays (each 24.5 feet wide closed off by 12-foot-long wooden needles), (d) a 50-foot-long concrete gravity left forebay wall with a 9-foot-wide needle sluice, and (e) a 90-foot-long concrete gravity forebay wall housing the penstock inlet; (2) a 128-foot-long concrete stoplog section with ten bays (each 8 feet wide); (3) a 245.5-foot-long riveted steel penstock ranging from 15-foot diameter at the forebay wall to 6-foot diameter at the downstream end; (4) six generating units (housed in the pulp and paper building adjacent to the dam) with a total installed capacity of 9,107 kW; (5) a 370-acre reservoir having a maximum storage capacity of 3,350 acre-feet at 944.0 feet (plant datum 1.4 feet higher than National Geodetic Vertical Datum [NGVD]); and (6) appurtenant facilities.

The project works generally described above are more specifically described in Exhibit A of the license application and shown by Exhibit F.

Exhibit A. The following sections of Exhibit A filed June 26, 1991.

Pages A-1 through A-10 describing the existing mechanical, electrical, and transmission equipment.

Exhibit F. The following Exhibit F drawings filed June 26, 1991:

<u>Exhibit F</u>	<u>FERC No.</u>	<u>Showing</u>
F-2	2536-11	General Layout
	2536-12	Powerhouse Plan & Sections
F-3	2536-13	Layout of Dam

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

(C) Exhibits A, F, and G of the license application 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 Projects Affecting Navigable Waters of the United States" and the following additional articles:

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

For the purposes of reimbursing the United States for the Commission's administrative costs, pursuant to Part I of the Federal Power Act, a reasonable amount as determined in accordance with the provisions of the Commission's regulations in effect from time to time. The authorized installed capacity for that purpose is 9,100 kilowatts.

Article 202. If the licensee's project was directly benefitted by the construction work of another licensee, a permittee, or the United States on a storage reservoir or other headwater improvement during the term of the original license (including extensions of that term by annual licenses), and if those headwater benefits were not previously assessed and reimbursed to the owner of the headwater improvement, the licensee shall reimburse the owner of the headwater improvement for those benefits, at such time as they are assessed, in the same manner as for benefits received during the term of this new license.

Article 203. 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

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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 proper for inclusion 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 401. The licensee shall operate the project, on an interim basis, in a daily peaking mode. This mode of operation shall remain in effect while the upstream Big Quinnesec Falls Project continues to operate in a peaking mode and until such time as this license may be amended by the Commission to order an alternative mode of operation.

The licensee shall maintain a target reservoir water surface elevation of 944.5 feet National Geodetic Vertical Datum, with a normal daily operating range of ± 0.6 foot, as measured immediately upstream of the forebay. The licensee may increase the reservoir water surface operating range to ± 1.2 feet during extraordinary operating conditions. The allowable normal and extraordinary operating ranges stipulated in this article may be modified by the Commission following completion of the two-year test period required by Article 403.

To protect weekend whitewater boating activities downstream of the project, the licensee shall operate the project to refill the reservoir on a daily basis whenever river inflows are sufficient. In addition, weekend operation shall not vary from weekday operation when inflow to the project is available for continued peaking operation. This operating requirement is intended to prevent the gradual drawdown of the reservoir pool over a series of weekdays, which would then require refilling the

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reservoir pool during weekends, leading to reduced downstream flows on the weekends.

Reservoir water surface elevations may be temporarily modified if required by operating emergencies beyond the control of the licensee, including flood and ice conditions, and for short periods, upon mutual agreement among the licensee, Michigan Department of Natural Resources (Michigan DNR), Wisconsin Department of Natural Resources (Wisconsin DNR), and U.S. Fish and Wildlife Service (FWS). If project operation or the reservoir water surface elevation is temporarily modified for mutually agreed upon short periods of time, the licensee shall notify the Commission as soon as possible, but no later than 10 days after each such incident. If project operation or reservoir surface elevation is modified due to an emergency, the licensee shall notify the Commission, Michigan DNR, Wisconsin DNR, and FWS within 24 hours.

In case of project shutdown during "ice-free" periods, the licensee shall pass river inflow through the project within 10 minutes, or in a manner consistent with safe project operation. During periods of "ice cover," the licensee shall pass river inflow through the project in accordance with procedures established by Article 403.

The "ice-free" and "ice-cover" periods referenced in this article shall be defined in accordance with the plan required by Article 403.

Article 402. To protect aquatic resources downstream of the project, the licensee shall provide a continuous minimum flow of 1,000 cubic feet per second (cfs) or project inflow, whichever is less, when the reservoir water surface is within or lower than the normal operating range specified by Article 401.

The minimum flow release may be temporarily modified if required by operating emergencies beyond the control of the licensee, and for short periods upon mutual agreement among the licensee, Michigan Department of Natural Resources (Michigan DNR), Wisconsin Department of Natural Resources (Wisconsin DNR), and U.S. Fish and Wildlife Service (FWS). If the flow is temporarily modified for mutually agreed upon short periods of time, the licensee shall notify the Commission as soon as possible, but no later than 10 days after each such incident. If the flow is modified due to an emergency, the licensee shall notify the Commission, Michigan DNR, Wisconsin DNR, and FWS within 24 hours.

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Article 403. Within 180 days of license issuance, the licensee shall file with the Commission, for approval, an initial operational compliance plan to document compliance with the operational requirements and reservoir elevation ranges specified by Article 401 and the minimum flow requirements of Article 402.

The initial plan, at a minimum, shall include measures to:

- (1) install, calibrate, and maintain a staff gage in the reservoir that is visible to the public with the prescribed operating levels clearly marked;
- (2) operate automatic water level sensors to record headwater and tailwater elevations, and devices to record power generation, capable of providing records at 60-minute intervals;
- (3) maintain records of headwater and tailwater elevations and power generation;
- (4) provide operational data to the interested agencies in a timely manner;
- (5) develop a schedule to conduct a two-year evaluation the daily water surface elevation limits for the project reservoir;
- (6) pass project inflow downstream within 10 minutes or in a manner consistent with safe project operation, in the event of project shutdown during "ice-free" periods;
- (7) pass project inflow downstream as soon as possible and practicable, in a manner consistent with safe project operation, in the event of a project shutdown during "ice-cover;"
- (8) develop a definition of "ice-free" and "ice-cover" periods applicable to Article 401; and
- (9) develop procedures and criteria for determining compliance with flow releases required by Article 402, including measures for maintaining the existing U.S. Geological Survey-type gage located downstream of the project.

Within 180 days after the Commission issues a new license for the Big Quinnesec Falls Hydroelectric Project, No. 1980, the

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licensee shall file a revised operational compliance plan for the Little Quinnesec Falls Project.

The licensee shall prepare the initial and revised plans after consultation with Michigan Department of Natural Resources, Wisconsin Department of Natural Resources, and U.S. Fish and Wildlife Service. The licensee shall include with the plans documentation of consultation, copies of comments and recommendations on the completed plans 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 make recommendations before filing the plans 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 plans. Upon Commission approval, the licensee shall implement the plans, including any changes required by the Commission.

Article 404. Within 180 days of license issuance, the licensee shall file with the Commission, for approval, a reservoir drawdown plan. The purpose of the drawdown plan is to minimize the impact of any project maintenance requiring a reservoir drawdown on aquatic and wetland resources. The plan shall include procedures for consulting with Michigan Department of Natural Resources (Michigan DNR), Wisconsin Department of Natural Resources (Wisconsin DNR), and U.S. Fish and Wildlife Service (FWS) in advance of planned drawdowns.

The plan shall also address procedures for consulting with the agencies after an emergency drawdown of the reservoir surface water elevation. The procedures shall identify notification and agency consultation requirements that would occur prior to returning to normal operating reservoir levels.

The licensee shall prepare the plan after consultation with Michigan DNR, Wisconsin DNR, and FWS. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated 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 project-specific information.

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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 405. Within one year of license issuance, the licensee shall file with the Commission, for approval, an erosion control plan that indicates measures that would be undertaken to control existing project-induced erosion and project-induced erosion identified in the future that is not attributable to natural phenomenon such as wind driven wave action against a shore, run-off from steep terrain during storms, and loss of vegetation due to fire and other natural causes, or as part of major land-disturbing activities proposed in the project boundary.

The licensee shall fund and implement erosion control measures along Niagara-owned portions of the shoreline to control identified project-induced erosion zones. If shoreline erosion adversely affects properties that are not owned by Niagara, Niagara shall cooperate with Michigan Department of Natural Resources (Michigan DNR), Wisconsin Department of Natural Resources (Wisconsin DNR), U.S. Fish and Wildlife Service (FWS), and property owners to address and correct such erosion.

The licensee shall prepare the plan after consultation with Michigan DNR, Wisconsin DNR, and FWS. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated 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 project-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 406. Within 180 days of license issuance, the licensee shall file with the Commission, for approval, a plan to monitor dissolved oxygen (DO), temperature, and pH of the Menominee River at the project.

The purpose of this monitoring plan is to ensure that releases from the Little Quinnesec Falls Project maintain the state standards below except when river flow in the Menominee

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River is less than the 95 percent exceedance flow or when natural conditions prohibit attainment of the standards.

(1) Monthly average temperatures downstream of the Little Quinnesec Falls Dam shall be no greater than those listed below:

January, February ---	38°F
March -----	41°F
April -----	56°F
May -----	70°F
June -----	80°F
July -----	83°F
August -----	81°F
September -----	74°F
October -----	64°F
November -----	49°F
December -----	39°F

(2) Temperature downstream of the Little Quinnesec Falls Dam shall not exceed 89°F at any time.

(3) DO concentrations downstream of the project powerhouse must be not less than 5 milligrams per liter (mg/l) at any time.

(4) Maintain pH within the range of 6.0 to 9.0, with no change greater than 0.5 units outside the estimated natural seasonal maximum and minimum.

The water quality monitoring plan shall include, at a minimum, the provisions listed below.

(1) Monitor temperature, DO, and pH in the Menominee River at the Little Quinnesec Falls Project periodically during critical periods, such as during low flow, high temperature periods.

(2) Prepare a summary of temperature, DO, pH, and any other data collected pursuant to this plan to be submitted to the Commission, Michigan Department of Natural Resources (Michigan DNR), Wisconsin Department of Natural Resources (Wisconsin DNR), and U.S. Fish and Wildlife Service (FWS).

(3) Include provisions for notifying the Commission, Michigan DNR, Wisconsin DNR, and FWS if water quality limits contained in this license are not met, including operating procedures for addressing and correcting the exceedance of water quality limits.

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The licensee shall prepare the plan after consultation with Michigan DNR, Wisconsin DNR, and FWS. The frequency of monitoring and monitoring locations shall be determined in consultation with the agencies.

The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies 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 monitoring plan, including any changes required by the Commission.

Article 407. Authority is reserved to the Commission to require the licensee to construct, operate, and maintain, or to provide for the construction, operation, and maintenance of, such fishways as may be prescribed by the Secretary of the Interior pursuant to Section 18 of the Federal Power Act.

Article 408. Within 180 days of license issuance, the licensee shall file with the Commission, for approval, a plan for the passage of large woody debris that collects near the project intake into the project tailrace to improve fish habitat downstream of the project.

The licensee shall prepare the plan after consultation with Wisconsin Department of Natural Resources, Michigan Department of Natural Resources, and U.S. Fish and Wildlife Service. 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 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 conditions.

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.

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Article 409. Within 180 days of license issuance, the licensee shall develop and file with the Commission, for approval, a plan to monitor and control the spread of purple loosestrife (*Lythrum salicaria*) and Eurasian milfoil (*Myriophyllum spicatum*) in project waters.

The plan shall include, but is not limited to: (a) the method of monitoring, (b) the frequency of monitoring, (c) a provision to cooperate in the control/elimination of these vegetative species if deemed necessary by the agencies, and (d) documentation of transmission of monitoring data to Michigan Department of Natural Resources (Michigan DNR), Wisconsin Department of Natural Resources (Wisconsin DNR), and U.S. Fish and Wildlife Service (FWS).

The licensee shall develop the plan in consultation with Michigan (DNR), Wisconsin DNR, and FWS. The licensee shall include with the plan documentation of consultation, copies of the agencies' 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 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 plan, including any changes required by the Commission.

Article 410. Within 180 days of notification by Wisconsin Department of Natural Resources (Wisconsin DNR) that a state-approved Recovery Plan for the Purple Wartyback Mussel has been completed, the licensee shall develop a plan to implement the Recovery Plan within the project boundary.

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

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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 411. Within one year of license issuance, the licensee shall file with the Commission, for approval, a wildlife management plan.

The plan, at a minimum, shall incorporate or adopt by reference all other wildlife resource protection plans required by this license order, and also include the following additional provisions:

- (1) measures to protect and manage bald eagles and ospreys;
- (2) measures to protect or manage cavity nesting and supercanopy trees;
- (3) installation and maintenance of wood duck nest boxes at a ratio of 1.2 nest boxes per acre of lumbered oak/pine forest occurring within the project boundary;
- (4) shoreline protection measures for wood turtle habitat;
- (5) measures to protect federal- and state-designated threatened, endangered, or sensitive species;
- (6) provision for cooperating with agencies in conducting wildlife surveys within project boundaries;
- (7) provision for consultation with Wisconsin Department of Natural Resources (Wisconsin DNR), Michigan Department of Natural Resources (Michigan DNR), and U.S. Fish and Wildlife Service (FWS) prior to any land-disturbing activities in order to ensure protection of fish and wildlife; and
- (8) provision for meetings and consultation to occur at a minimum of once every five years with Wisconsin DNR, Michigan DNR, and FWS to review and update the plan.

The licensee shall prepare the plan after consultation with Wisconsin DNR, Michigan DNR, and FWS. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments and recommendations are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies to comment and make recommendations before filing the

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plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on site-specific conditions.

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 412. Within one year of license issuance, the licensee shall file with the Commission, for approval, a land management plan to protect shoreland resources in the project area. The land management plan, at a minimum, shall incorporate or adopt by reference all other resource protection plans, and include the following additional provisions and policies:

- (1) provision to expand the existing project boundary to include a variable-width buffer zone on licensee-owned lands;
- (2) maps delineating the shoreland protection zones;
- (3) the criteria for selecting each area;
- (4) policies for land management within the variable-width shoreline buffer zone, including provision that no timber harvesting can occur in this buffer;
- (5) incorporation of Michigan Department of Natural Resources' (Michigan DNR's) Best Management Practices policy guidelines;
- (6) provision for consultation with Wisconsin Department of Natural Resources (Wisconsin DNR), Michigan DNR, and U.S. Fish and Wildlife Service (FWS) prior to any land-disturbing activities to ensure protection of fish and wildlife; and
- (7) provision for meetings with Wisconsin DNR, Michigan DNR, and FWS to review and update the plan.

The licensee shall prepare the plan after consultation with Wisconsin DNR, Michigan DNR, and FWS. The licensee shall include with the filing, documentation of consultation, copies of comments and recommendations on the completed plan after it is 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,

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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 plan, including any changes required by the Commission.

Article 413. Within one year of license issuance, the licensee shall file with the Commission, for approval, a recreation plan for the Little Quinnesec Falls Project. The plan shall include, at a minimum, the following information:

- (1) type and estimated amount of public and private recreation use at the project;
- (2) discussion of the adequacy of existing recreation improvements to meet existing and future public and recreation demand;
- (3) final site plans and final design drawings and specifications for proposed new recreation facilities to be funded in part or in whole by the licensee;
- (4) a description of the construction materials for the new recreational facilities;
- (5) landscaping of new construction areas;
- (6) costs of the improvements;
- (7) identification of the entity or entities responsible for the construction, operation, and maintenance of the existing or proposed facilities and, if this is not the licensee, documentation of the licensee's construction, operation, and maintenance agreement with the entity or entities;
- (8) implementation schedule for proposed recreation improvements;
- (9) discussion of how existing and proposed facilities consider the needs of persons with disabilities; and
- (10) documentation of consultation with resource agencies and other providers of public recreation at the project.

The plan shall provide for the specific recreation facilities and improvements described below:

(1) At Riverside Park, (a) remove the existing boat launch and replace it with a 36-foot-wide boat launch; (b) restore the landscaping and shore where the existing launch was removed; (c) add a barrier-free courtesy pier at the boat launch; (d) add a barrier-free fishing pier downstream of the boat launch; (e) provide barrier-free shoreline fishing; (f) provide a barrier-free fish cleaning station and fish waste containers; (g) provide barrier-free trash receptacles; (h) provide barrier-free toilets; (i) resurface the parking area and provide one designated barrier-free parking space for every 25 parking spaces; (j) provide a minimum of two barrier-free picnic tables and fire rings; (k) provide landscaping, including shade trees; and (l) ensure the path of travel to the barrier-free recreation enhancements is accessible.

(2) Install a platform, canoe portage stairway, and phone to pulp mill security personnel so that the licensee can transport recreationists to the downstream put-in location. Provide a phone to pulp security personnel mill at the downstream put-in location so that the licensee can transport recreationists upstream to the reservoir.

(3) Develop a new recreation site downstream of the project that includes: (a) a carry-in boat put-in; (b) a boat launch; (c) a changing facility and barrier-free toilet; (d) barrier-free trash receptacles; and (e) a parking area with designated barrier-free parking spaces. The facilities should accommodate persons with disabilities to the extent practicable.

(4) Install a toll-free telephone hotline to provide information to the public 24 hours a day regarding daily flows discharging from the project. The licensee may use its discretion in determining the method to provide flow information to callers.

(5) Provide directional signs to the recreation facilities from major roadways in the area. The number and location of signs should be determined in consultation with Michigan Department of Natural Resources (Michigan DNR) and Wisconsin Department of Natural Resources (Wisconsin DNR).

(6) Include information indicating the presence of disabled accessibility, potable water, and toilets on the recreation facility signs at the entrance to each project recreation site.

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(7) Provide directional signs from Highway 141 to the Boy Scout Camp. On the signs, include the dates that the camp is open to the public and the amenities that are available at the campground.

The licensee shall prepare the recreation plan in consultation with Wisconsin DNR, Michigan DNR, and local agencies having land management or planning/zoning authority in the area. The licensee shall also consult with the above agencies, regarding recreation use and needs at the project, every sixth year as part of the Form 80 reporting cycle, for the term of the license, pursuant to Part 8 of the Commission's regulations.

The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies 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 site-specific conditions.

The Commission reserves the right to require changes to the plan. No construction of new recreational facilities 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 414. The licensee shall implement the "Programmatic Agreement Among the Federal Energy Regulatory Commission, the Advisory Council on Historic Preservation, the State of Wisconsin, State Historic Preservation Officer, and the State of Michigan, State Historic Preservation Officer, for Managing Historic Properties That May be Affected By New and Amended Licenses Issuing For the Continued Operation of Existing Hydroelectric Projects in the State of Wisconsin and adjacent Portions of the State of Michigan," executed on December 30, 1993, including but not limited to, the Historic Resources Management Plan for the project.

In the event that the Programmatic Agreement is terminated, the licensee shall implement the provisions of its approved Historic Resources Management Plan.

The Commission reserves the authority to require changes to the Historic Resources Management Plan at any time during the term of the license. If the Programmatic Agreement is terminated

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prior to Commission approval of the Historic Resources Management Plan, the licensee shall obtain Commission approval before engaging in any ground-disturbing activities or taking any other actions that may affect any historic properties with the project's area of potential effect.

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

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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 1 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

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necessary federal and state water quality certification or permits have been obtained; (3) other pipelines that cross project lands or waters but do not discharge into project waters; (4) non-project overhead electric transmission lines that require erection of support structures within the project boundary, for which all necessary federal and state approvals have been obtained; (5) private or public marinas that can accommodate no more than 10 watercraft at a time and are located at least one-half mile (measured over project waters) from any other private or public marina; (6) recreational development consistent with an approved Exhibit R or approved report on recreational resources of an Exhibit E; and (7) other uses, if: (i) the amount of land conveyed for a particular use is 5 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.

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

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

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

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

(E) The motions to intervene out of time filed by the Michigan Department of Natural Resources, the Michigan Hydro Relicensing Coalition, Izaak Walton League, and River Alliance of Wisconsin are granted.

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

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(G) 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 this order, pursuant to 18 CFR section 385.713. The filing of a request for rehearing does not operate as a stay of the effective date of this order or of any other date specified in this order, except as specifically ordered by the Commission. The Licensee's failure to file a request for rehearing shall constitute acceptance of this order.



Kevin P. Madden
Acting Director
Office of Hydropower
Licensing

Document Content(s)

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