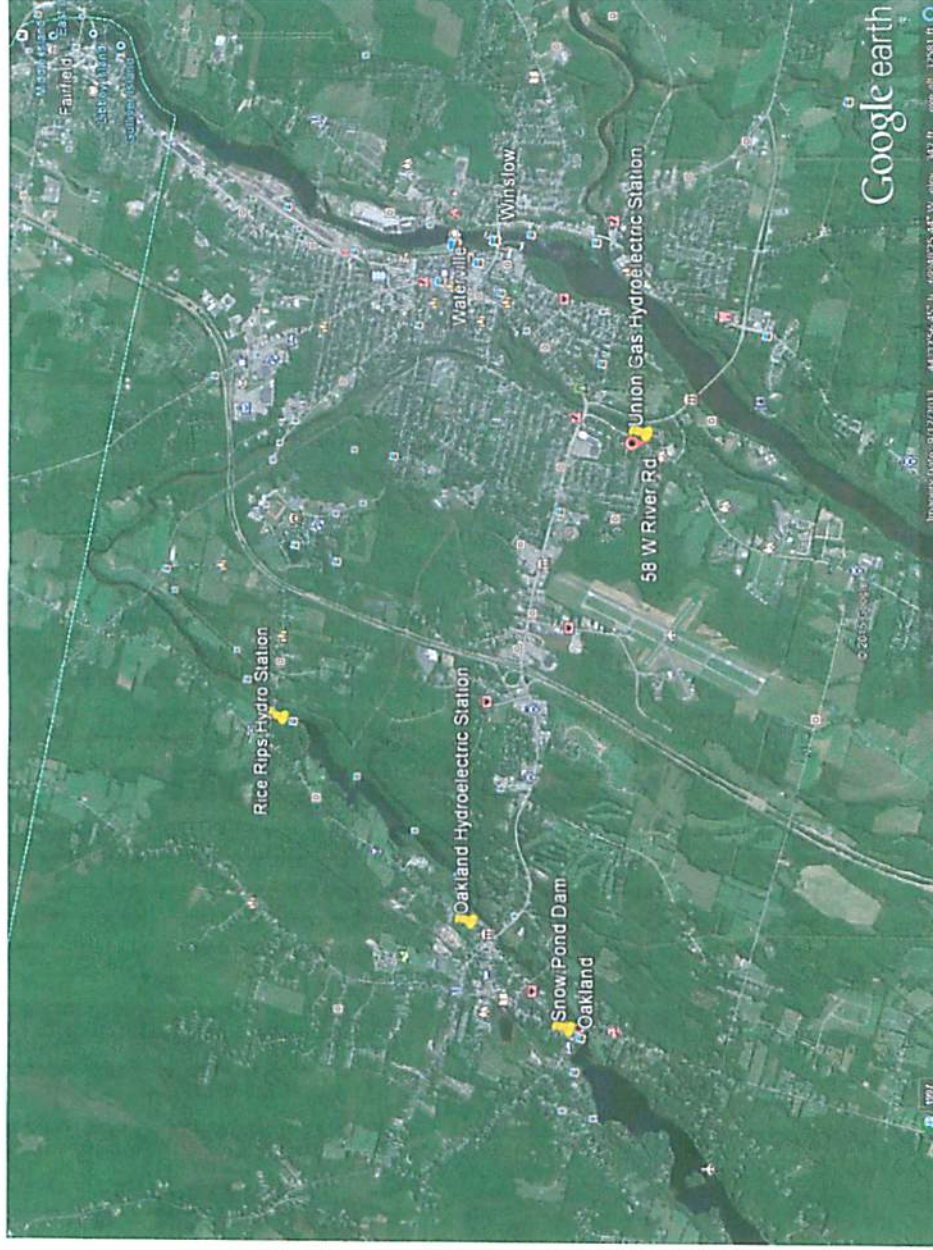


APPENDIX 1

Upstream and Downstream Dams

APPENDIX 1
Upstream and Downstream Dams



APPENDIX 2

Ownership/Regulatory Status Rice Rips Hydroelectric Facility

Appendix 2

Rice Rips Hydroelectric Project Ownership/Regulatory Status

The Messalonskee Project is owned and operated by Messalonskee Stream Hydro LLC (“MSH”). It consists of four developments governed under FERC license No. 2556 issued July 28, 1999, as amended on October 12, 2000, June 1, 2001, and again on February 21, 2002. (see Appendices 2-1, 2-2, 2-3, 2-4): Messalonskee Lake; the Oakland hydroelectric project; the Rice Rips hydroelectric project and the Union Gas hydroelectric project.

Messalonskee Lake contains approximately 39 billion gallons of water and the lake’s water discharges into the Messalonskee Stream at the town of Oakland. Messalonskee Lake is operated for recreational purposes. The Messalonskee Stream gatehouse controls reservoir levels and discharges into Messalonskee stream. Conditions of the FERC license No. 2556, require MSH to release instantaneous minimum flows of 15 cfs at all times through the project developments. When inflow to Messalonskee Lake is greater than 570 cfs, the hydroelectric projects on the Messalonskee Stream are operated as run of river projects. The projects are cycled when lake inflow is less than approximately 570 cfs run-of-river.

The Rice Rips hydroelectric facility (“the Rice Rips Project”), the second hydroelectric project below Messalonskee Lake, is a 1.6MW station located on the Messalonskee Stream in Oakland, Maine. Construction of the Rice Rips Project was completed in 1908 and the Project was operated as an unlicensed facility from that time until 1969 when, on February 24, 1969, the Federal Energy Regulatory Commission (FERC) (FERC Project No. 41) issued it a 30-year License.

On December 4, 1991, CMP filed an application for a new license for the Messalonskee Project pursuant to Sections 15 and 4(e) of the Federal Power Act. The application proposed the issuance of a consolidated license for the four projects, Messalonskee Lake, and the Oakland, Rice Rips and Union projects. In 1998, subsequent to the filing of the application for a new license for the Messalonskee Project, ownership of the Messalonskee Project was transferred from CMP to FPL Energy Maine Hydro LLC (FPL Hydro). Since 1999 the Rice Rips Project has been operated in conjunction with the immediately upstream Oakland hydroelectric station and the immediately downstream Union hydroelectric station.

Ownership of the project was transferred from FPL to Messalonskee Stream Hydro LLC (“MSH”) in 2003. At that time MSH was wholly owned by Maine Renewables, LLC. On April 15, 2010 whole ownership of MSH was transferred from Maine Renewables to Concord Hydro Associates. As you will note in many of the attached documents, there are many references to the predecessor owners, CMP, and FPL.

APPENDIX 2-1
Federal Energy Regulatory Commission Order Issuing License
Issued July 28, 1999

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: James J. Hoecker, Chairman;
Vicky A. Bailey, William L. Massey,
Linda Breathitt, and Curt Hébert, Jr.

FPL Energy Maine Hydro LLC

Project Nos. 2556-004
2557-004, 2559-003

ORDER ISSUING NEW LICENSE

(Issued July 28, 1999) (EXPIRES JUNE 30, 2036)

On December 4, 1991, Central Maine Power Company (Central Maine) filed an application for a new license pursuant to Sections 15 and 4(e) of the Federal Power Act (FPA), 16 U.S.C. § 815, for the continued operation of four projects: the Oakland Project No. 2559, which has two developments; the Rice Rips Project No. 2557; the Automatic Project No. 2556; and the Union Gas Project No. 2556. 2/ The projects, listed in order from upstream to downstream, are located on Mesalonskee Stream, a tributary of the Kennebec River, in Kennebec County, Maine. Although the projects had been operated under separate licenses, Central Maine sought a single new license that would encompass all four projects. 3/

Subsequent to the filing of the application, the four projects were transferred from Central Maine: the Automatic

1/ 16 U.S.C. §§ 797(e), 808.

2/ Original licenses were issued for the Oakland and Rice Rips Projects on February 24, 1969, 41 FPC 176 and 179, respectively, and for the Automatic and Union Gas Projects on August 30, 1968, 40 FPC 376 and 378, respectively. The four licenses were effective May 1, 1965, and expired December 31, 1993. The projects have operated under interim authority.

3/ In an order issued concurrently with this one, we affirm our earlier finding, in Kennebec Water District, 84 FERC ¶ 61,027 (1998), that the Mesalonskee Stream from the Union Gas Project (the lowermost project on the stream) to the Mesalonskee's confluence with the Kennebec is a navigable waterway of the United States. Because the four projects constitute a single unit of development, the location of the Union Gas Project on a navigable stream requires that all four projects be licensed. See Kennebec Water District, 80 FERC ¶ 61,208 at p. 61,828 (1997).

Project No. 2556-004, et al.

. 2 .

Project to Kennebec Water District (District), which became the relicense applicant for that project, 4/ and the other three projects to FPL Energy Maine Hydro LLC (FPL Hydro), which is now the relicense applicant for those projects. 5/ This order issues a license to FPL Hydro for the 5.9-megawatt (MW) Mesalonskee Project No. 2556, which comprises the Oakland, Rice Rips, and Union Gas Projects. By separate order we are also issuing a license to the District for the continued operation of the Automatic Project No. 2555.

BACKGROUND

Notice of the application was published, and comments were received. Timely motions to intervene in this proceeding were filed by the Maine State Planning Office (Planning Office) and the U.S. Department of the Interior (Interior). The Kennebec Valley Chapter of Trout Unlimited (Kennebec Trout) filed a timely motion to intervene in response to the notice of Commission staff's Draft Environmental Impact Statement (EIS), which was issued in January 1996. Kennebec Trout's motion is in opposition to the project.

The environmental review of this application was consolidated with the review of seven other applications for original, new, or subsequent licenses for projects in the Kennebec River Basin. The Draft EIS evaluated the potential impacts of the 11 projects. Numerous comments on the Draft EIS were filed, and the Commission staff considered these comments in preparing the Final EIS, which was issued in July 1997. 6/ We have fully considered the motions and comments received from interested agencies and individuals in determining whether, and under what conditions, to issue this license. 7/

4/ 70 FERC ¶ 62,003 (1995).

5/ 85 FERC ¶ 62,208 (1998).

6/ References in this order to the EIS are to the Final EIS unless otherwise specified. Comments were received from the U.S. Environmental Protection Agency (EPA), Kennebec Trout, Kennebec Coalition, and Maine Professional River Outfitters.

7/ A number of intervenors and commenters in the Kennebec River Basin licensing proceedings raised issues regarding the scope of the environmental analysis and the assumptions underlying that analysis. The EIS generally responded to those comments, and we addressed them at length in our earlier orders issuing licenses for other projects evaluated in the EIS. See, e.g., 81 FERC ¶ 61,249 at pp. 62,114-15. These issues included our choice of an environmental

(continued...)

PROJECT DESCRIPTION

The Messalonskee Project consists of four developments. Messalonskee Lake, located at the beginning of Messalonskee Stream, includes a 12.5-foot-high, 150-foot-long, L-shaped dam, with 2-foot-high flashboards; and a storage reservoir that is 3,500 feet wide and 15 miles long, with a gross storage of 110,000 acre-feet. Releases from Messalonskee Lake dam are designed to provide flows for generation at the hydroelectric developments on Messalonskee Stream -- FPL Hydro's other three developments and the District's Automatic Project No. 2555. A/

The Oakland development, located about 0.4 miles downstream of the lake, includes a 115-foot-long, 14-foot-high dam with 4-foot-high flashboards; a 466-foot-long penstock; a powerhouse containing one 2.8-MW generator; and a 0.4-mile-long impoundment with a gross storage capacity of 50 acre-feet. The tailrace abuts the Rice Rips development.

The Rice Rips development includes a 220-foot-long, 31-foot-high dam with 5-foot-high flashboards; a 2,293-foot-long penstock, resulting in a 2,400-foot-long bypassed reach; a powerhouse containing one 1.6-MW generator; and a 1.6-mile-long impoundment with a gross storage capacity of 1,000 acre-feet. 2/

The Union Gas development is the furthest downstream of the developments and includes a 343-foot-long, 31-foot-high dam with 18-inch-high flashboards; a powerhouse containing one 1.5-MW generator; and a 1.5-mile-long impoundment with a gross storage capacity of 600 acre-feet.

2/ (...continued)

baseline and "no action" alternative. Consideration of watershed-wide land use protection, alternative energy sources, consideration of license denial and project decommissioning for all projects, and inclusion of other projects in the environmental analysis. Since those issues have already been addressed, we see no need to repeat our earlier discussion, which we incorporate by reference here to the extent pertinent.

A/ Messalonskee Lake was one of the Oakland Project's two developments.

3/ The District's Automatic Project is located immediately below the Rice Rips and just above the Union Gas developments. It consists of an 81-foot-long, 33-foot-high dam; a powerhouse containing one 0.8-MW generator; and a 4.5-mile-long impoundment.

The Messalonskee Lake Dam is operated manually by FPL Hydro, with releases scheduled on the basis of customer load requirements and specified drawdown limits that vary seasonally from about 0.5 foot in the summer to 1.0 foot in the winter. The four developments that generate electric power have been operated essentially in a run-of-river mode, with some fluctuations in their reservoir levels permitted by their licenses. 10/

A more detailed description of project facilities is contained in ordering paragraph (B) (2).

APPLICANT'S PLANS AND CAPABILITIES

In accordance with Sections 10 and 15 of the FPA, 11/ we have evaluated FPL Hydro's record as a licensee with respect to the following: (1) conservation efforts; (2) compliance history and ability to comply with the new licenses; (3) safe management, operation, and maintenance of the three developments; (4) ability to provide efficient and reliable electric service; (5) need for power; (6) transmission service; (7) cost effectiveness of plans; and (8) actions affecting the public.

1. Conservation Efforts

FPL Hydro is an independent power producer, not an electric utility, and, as such, is not required to address the energy efficiency improvement programs as required by Section 10(A) (2) of the FPA.

2. Ability to Comply with the New License

In accepting the transfer of the license from Central Maine, FPL Hydro agreed to accept all of the responsibilities, terms, and conditions of the existing license and the FPA. We have no reason not to believe that FPL Hydro can satisfy the conditions of a new license.

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

We have reviewed the record of management, operation, and maintenance of the Messalonskee Lake, Oakland, Rice Rips and Union Gas developments pursuant to project safety. We conclude

10/ The Oakland, Rice Rips, and Automatic reservoirs are permitted a 1-foot fluctuation; the Union Gas reservoir is permitted a 1.3-foot fluctuation.

11/ 16 U.S.C. §§ 803 and 808.

that the dams and other project works are safe, and we have no reason not to believe that FPL Hydro will safely manage, operate, and maintain these facilities under a new license.

4. Ability to Provide Efficient and Reliable Electric Service

In accepting the transfer of the license from Central Maine, FPL Hydro agreed to accept all of the responsibilities, terms, and conditions of the existing license and the FPA.

Before the license transfer, Central Maine studied the existing development facilities, the operation of the project, and the utilization of flows on the Messalonskee Stream and concluded that the developments are properly sized for the available flow. Stream flows exceed the project's turbine capacities only about 10 percent of the time, which is a high level of flow utilization. Central Maine determined that it would not be economical to upgrade turbines and generators at this time.

We have no reason not to believe that FPL Hydro will operate the project in an efficient manner within the constraints of the existing license and that the project will continue to provide efficient and reliable electric services in the future.

5. Need for Power

To assess the need for power, we looked at the needs in the operating region in which the project is located. The project is located in the New England Power Pool (NEPOOL) area of the Northeast Power Coordination Council region of the North American Electric Reliability Council (NERC). NERC annually forecasts electrical supply and demand in the nation and the region for a ten-year period. NERC's most recent report 12/ on annual supply and demand projections indicates that, for the period 1998-2007, total summer demand is projected to increase from 22,158 megawatt hours (MWh) to 26,333 MWh, and winter demand from 20,253 MWh to 23,601 MWh. Independent power producers such as FPL Hydro are projected to supply about 4,000 MWh of this demand. We conclude that the project's power, low cost, displacement of nonrenewable fossil-fired generation, and contribution to the region's diversified generation mix will help meet a need for power in the region.

12/ NERC's Electricity Supply and Demand Database, Data set 1997-2007.

6. Transmission Service

The project's transmission facilities include the generator leads, station transformers and buses located at each of the developments' powerhouses. FPL Hydro proposes no changes that would affect transmission facilities.

7. Cost Effectiveness of Plans

FPL Hydro has no plans for changing project facilities or operations for power development purposes, but is proposing a number of measures for the enhancement of natural resources and recreational opportunities. We conclude, based on the license application, that FPL Hydro's plans for implementing these measures, as well as its continued operation of the project, will be achieved in a cost-effective manner.

8. Actions Affecting the Public

Environmental enhancement measures, new safety measures, and recreation improvements included in the license will generally improve environmental quality, particularly in aquatic and wildlife resources, and will have a beneficial effect on public use of project facilities for recreational purposes.

WATER QUALITY CERTIFICATION

Under Section 401(a)(1) of the Clean Water Act (CWA), 13/ the Commission may not issue a license for a hydroelectric project unless the 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 period of time, not to exceed one year. Section 401(d) of the CWA provides that state certification shall become a condition on any federal license or permit that is issued. 14/ On August 28, 1995, the Maine Department of Environmental Protection (Maine DEP) issued Section 401 water quality certification for all four projects, subject to certain conditions.

Maine DEP's water quality certification includes nine conditions, the substantive ones of which we summarize here, and which are attached in full as Appendix A to this order. 15/ .

13/ 33 U.S.C. § 1341(a)(1).

14/ 33 U.S.C. § 1341(d).

15/ As we have acknowledged in Kennebec Water Power Company, 81 FERC ¶ 61,254 (1997), we are required by the decision of the (continued...)

While we have included certain of these provisions as license articles, all of the Section 401 conditions are conditions to this license.

Condition 1 requires the licensee to maintain an instantaneous minimum flow of 15 cubic feet per second (cfs) through all project developments at all times, including into the bypassed reach at the Rice Rips development. 16/ and requires that the top 0.5 foot of Messalonskee Lake shall be used to augment natural flows to meet the 15-cfs minimum flow requirement. (See also license Article 402, which incorporates this latter provision.) Condition 1 further requires that the licensee submit plans for providing and monitoring the minimum flows for Maine DEP approval (see also Article 404).

Condition 2 requires the licensee to maintain the Oakland and Rice Rips impoundments within 1.0 foot of full pond, to maintain the Union Gas impoundment within 1.3 feet of full pond, and to maintain Messalonskee Lake within 0.5 foot of full pond from June 1 to August 31, and within 1 foot from September 1 to May 31 (see also Article 402). Condition 2 further requires the licensee to submit plans for providing and monitoring the impoundment water levels for Maine DEP approval (see also Article 404).

Condition 3 requires the licensee to sample dissolved oxygen, temperature, and chlorophyll a in Messalonskee Stream (see also Article 407) and to provide a water quality sampling plan to Maine DEP for review and approval within six months of

15/ (....continued)

United States Court of Appeals in *American Rivers, et al. v. FERC*, 129 F.3d 99 (1997) to accept all conditions in a water quality certification as conditions on a license, even if we believe that the conditions may be outside the scope of Section 401. While we have included certain of the provisions as license articles, all of the Section 401 conditions are conditions to this license. In any event, nothing in the conditions of the water quality certification shall be viewed as restricting the Commission's ability or the licensee's obligation, under the Federal Power Act, to take timely action necessary to protect human life or the environment.

16/ As noted below, Interior recommended that the licensee release instantaneous minimum flows of 100 cfs below all developments, and 25 cfs for the Rice Rips bypassed reach. By letter dated May 13, 1996, Maine DEP stated that these higher minimum flows, which are required by Article 401 of the license, do not conflict with the water quality certification.

license issuance. Maine DEP reserves the right, after proper notification and hearing, to require structural or operational changes if monitoring indicates that water quality standards are not met.

Condition 4 requires the licensee to implement its proposed new downramping sequence at the Union Gas Development as outlined in the supporting documentation for the application for Section 401 certification (see also Article 403). 17/

Condition 5 requires the licensee to implement the "Messalonskee Lake Waterfowl Management Plan" and to begin conducting wetland assessments and waterfowl surveys needed to maintain or enhance waterfowl nesting at Messalonskee Lake within two years of license issuance (see also Article 408). Condition 5 further requires FPL Hydro to consult with Maine Department of Inland Fisheries and Wildlife (Maine IFW) regarding the survey results, and, based on the results of the studies, maintain or modify water levels as deemed appropriate by Maine DEP as necessary to protect nesting waterfowl.

Condition 6 requires the licensee to maintain and improve recreational facilities and public access at the project. Condition 6 further requires the licensee to submit a schedule, for Maine DEP approval, for implementing the recreational enhancements.

ENDANGERED SPECIES ACT

There are no federally-listed threatened or endangered species that occur in the vicinity of the Messalonskee Project, other than occasional transient bald eagles and peregrine falcons. 18/ In any event, we have included measures to protect waterfowl and fishery resources on which bald eagles and peregrine falcons feed (Articles 401, 402, 403, 407, and 408).

17/ As part of the licensing process, Central Maine conducted a downramping study below the Union Gas dam. The results show that when the development shuts down, fish are stranded as wicket gate settings close from 70 to 40 percent open. FPL Hydro proposes to extend to 30 minutes its wicket gate closings from 70 to 40 percent open, creating a 1 percent gate closure per minute.

18/ See Interior's letter of January 26, 1994, filed January 28, 1994.

SECTION 18 FISHWAY PRESCRIPTIONS

Section 18 of the FPA 19/ states that the Commission shall require construction, maintenance, and operation by a licensee of such fishways as the Secretaries of the U.S. Departments of Commerce and of the Interior may prescribe. By letter of January 26, 1994, Interior's Fish and Wildlife Service (FWS) requested that the Secretary's authority to prescribe fishways be reserved. Article 406 of this license reserves authority to the Commission to require the licensee to construct, operate, and maintain such fishways as the Secretary of the Interior may prescribe in the future.

RECOMMENDATIONS OF FEDERAL AND STATE FISH AND WILDLIFE AGENCIES

Section 10(j) (1) of the FPA 20/ requires the Commission, when issuing a license, to include conditions based upon recommendations of federal and state fish and wildlife agencies, submitted pursuant to the Fish and Wildlife Coordination Act, 21/ to "adequately and equitably protect, mitigate damages to, and enhance, fish and wildlife (including related spawning grounds and habitat)" affected by the project. If the Commission believes that any such recommendation may be inconsistent with the purposes and requirements of Part I of the FPA or other applicable law, Section 10(j) (2) requires the Commission and the agencies to attempt to resolve any such inconsistency, giving due weight to the recommendations, expertise, and statutory responsibilities of such agencies. If the Commission then does not adopt a recommendation, it must explain how the recommendation is inconsistent with applicable law and how the conditions selected by the Commission adequately and equitably protect, mitigate damages to, and enhance fish and wildlife.

Maine's recommendations pertaining to fish and wildlife, by executive order of the Governor, are contained in the conditions of the water quality certification, which we have already discussed.

By letter dated January 26, 1994, Interior provided recommendations, pursuant to Section 10(j), for the four combined Messalonskee projects. One of those recommendations, which would require the licensee to monitor recreational use of the project area to determine whether existing access facilities are meeting demands for public use of fish and wildlife resources, is not within the scope of Section 10(j), because it is not a specific

19/ 16 U.S.C. § 811.

20/ 16 U.S.C. § 803 (j) (1).

21/ 16 U.S.C. § 661 et seq.

measure to protect, enhance, or mitigate damages to fish and wildlife. However, we have considered this recommendation under Section 10(a) of the FPA, and, in Article 412, we are requiring the licensee to file with the Commission a plan to monitor recreational use at the developments comprised by the Messalonskee Project.

Interior submitted three recommendations relating to minimum flows. Those recommendations would require the licensee: to discharge from the Messalonskee Lake Dam and from each of the four downstream hydroelectric developments an instantaneous flow of 100 cfs or inflow, whichever is less; at the Rice Rips development, to discharge from the dam into the bypassed reach 25 cfs of the required minimum flows; and to file with the Commission, after consultation with FWS and other agencies, a plan for complying with the minimum flow requirements. These recommendations were advanced primarily to improve habitat for brown trout below the Union Gas Dam and in the Rice Rips bypassed reach. 22/ Interior also recommended that the licensee file a plan for installing and maintaining a fish screen at the Messalonskee Lake Dam. Finally, Interior recommended that the licensee file with the Commission a plan to monitor wetlands and associated wildlife use at the Messalonskee Project.

In the Draft EIS, staff made a preliminary determination that Interior's 100-cfs minimum flows for all four developments would be inconsistent with the comprehensive development standard of Sections 10(a) (1) and 4(e) of the FPA, because those releases would be too high to permit the four developments to generate during the summer, because water quality could be adversely affected without periodic high generation flows to flush water through the Rice Rips impoundment, and because the annual costs of the flows would be high in relation to the benefits to the brown trout fishery, which the Draft EIS characterized as experimental. 23/ The Draft EIS also determined that the flow recommendation would be inconsistent with Maine DEP's water quality certification requirement that 15 cfs be released through

22/ Because Messalonskee Lake is essentially the only development that stores water, any minimum flow delivered below the Union Gas development would have to be released from Messalonskee Lake and passed through each succeeding dam.

23/ Draft EIS at pp. 5-62-63. The Draft EIS noted that only Union Gas could generate with a flow of 100 cfs, but inflow to Messalonskee Lake would rarely be 100 cfs during the summer. The Draft EIS determined that the annual cost of providing 100-cfs minimum flows at all four developments would be \$56,400, compared to \$20,700 for 15-cfs minimum flows.

all of the project developments at all times. 24/ The Draft EIS concluded that the 15-cfs minimum flow, which was also the flow release proposed for each development by the license applicant, would provide an acceptable degree of habitat enhancement for brown trout in the Union Gas tailrace, and that higher minimum flows could displace pockets of cool water, needed by the brown trout, with warmer water from the impoundment. 25/

The Draft EIS determined that Interior's recommendation for a new fish screen at Messalonskee Lake Dam lacked evidentiary support, because Interior had not shown that the existing fish screen at that dam required replacement. 26/ Finally, the Draft EIS adopted Interior's recommendation for monitoring wetlands and associated wildlife, provided that the intent of the recommendation was that the licensee implement the Messalonskee Lake Waterfowl Management Plan, submitted by Central Maine to the Commission in June 1993. 27/ The staff concluded that the record did not support monitoring and associated wildlife use at any of the Messalonskee developments downstream of Oakland, given that future project operations would not change substantially from existing ones. 28/

By letters dated March 8, 1996, Commission staff notified Interior of its determinations of the potential inconsistencies relating to the minimum flows and the fish screen. The Commission staff convened a meeting of the parties on May 7, 1996, in Augusta, Maine, to reconcile these inconsistencies.

At the Section 10(j) meeting, Interior withdrew its recommendation for a new fish screen, based on the assurances of Maine DEP that the existing fish screen was satisfactory. In

24/ Maine DEP's certification requires that 15 cfs be released from Messalonskee Lake and instantaneously passed at all times, including the Rice Rips bypassed reach, at all times, using the top 0.5 foot of Messalonskee Lake storage as needed. Adopting Interior's recommendation could cause instantaneous flows to fall below the 15 cfs mandated by the certification if inflow to the project falls below 15 cfs.

25/ Draft EIS at p. 4-71. The Draft EIS found that the 15-cfs instantaneous minimum flow would provide about 76 percent of the maximum brown trout weighted usable area (WUA).

26/ Draft EIS at p. 5-63.

27/ The text supporting Interior's Section 10(j) recommendations specifically requested that this management plan, which had already been submitted, be made a license condition.

28/ Draft EIS at p. 5-63.

addition, Interior stated that, although the focus of the wetland and wildlife monitoring should be Messalonskee Lake due to the importance of its wetland habitat, other wetlands downstream should also be monitored, since they could be affected by recreational enhancements implemented under the new license. The issue was resolved by determining that FWS should be included in the review of the recreation plans for all of the Messalonskee developments, and the scope of the licensee's existing plans for monitoring wetlands and waterfowl at Messalonskee Lake was not changed. This recommendation was adopted in the Final EIS, and Articles 409 through 412 of the license require the licensee to consult with FWS in developing and monitoring the recreation enhancements.

The flow issue was not resolved at the Section 10(j) meeting. However, Maine DEP agreed to conduct an analysis to determine whether the 100-cfs minimum flows recommended by Interior would conflict with its water quality certification conditions of a 15-cfs minimum flow and a 0.5-foot draw-down restriction at Messalonskee Lake. The possibility was also entertained of Interior, Maine DEP, and Maine IFW exploring fisheries enhancements in other tributaries as an alternative to Interior's 100-cfs minimum flow releases.

By letter dated May 13, 1996, Maine DEP notified the Commission that it found no conflict between the certification and Interior's minimum flows, as long as the Maine DEP's guaranteed minimum flow of 15 cfs is met regardless of inflow into Messalonskee Lake. Maine DEP also concluded, based on a technical analysis conducted by its staff, that sufficient flushing would be provided under any operating scenario to meet water quality standards even in the absence of summer generation flows, and that Interior's more stable flow (inflow equals outflow up to a 100-cfs inflow) would probably benefit water quality, especially during the summer months.

In the Final EIS, staff continued to maintain that the 15-cfs minimum flow release would be preferable to Interior's flow release, for the reasons indicated in the Draft EIS. However the EIS acknowledged Maine DEP's conclusions regarding the consistency of Interior's flow recommendation with the certification and the adequacy of flushing flows under Interior's flow regime. The EIS recommended adoption of Interior's minimum flow recommendations as not inconsistent with applicable law.

On October 14, 1998, Commission staff held a technical conference with the parties to determine whether any further agreement could be reached on the minimum flow issue. The participants stated that no agreement had been reached on alternative habitat enhancements. While Central Maine (which was still the licensee) and the resource agencies reached agreement on certain subsidiary matters, they continued to disagree on the

appropriate minimum flows. Interior, Maine IFW, Maine DEP, and Central Maine stated that they would continue discussions on appropriate minimum flow requirements. Although staff provided these entities additional time to pursue such discussions, it received no subsequent notification that further discussions took place or that any resolution of the issue was reached.

We will adopt Interior's 100-cfs minimum flow recommendation. Staff's concern that this flow regime would conflict with Maine DEP's water quality certification is satisfied by Maine DEP's assurances to the contrary. Similarly, Maine DEP has determined that the reduction in summer generation flows resulting from the release of Interior's higher constant minimum flows would not deprive the Rice Rips impoundment of sufficient flushing to maintain water quality standards. Moreover, Maine DEP now believes that Interior's flow requirement would probably benefit water quality during the summer. At the technical conference, Central Maine and the resource agencies agreed that the water released from the Union Gas impoundment would not be significantly warmer than the water below the Union Gas Dam; this determination addresses staff's concern that Interior's higher minimum flows could displace cool water in the trout habitat below that dam with warmer water from the impoundment.

Maine IFW manages a successful trout fishery below the Union Gas Dam. Recreationally, the reach below the Union Gas development receives 3,700 user-days a year, mostly for bank fishing below the powerhouse. 29/ The experimental nature of this fishery was a significant factor in the staff's conclusion, in the Draft EIS, that the annual costs of the flows would be high in relation to the benefits the fishery would receive. 30/ However, although the fishery was started as an experimental urban fishery, it is no longer designated experimental. 31/ The fact that the fishery is now established warrants placing greater

29/ EIS at p. 3-154.

30/ Draft EIS at p. 5-62-63. Moreover, in relation to the fishery in the Rice Rips bypassed reach, the Draft EIS stated, at p. 4-66:

We consider it unwarranted to condition a long-term license requiring (the licensee) to provide flows to optimize a fishery that is completely dependent on stocking if there is a reasonable chance that the stocking may be discontinued in the near future.

31/ See Summary of Section 10(j) meeting, issued May 30, 1997; Summary of Technical Conference issued October 30, 1998.

wight on the benefits to the fishery in relation to the loss of power benefits. 32/

Although staff determined that the project would be able to generate only about 3 percent of the time during the summer with Interior's recommended flows, it also found that the project would be able to generate only about 10 percent of the time under existing operating conditions (essentially the release of 15 cfs as leakage flows). 33/ The Final EIS estimated that the annual cost of providing Interior's 100-cfs minimum flow at all four developments (including Automatic) would be \$59,300 or 5.3 percent of the annual power value. 34/ Although both the Draft and the Final EIS concluded that the 15 cfs minimum flow would provide an acceptable degree of habitat enhancement for brown trout in the Union Gas tailrace, a flow study conducted by Central Maine in the Union Gas tailwaters shows that 100 cfs would provide the maximum weighted useable area (WUA) for brown trout. 35/

Given the importance of the brown trout fishery in reaches of the Messalonskee Stream, the relative loss of power benefits from adopting Interior's recommended flows, and the satisfaction of previously-expressed concerns regarding water quality issues, we conclude that adoption of Interior's recommended flows would be consistent with the comprehensive development standards of the FPA and with Maine DEP's water quality certification. We therefore adopt Interior's flow regime, modified to ensure a minimum flow of 15 cfs at all times. 36/

Article 401 requires the licensee to discharge from Messalonskee Lake and from the project's generation developments an instantaneous flow of at least 100 cfs or inflow to the project area, whichever is less, but in no case less than 15 cfs. 37/ Article 401 also requires that, at the Rice Rips

32/ Brown trout are considered a prized game fish, and Maine IFW manages the reach below Union Gas Dam specifically for a brown trout fishery.

33/ Summary of Section 10(j) meeting.

34/ EIS at p. 2-72 through 2-80.

35/ EIS at p. 4-72, 79.

36/ Although the focus of the flow regime is the enhancement of the brown trout fishery, the record contains evidence of benefits to the shad fishery as well. See EIS at p. 4-81.

37/ Since the benefit to the fishery below the Union Gas Dam is (continued...)

development. 25 cfs of the required 100 cfs, or inflow, be released from the dam into the bypassed reach, but in no case less than 15 cfs. Article 404 requires the licensee, within 3 months of license issuance, to file with the Commission a plan to monitor the minimum flow requirements at the developments. Article 408 requires the licensee, within 3 months of license issuance, to file with the Commission a plan to monitor the wetlands and associated wildlife use at the project.

OTHER COMMENTS AND RECOMMENDATIONS

Kennebec Trout proposes a number of additional recommendations relating primarily to the enhancement of fisheries and recreational use in the project area. Kennebec Trout urges us not to require the installation of a carry-in boat launch and parking area at the Rice Rips project. Kennebec Trout argues that there is no current demand for such access and recommends that construction of these facilities be postponed until the need for them is demonstrated. The State Comprehensive Outdoor Recreation Plan prepared in 1988 concludes that recreation needs in the Kennebec River region include boat access and a parking area at the Rice Rips impoundment based on its site visit and review of the demand projections for flatwater recreation in the area. 38/ We concur with this recommendation and are including, in Article 410 of the license, a requirement that the licensee construct these facilities.

Kennebec Trout contends that a fishing facility accessible to persons with disabilities should be built at the Fort Halifax Park instead of the Union Gas powerhouse. Kennebec Trout recommends that we require the licensee to set aside \$25,000 for construction of a fishing facility accessible to persons with disabilities at a location to be determined through consultation with resource agencies and interested groups. We concur with the conclusion in the EIS that the flat area near the river makes the site below the Union Gas powerhouse well suited for a fishing facility accessible to persons with disabilities and that the improving fishery offers reasonable angling opportunities. 39/ Article 411 of the license requires the licensee to construct,

37/ (...continued)

dependent on the release of these flows from each upstream dam, we are requiring the same minimum flow release from the Automatic Project in our order issuing a subsequent license for that project.

38/ EIS at pp. 4-161 and 4-162.

39/ EIS at p. 4-164.

below the Union Gas powerhouse, a fishing facility that is accessible to persons with disabilities. 40/

COMPREHENSIVE PLANS

Section 10(a)(2) of the FPA requires the Commission to consider the extent to which a project is consistent with federal or state comprehensive plans for improving, developing, or conserving a waterway or waterways affected by the project. Under Section 10(a)(2), federal and state agencies filed a total of 13 plans. Of these, we identified nine plans relevant to the project. 41/ The project does not conflict with any of these comprehensive plans.

COMPREHENSIVE DEVELOPMENT

Sections 4(e) and 10(a)(1) of the FPA 42/ require the Commission, in acting on applications for license, to give equal consideration to the power and development purposes and to the purposes of energy conservation, the protection, mitigation and enhancement of fish and wildlife, the protection of recreation 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

40/ Kennebec Valley proposed a number of additional recommendations relating to parking and access and to water quality in the project area. The EIS explained either why Kennebec Valley's concerns should be satisfied by the staff's recommended license conditions or why the additional recommendations were inappropriate or unnecessary. See EIS at pp. E-278 through E-284. As the EIS responded adequately to Kennebec Valley's concerns, we will not reiterate those responses in detail here.

41/

Strategic Plan for Management of Atlantic Salmon in Maine, 1981, Atlantic Sea-Run Salmon Commission; Maine River Study - Final Report, 1982, Maine Department of Conservation; State Comprehensive River Management Plan, 1987, Maine State Planning Office; Hydrology of Floods - Kennebec River Basin, Maine, 1985, U.S. Army Corps of Engineers; Hydrology of Floods, Kennebec River Basin, Maine, Part II, 1988, U.S. Army Corps of Engineers; Water Resource Study - Kennebec River Basin, 1989, U.S. Army Corps of Engineers; Fisheries USA: The Recreational Fisheries Policy of the FWS, Fish and Wildlife Service; North American Waterfowl Management Plan, 1986, Interior and Canadian Wildlife Service; Final EIS - Restoration of Atlantic Salmon to New England Rivers, 1989, Interior.

42/ 16 U.S.C. §§ 797(e) and 803(a)(1).

comprehensive plan for improving or developing a waterway or waterways for all beneficial public uses. The decision to license this project, and the terms and conditions included herein, reflect such consideration.

The EIS analyzed the environmental effects of the continued operation of these combined projects. It recommends a number of measures to protect and enhance environmental resources. These measures will provide minimum flows and limit reservoir draw-downs to improve fish and wildlife resources, enhance recreational resources in the project vicinity, enhance cultural resources affected by the project.

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 Corp., 43/ the Commission employs an analysis that uses current costs to compare the costs of the projects and likely alternative power, with no forecasts concerning potential future inflation, escalation, or deflation beyond the license issuance date. The basic purpose of the Commission's economic analysis is to provide a general estimate of the potential power benefits and the costs of a project, and reasonable alternatives to project power. The estimate helps to support an informed decision concerning what is in the public interest with respect to a proposed license. In making its decision, the Commission considers the project power benefits both with the applicant's proposed mitigation and enhancement measures and with the Commission's proposed modifications and additions to the applicant's proposal.

As proposed by FPL Hydro, the Messalonskee Project would produce an average of 18,995 gigawatt-hours (GWh) of energy annually at an annual cost of about \$543,000 (28.6 mills/kWh). The annual value of the project's power would be \$1,016,000 (53.5 mills/kWh) based on the current cost of alternative power. We base this value on the cost of a new combined cycle combustion turbine plant and the regional cost of natural gas. 44/ To determine whether the proposed project is currently economically beneficial, we subtract the project's cost from the value of the project's power. Thus, we find the project would be economically

43/ 72 FR 61,027 (1995).

44/ Our estimate of the value of project power is more completely described in the EIS at p. 2-55, n. 10.

beneficial, costing about \$473,000 annually (24.9 mills/kWh) less than the current cost of alternative power.

As licensed by the Commission, the project will produce an average of 17,190 GWh of energy annually at an annual cost of about \$570,000 (33.2 mills/kWh). The current annual value of the licensed project's power is about \$981,000 (57.1 mills/kWh). Thus, we find the project as licensed is economically beneficial, costing \$411,000 annually (23.9 mills/kWh) less than the current cost of alternative power.

Based on our review of the agency and public comments, and our evaluation of the environmental and economic effects of the proposed project and its alternatives pursuant to Section 10(a)(1), we find that the Messalonskee Project, with our protection and enhancement measures, will be best adapted to the comprehensive development of the Messalonskee Stream and Kennebec River Basin for all beneficial public uses.

LICENSE TERM

Section 15(e) of the FPA specifies that any new license issued shall be for a term that we determine to be in the public interest but the term may not be less than 30 years or more than 50 years. Our policy establishes 30-year terms for projects that propose little or no redevelopment, new construction, new capacity, or enhancement; 40-year terms for projects that propose moderate redevelopment, new construction, new capacity, or enhancement; and 50-year terms for projects that propose extensive redevelopment, new construction, new capacity, or enhancement. FPL Hydro does not propose any new capacity or development at the Messalonskee Project.

Central Maine, the original applicant, suggested that we coordinate the license terms for the projects encompassed in the Kennebec River Basin EIS to expire simultaneously with the license for the Hydro-Kennebec Project No. 2611, another project on the mainstem Kennebec River. That license expires in the year 2036. Central Maine argued that this would enable the Commission to ensure that numerous licenses in the Kennebec River Basin would expire around the same time.

In our policy statement on cumulative impacts and license reopeners, we stated that we would endeavor to coordinate the expiration dates of licenses for projects located in the same river basin to the maximum extent feasible, consistent with our commitment to considering the cumulative impacts of projects in the same river basin collectively at relicensing. 45/ In earlier

45/ Use of Reserved Authority in Hydropower Licenses to (continued...)

orders issuing licenses for other projects encompassed in the Kennebec River Basin FIS. We concluded that issuing licenses with the expiration dates Central Maine suggested would further this policy, not only by ensuring that those licenses would expire simultaneously, 45/ but also by providing an opportunity for coordination of their expiration dates with the expiration dates of other licenses for projects in the basin. 47/ Consequently, we issued licenses for those projects with license terms expiring in 2036. Following that policy here, we will issue a license for a 37-year term for the Messalonskee Project, effective the first day of the month in which this license is issued. 48/

SUMMARY OF FINDINGS

The Final FIS includes background information, analysis of impacts, discussion of enhancement measures, and support for related license articles. The project will not result in any major, long-term adverse environmental impacts.

45/ (...continued)

Ameliorate Cumulative Impacts, 59 Fed. Reg. 66718 (December 28, 1994), FERC Statutes and Regulations § 31.010 at p. 31.219 (1994). This policy is codified at 18 C.F.R. § 2.23 (1999). See also Central Maine Power Company, 73 FERC § 61.149 at p. 61.422 (1995); Duke Power Company, 73 FERC § 61.335 at p. 61.940 (1995).

46/ Because those projects entailed differing degrees of construction and enhancement, the licenses would not have expired at the same time if we had based each license term on those factors alone.

47/ See, e.g., 81 FERC § 61.249 at p. 62.123.

48/ Besides the Hydro-Kennebec Project license, expiring in 2036, the license for the Benton Falls Project No. 5073 expires in 2034. In addition, the license for the Flagstaff Project No. 2612 expired in 1997 (no new license has yet been issued), and several other projects have licenses expiring within the next ten years: Harris Project No. 2142 (2001); and Anson Project No. 2365, Abenaki Project No. 2364, and Lockwood Project No. 2574 (2004). New licenses could be issued for those projects with expiration dates coordinated with those of the licenses we are issuing in the present orders. We cannot, of course, commit ourselves here to issuing such licenses; moreover, the terms of such licenses as we may issue for those projects may also depend on other factors, such as the amount of new construction involved. However, our action in the present orders makes such coordination possible.

The design of this project is consistent with the engineering standards governing dam safety. The project will be safe if operated and maintained in accordance with the requirements of this license.

We conclude that issuing a license for the Messalonskee Project, with our required enhancement measures, will not conflict with any planned or authorized development, and will be best adapted to a plan for comprehensive development of the waterway for beneficial public uses.

The Commission orders:

(A) This license is issued to FPL Energy Maine Hydro LLC, for a period of 37 years, effective the first day of the month in which this order is issued, to operate and maintain the Messalonskee Project No. 2556. This license is subject to the terms and conditions of the FPA, which is incorporated by reference as part of this license, and subject to the regulations the Commission issues under the provisions of the FPA.

(B) The project consists of:

(1) All lands, to the extent of the licensee's interest in those lands, shown in the following exhibits:

Exhibit G- FERC Drawing Showing
No. 2556

1	1001	Project Map
2	1002	Detail Map - Messalonskee Lake Development
3	1003	Detail Map - Oakland Development
4	1004	Detail Map - Rice Rips Development
6	1005	Detail Map - Union Gas Development

(2) The project works, consisting of the following developments and components:

(a) The Messalonskee Lake Development consisting of:
(i) an L-shaped masonry gravity dam, 12.5 feet high and 150 feet long, including: a 108-foot-long spillway section topped with 2-foot-high flashboards, two 10-foot-high by 12-foot-wide Tainter gate sections, and a 10-foot-high by 4-foot wide wastegate section; and (ii) a storage reservoir,

3,500 feet wide and 15 miles long, with a surface area of 3,600 acres and a gross storage capacity of 110,000 acre feet (AF);

(b) The Oakland Development, consisting of: (i) a concrete gravity dam with a 63-foot-long spillway section with a crest elevation of 207.1 feet, a 51-foot-long by 35-foot-wide intake section with a deck elevation of 213.3 feet, and a gate section with one Tainter gate, 6 feet high by 12 feet wide; (ii) a 1,900-foot-long impoundment with a surface area of 10 acres, a gross storage capacity of 50 AF, and negligible useable storage; (iii) a 466-foot-long fiberglass-lined 10-foot-diameter steel penstock; (iv) a concrete-steel with stone masonry powerhouse, 90 feet high by 39 feet wide by 39 feet long, housing one vertical Francis turbine and Allis-Chalmers generator with a rated capacity of 2,800 kW; and (v) appurtenant facilities;

(c) The Rice Rips Development, consisting of: (i) a 220-foot-long concrete Ambursen dam containing: a 51-foot-long, non-overflow embankment section with a concrete core wall; a 41-foot-long by 30-foot-wide, gated concrete intake section; a 16-foot-long steel flashboard section; a 73-foot-long spillway section with crest at elevation 139.1 feet; and a 50-foot-long, earthen section with concrete core wall; (ii) a 1.6-mile-long impoundment with a gross storage capacity of 1,000 AF; (iii) a 2,293-foot-long, 10-foot-diameter, wood stave penstock; (iv) a 150-foot-diameter surge pond containing a 67-foot-long secondary spillway section and a 27-foot-long primary spillway section with 5-foot-high hinged flashboards; (v) a concrete and steel with brick powerhouse, 31 feet by 43 feet, housing one vertical Francis turbine and General Electric generator with a rated capacity of 1,600 kW; and (vi) appurtenant facilities.

(d) The Union Gas Development, consisting of: (i) a 343-foot-long, 31-foot-high, stone-masonry gravity dam containing: a non-overflow section measuring 122 feet from the east river bank to an angle point where it continues 15 feet to the gate section and 54 feet downstream; a 32-foot-long gated intake section with three, 8-foot-high by 6-foot-wide deep gates; a 32-foot by 11-foot wooden gatehouse; a 32-foot-long spillway section topped with 18-inch-high, pin-supported flashboards; a 41-foot-long, masonry intake section with two 8-foot-diameter intakes; and a 73-foot-long stone masonry non-overflow section; (ii) a concrete-stone masonry powerhouse, 50 feet high by 46 feet wide by 60 feet long, housing one vertical Francis turbine and General Electric generator combination with a rated capacity of 1,500 kW; (iii) a 1.5-mile-long impoundment with a gross storage capacity of 600 AF; and (iv) appurtenant facilities.

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

Exhibit A - The following sections of Exhibit A filed December 4, 1991: The turbine and generator descriptions on pages A-25 through A-28; and additional mechanical and electrical equipment described elsewhere on pages A-29 through A-33.

Exhibit F - The following Exhibit F drawings filed on December 4, 1991:

Exhibit F	FERC Drawing No. 2556	Showing
1	1006	Messalonskee Lake Development Dam - Plan, Elevation, Sections
2	1007	Oakland Development - Dam Intake, Penstock & Surge Tank - Plan Elevations & Sections
3	1008	Oakland Development - Powerhouse Plans & Sections
4	1009	Rice Rips Development - Dam Plan, Elevation & Sections
5	1010	Rice Rips Development - Penstock Plan & Details
6	1011	Rice Rips Development - Surge Pond Plan & Sections
7	1012	Rice Rips Development - Powerhouse Plans, Elevations & Sections
8	1013	Union Gas Development - Dam Plan, Elevation & Sections
9	1014	Union Gas Development - Powerhouse Plan, Elevation & Sections

(3) All 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 necessary or appropriate in the operation or maintenance of the project.

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

(D) This license is subject to articles set forth in Form

L-3 (October 1975), entitled "Terms and Conditions of License for Constructed Major Project on Navigable Waters" and the following additional articles.

Article 201. The licensee shall pay the United States an annual charge, effective the first day of the month in which this license is issued, for the purposes of reimbursing the United States for the cost of administration of Part I of the Federal Power Act, 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 5,900 kW.

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

The specified reasonable rate of return used in computing amortization reserves shall be calculated annually based on current capital ratios developed from an average of 13 monthly balances of amounts properly included 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 203. 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 204. Within 45 days of the date of issuance of the license, the licensee shall file three original sets of aperture cards of the approved drawings. The drawings must be reproduced on silver or gelatin 35 mm microfilm. All microfilm must be mounted on type D (3-1/4" x 7-3/8") aperture cards. The licensee shall submit a copy of form FERC-582 with the aperture cards.

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

Two sets of the aperture cards shall be filed with the Secretary of the Commission, ATTN: OHL/Division of Licensing and Compliance. The third set of aperture cards shall be filed with Commission's New York Regional Office.

Article 401. Within 60 days of the installation of water level and streamflow monitoring devices required by Article 404, the licensee shall release minimum flows for the protection and enhancement of water quality and aquatic resources in Messalonskee Stream and the Kennebec River.

The licensee shall release instantaneous minimum flows of 100 cfs or the inflow to Messalonskee Lake, whichever is less (except that at no time shall minimum flows drop below 15 cfs), from the Messalonskee Lake, Oakland, Rice Rips, and Union Gas developments as measured in the Union Gas tailrace immediately downstream of the Union Gas dam. The licensee shall release an instantaneous minimum flow of 25 cfs or the inflow to release an instantaneous minimum flow, whichever is less (except that at no time shall minimum flows drop below 15 cfs), to Messalonskee Stream as measured immediately downstream of the Rice Rips dam. The 100-cfs minimum flow requirement for the Rice Rips development is inclusive of the 25 cfs requirement for the Rice Rips bypassed reach.

Minimum flow releases from the three developments may be temporarily modified if required by operating emergencies beyond the control of the licensee, and for short periods upon mutual agreement between the licensee, U.S. Fish and Wildlife Service, the Maine Department of Inland Fisheries and Wildlife, and the Maine Department of Environmental Protection. If the flow is so modified, the licensee shall notify the Commission as soon as possible, but no later than 10 days after each such incident.

* AMENDED OCT. 13, 1999. SEE ORDER

* ARTICLE 401 AMENDED OCT. 12, 2000. SEE ORDER

* Article 402. Within 60 days of installation of water level and streamflow monitoring devices required by Article 404, the licensee shall manage impoundment fluctuation levels for the protection and enhancement of water quality and aquatic resources in Megallowee Stream and the Kennebec River.

The licensee shall limit the maximum draw-down of water levels in Megallowee Lake to within 0.5 foot from June 1 to August 31, and 1.0 foot for the remainder of the year, of full pond elevation of 235.9 feet. The top 0.5 foot of Megallowee Lake shall be managed to provide the guaranteed 15-cfs minimum flows required in Article 401 of this license. The licensee shall limit the maximum draw-down of water levels in the Oakland impoundment to 1.0 foot of full pond elevation of 207.1 feet. The licensee shall limit the maximum draw-down of water levels in the Rice Rips impoundment to 1.0 foot of full pond elevation of 139.1 feet. The licensee shall limit the maximum draw-down of water levels in the Union Gas impoundment to 1.3 foot of full pond elevation of 69.1 feet.

The maximum drawdown limitations may be temporarily modified if required by operating emergencies beyond the control of the licensee, and for short periods upon mutual agreement between the licensee, the U.S. Fish and Wildlife Service, Maine Department of Inland Fisheries and Wildlife, and Maine Department of Environmental Protection. If the drawdown limitations are so modified, the licensee shall notify the Commission as soon as possible, but no later than ten days after each such incident. Notification of drawdowns that exceed the restriction for Megallowee Lake or any of the three impoundments from the-out through and including July 31 shall include the reason for the drawdown and documentation of prior consultation with the Maine Department of Inland Fisheries and Wildlife.

Article 403. Within 60 days of installation of water level and streamflow monitoring devices required by Article 404, the licensee shall, to prevent fish stranding below the Union Gas dam, implement the following drawdowning routine at the Union Gas open to 40 percent open shall occur over a fixed 30 minute period, resulting in a gradual reduction of 1 percent gate closing per minute. No restrictions shall apply to wicket gate closings from 100 percent open to 70 percent open, or from 40 percent open to 0.0 percent open.

Article 404. Within six months of license issuance, the licensee shall file for Commission approval a plan to install, operate, and maintain water level and streamflow monitoring equipment necessary to monitor and assess compliance with the minimum flows required by Article 401, impoundment drawdown limits required by Article 402, and drawdowning at Union Gas required by Article 403.

* ARTICLE 402 AMENDED OCT. 12, 2000. SEE ORDER

* ARTICLE 404 AMENDED OCT. 12, 2000. SEE ORDER

The plan shall include, but need not be limited to: a schedule for installing the monitoring equipment; the proposed location, design, and calibration of the monitoring equipment; the method of data collection; a provision for providing the data to the consulted agencies, within 30 days from the date of the agencies' request for the data; and a provision for notification of the Maine Department of Inland Fisheries and Wildlife and Maine Department of Environmental Protection prior to any proposed draw-down of up to 8 feet for flood control. This plan may incorporate existing monitoring equipment as long as it meets the standards of the U.S. Geological Survey.

The licensee shall prepare the plan after consultation with the U.S. Fish and Wildlife Service, National Marine Fisheries Service, U.S. Geological Survey, Maine Department of Inland Fisheries and Wildlife, Maine Department of Marine Resources, and Maine Department of Environmental Protection.

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

The Commission reserves the right to require changes to the plan. The monitoring plan shall not be implemented until the licensee is notified that the plan is approved. Upon Commission approval, the licensee shall implement the plan including any changes required by the Commission.

Article 405. Within 60 days of license issuance, the licensee shall file with the Commission, for approval, a plan to release the minimum flows required by Article 401 of this license. The plan shall include, at a minimum:

- (1) the method of release for each development;
- (2) specific measures that would ensure that the minimum flow requirements would be met at all times;
- (3) an explanation of any modifications to existing facilities to release the required minimum flows; and
- (4) design drawings, including any pertinent hydraulic calculations, and technical specifications for any modifications to facilities necessary to meet the minimum flow requirements.

*** ARTICLES 404 & 405 MODIFIED BY PARAGRAPHS (B) THROUGH (G) OF ORDER MOD. & APPR. MIN. FLOW REL. & MON. PLANS..... JUNE 1, 2001.

(See Order) AND BY ORDER AMENDING ORDER MOD/APPR MIN.FLOW... : FEB. 21, 2002. (See Order)

The Commission reserves the right to require changes to the plan. The plan for releasing the required minimum flows shall not be implemented until the licensee is notified that the plan is approved. Upon Commission approval, the licensee shall implement the plan including any changes required by the Commission.

Article 406. Authority is reserved to the Commission to require the licensee to construct, operate, and maintain, or upstream and downstream fishways as may be prescribed by the Secretary of the Interior under Section 18 of the Federal Power Act.

* Article 407. Within six months of license issuance, the licensee shall file for Commission approval a water quality monitoring plan to ensure that development operations and facilities do not contribute to violations of state water quality standards. The licensee shall, for a 5-year period, monitor dissolved oxygen, temperature, and chlorophyll a levels in Messalonskee Stream, record the outflow from Messalonskee Lake dam, and identify periods of generation during sampling. The plan shall include, but need not be limited to:

- (1) the methodology, including sampling protocol based on the Maine Department of Environmental Protection's most recent river sampling protocol, or other protocol approved by the Maine Department of Environmental Protection;
- (2) a schedule for implementation of the plan;
- (4) a schedule for consultation with the consulted agencies concerning the results of the monitoring; and
- (5) a schedule for filing the results, agency comments, and licensee's response to agency comments with the Commission.

The licensee shall prepare the plan after consultation with the Maine Department of Environmental Protection, U.S. Fish and Wildlife Service, National Marine Fisheries Service, Maine Department of Inland Fisheries and Wildlife, and Maine Department of Marine Resources. The licensee shall include with the plan documentation of agency consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with

* ARTICLE 407 MODIFIED BY PARAGRAPH (B) OF ORDER
MOD. 3 APPR. WATER QUAL. MON. PLAN. MAR. 30, 2001
See Order.

the Commission for approval. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on site-specific information.

The Commission reserves the right to require changes to the plan. The water quality monitoring plan shall not be implemented until the licensee is notified that the plan is approved. Upon Commission approval the licensee shall implement the plan, including any changes required by the Commission.

If the results of the 5-year monitoring program indicate that violations of the Class GPA standards for trophic state still occur, the Commission may direct the licensee to modify project structures or operations, including alternative flow releases, as necessary to protect water quality in Messalonskee Stream.

* Article 408. Within three months of license issuance, the licensee shall file for Commission approval a waterfowl wetland assessment and wildlife monitoring outlined in the "Messalonskee Lake Waterfowl Management Plan" filed with the Commission on June 30, 1993. The waterfowl management plan shall provide a basis for determining trends in waterfowl use and wetland habitat at Messalonskee Lake. The waterfowl management plan shall specify, at a minimum: (a) the methods to be used to assess the status and trends in the quantity of wetlands in Messalonskee Lake; and (b) the methods to be used to monitor waterfowl, wading bird, and black tern use of the Messalonskee Lake wetlands. The plan shall also include a schedule for conducting and reporting the periodic assessment of the Messalonskee Lake wetlands and associated wildlife use. The periodic assessment shall be conducted at an interval of every 5 years through the term of the license, as set forth in the June 30, 1993 "Messalonskee Lake Waterfowl Management Plan". After completing each assessment, the licensee shall file a report with the Commission that includes, at a minimum, the periodic assessment results, and any recommendations for modifications of project operations or the implementation of other measures to enhance waterfowl habitat, as might be appropriate.

The licensee shall prepare the waterfowl management plan after consultation with the Maine Department of Inland Fisheries and Wildlife and U.S. Fish and Wildlife Service. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after 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 prior to filing

* ARTICLE 408 MODIFIED BY PARAGRAPH (B) OF ORDER
MOD. 3 APPR. WATERFOWL MNGT. PLAN. MAY 17, 2000
See Order.

the plan with the Commission for approval. 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 approval, the licensee shall implement the plan, including any changes required by the Commission. The Commission also reserves the right to require modifications to the project operation or water levels in the lake if the assessment results show that such modifications are warranted to protect nesting waterfowl.

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Article 409. Within six months of license issuance, the licensee shall file for Commission approval a recreation plan showing existing recreational development and indicating the entities responsible for operation and maintenance of the facilities for the Oakland development. The plan shall also provide for the following recreation enhancements: (1) Messalonskee Lake outlet on land leased to the State of Maine; (2) a gravel parking area for 5 to 6 vehicles and a footpath from the parking area to the picnic and day-use area; (3) an extended footpath for walking and shorefront activities; (4) management of the recreational facilities at the site; and (5) interpretive signs at Oakland dam.

The plan shall provide for, but need not be limited to: (1) final site plans for the facilities cited above; (2) erosion and sediment control during construction; (3) an implementation schedule; and (4) protections for wetlands and wildlife when the recreational enhancements are implemented.

The licensee shall prepare the plan after consulting with the Maine Department of Environmental Protection, the Maine Department of Conservation, the U.S. Fish and Wildlife Service, and the Natural Resources Conservation Service. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the entities, and specific descriptions of how the entities' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the entities to comment and to make recommendations prior to filing the plan with the Commission for approval. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on site-specific information.

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

* ARTICLES 409, 410, 411 MODIFIED BY PARAGRAPHS (B), (C), (D), and (E) of ORDER MOD. 3 APPR.
RECREATION PLAN. JUNE 26, 2000. See Order.

*

Article 410. Within six months of license issuance, the licensee shall file for Commission approval a recreation plan showing existing recreational development and indicating the entities responsible for operation and maintenance of the facilities for the Rice Rips development. The plan shall also provide for the following recreation enhancements: (1) designating the corridor between the Oakland and Rice Rips developments as a greenbelt or multi-use area on the east side of Messalonskee Stream and the Rice Rips impoundment from the Oakland dam to Rice Rips dam; (2) a parking area; and (3) carry-in boat access to the Rice Rips impoundment.

The plan shall provide for, but need not be limited to: (1) final site plans for the facilities cited above; (2) erosion and sediment control during construction; (3) an implementation schedule; and (4) protections for wetlands and wildlife when the recreational enhancements are implemented.

The licensee shall prepare the plan after consulting with the Maine Department of Environmental Protection, the Maine Department of Conservation, the U.S. Fish and Wildlife Service, and the town of Oakland. 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 entities, and specific descriptions of how the entities' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the entities to comment and to make recommendations prior to filing the plan with the Commission for approval. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on development-specific information.

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

*

Article 411. Within six months of license issuance, the licensee shall file for Commission approval a recreation plan showing existing recreational development and indicating the entities responsible for operation and maintenance of the facilities at the Union Gas development. The plan shall provide specific details for constructing a fishing access for people with disabilities, including parking on a level area near the Union Gas powerhouse, a platform for bank fishing downstream of the tailrace, and an access from the parking lot to the platform.

The plan shall provide for, but need not be limited to, the following:

- (1) final site plans for the facilities cited above;
- (2) a discussion of how the needs of the disabled were considered in the planning and design of each recreation facility;
- (3) erosion and sediment control during construction;
- (4) an implementation schedule; and
- (5) protections for wetlands and wildlife when the recreational enhancements are implemented.

The licensee shall prepare the plan after consulting with the Maine Department of Environmental Protection, the Maine Department of Conservation, the U.S. Fish and Wildlife Service, the city of Waterville, the Waterville Conservation Committee, and the Natural Resources Conservation Service. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the entities, and specific descriptions of how the entities' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the entities to comment and to make recommendations prior to filing the plan with the Commission for approval. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on development-specific information.

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

Article 412. Within three months of license issuance, the licensee shall prepare a plan to monitor recreational use of the Oakland, Rice Rips, and Union Gas developments to determine whether existing access facilities and the new facilities required in Articles 409, 410, and 411 are meeting public use demands without harm to wetlands and wildlife. The plan shall provide for monitoring the effects of recreational use at the developments and filing a monitoring report concurrently with the Form 80 recreational report, starting with the Form 80 report due in 2004.

Every six years during the term of the license, the licensee shall file, with the Commission, a report on the monitoring results along with the required Form 80, Recreation Report. The

report shall include: (1) annual recreation use figures; (2) a discussion of the adequacy of the licensee's recreation facilities at the three developments to meet recreation demand; (3) a description of the methodology used to collect all study data; and (4) where there is a need for additional facilities, a recreation plan proposed by the licensee to accommodate recreation needs at the developments. The licensee shall allow a minimum of 30 days for the entities to comment and to make recommendations prior to filing the report and Form 80 with the Commission.

The licensee shall prepare the recreation use monitoring plan after consulting with the Maine Department of Inland Fisheries and Wildlife, U.S. Fish and Wildlife Service, National Park Service, and Maine Department of Conservation. 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 prior to filing the plan with the Commission for approval. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on development-specific information.

The Commission reserves the right to require changes to the plan. The monitoring plan shall not be implemented until the licensee is notified that the plan is approved. Upon approval, the licensee shall implement the plan, including any changes required by the Commission.

* Article 411. Within six months of license issuance, the licensee shall file for Commission approval a plan to enhance habitat for brown trout by adding shade and instream cover at Messalonskee Stream below the Rice Rips dam. The plan shall provide for, but need not be limited to: (1) final site plans for the facilities cited above; (2) erosion and sediment control during construction; and (3) an implementation schedule.

The licensee shall prepare the plan after consultation with the U.S. Fish and Wildlife Service, Maine Department of Inland Fisheries and Wildlife, Kennebec Valley Chapter of Trout Unlimited, and local angling groups.

The licensee shall include with the plan documentation of consultation with the listed entities, copies of comments and recommendations on the completed plan after it has been prepared and provided to the consulted entities, and specific descriptions of how the entities' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the consulted entities to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a

* ARTICLE 413 MODIFIED BY PARAGRAPH (B)

OF ORDER MOD. 3 APPR. FISHERIES

HABITAT ENHANCEMENT PLAN, JUN. 12, 2000

See Order,

recommendation, the filing shall include the licensee's reasons, based on site-specific information.

The Commission reserves the right to require changes to the plan. The enhancement plan shall not be implemented until the licensee is notified that the plan is approved. Upon 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, and the Maine State Historic Preservation Office for the Management of Historic Structures and Eligible Archaeological Sites that may be Affected by New Licenses Issued to Central Maine Power Company and Kennebec Water Power Company for Ten Hydroelectric or Storage Projects in Maine" executed on September 29, 1993, including but not limited to the Cultural Resources Management Plan (CRMP) for the Oakland, Rice Riis, and Union Gas developments. In the event the Programmatic Agreement is terminated, the licensee shall implement the provisions of its approved CRMP. The Commission reserves the authority to require changes to the CRMP at any time during the term of the license. If the Programmatic Agreement is terminated, the licensee shall obtain approval before engaging in any ground disturbing activities or taking any other action that may affect any historic properties within the project's area of potential effect.

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 to grant 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 purposes of protecting use and occupancy is consistent with the 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, that authorized representative, that the use and occupancies for which it grants permission are maintained in good repair and comply with applicable state and local health and safety requirements.

Before granting permission for construction of bulkheads or retaining walls, the licensee shall:

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

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

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

- (1) replacement, expansion, realignment, or maintenance of bridges or roads where all necessary state and federal approvals have been obtained;
- (2) storm drains and water mains;
- (3) sewers that do not discharge into project waters;
- (4) minor access roads;
- (5) telephone, gas, and electric utility distribution lines;
- (6) non-project overhead electric transmission lines that do not require erection of support structures within the project boundary;
- (7) submarine, overhead, or underground major telephone distribution cables or major electric distribution lines (69-kV or less); and
- (8) water intake or pumping facilities that do not extract more than one million gallons per day from a project reservoir.

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

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

- (1) construction of new bridges or roads for which all necessary state and federal approvals have been obtained;
- (2) sewer or effluent lines that discharge into project waters, for which all necessary federal and state water quality certification or permits have been obtained;

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- (3) other pipelines that cross project lands or waters but do not discharge into project waters;
- (4) non-project overhead electric transmission lines that require erection of support structures within the project boundary, for which all necessary federal and state approvals have been obtained;
- (5) private or public marinas that can accommodate no more than 10 watercraft at a time and are located at least one-half mile (measured over project waters) from any other private or public marina;
- (6) recreational development consistent with an approved Exhibit R or approved report on recreational resources of an Exhibit E; and
- (7) other uses, if: (i) the amount of land conveyed for a particular use is five acres or less; (ii) all of the land conveyed is located at least 75 feet, measured horizontally, from project waters at normal surface elevation; and (iii) no more than 50 total acres of project lands for each project development are conveyed under this clause (d) (7) in any calendar year.

At least 60 days before conveying any interest in project lands under this paragraph (d), the licensee must submit a letter to the Director, Office of Hydropower Licensing, stating its intent to convey the interest and briefly describing the type of interest and location of the lands to be conveyed (a marked exhibit G or X map may be used), the nature of the proposed use, the identity of any federal or state agency official consulted, and any federal or state approvals required for the proposed use. Unless the Director, within 45 days from the filing date, requires the licensee to file an application for prior approval, the licensee may convey the intended interest at the end of that period.

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

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

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

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

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

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

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

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

(F) This order is final unless a request for rehearing by the Commission is filed within 30 days of the date of its issuance, as provided in Section 313 of the FPA. 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.

By the Commission. Commissioner Bailly dissented in part with a separate statement attached.

(S E A L)

David P. Boergers
David P. Boergers,
Secretary.

APPENDIX A

WATER QUALITY CERTIFICATION CONDITIONS

THEREFORE, the Department GRANTS certification that there is a reasonable assurance that the continued operation of the Messalonskee Project, as described above, will not violate applicable water quality standards, SUBJECT TO THE FOLLOWING CONDITIONS:

1. MINIMUM FLOWS

- A. Except as temporarily modified by approved maintenance activities, emergencies beyond the applicant's control, as defined below, or upon mutual agreement between the applicant and Department, the applicant shall discharge an instantaneous minimum flow of 15 cfs through all project developments, including the Rice Rips bypass, at all times.

The top 0.5 feet of Messalonskee Lake shall, in addition to being used for generation flows, be used to augment natural flows to meet the 15 cfs minimum flow requirement.

- B. Operating emergencies beyond the applicant's control include, but may not be limited to, equipment failure or other abnormal condition, and orders from local, state, or federal law enforcement or public safety authorities.
- C. The applicant shall, in accordance with the schedule established in a new FERC license for the project, submit plans for providing and monitoring the minimum flows required by Part A of this condition. These plans shall be reviewed by and must receive approval of the DEP Bureau of Land and Water Quality.

2. WATER LEVELS

- A. Except as temporarily modified by (1) approved maintenance activities, (2) inflows to the project area, (3) operating emergencies beyond the applicant's control, as defined below, (4) by flashboard failure, or (5) upon mutual agreement between the applicant and Department, the following water levels shall be maintained:

Messalonskee Lake
(cycling)
Within 0.5 feet of full pond from 6/1-8/31 and within 1.0 feet from 9/1-5/31;

Oakland, Rice Rips, and Automatic (run-of-river)

Within 1.0 feet of full pond elevations;

Union Gas
(cycling)

Within 1.3 feet of full pond elevation.

- B. Operating emergencies beyond the applicant's control include, but may not be limited to, equipment failure or other temporary abnormal condition, and orders from local, state, or federal law enforcement or public safety authorities.
- C. The applicant shall, in accordance with the schedule established in a new FERC license for the project, submit plans for providing and monitoring the water levels in each of the project impoundments as required by Part A of this condition. These plans shall be reviewed by and must receive approval of the DEP Bureau of Land and Water Quality.

3. WATER QUALITY SAMPLING

- A. The applicant shall sample dissolved oxygen, temperature, and chlorophyll a in Messalonskee Stream. The applicant shall also record flow out of the Messalonskee Lake dam and identify periods of generation during sampling. The Department will review the results of this sampling in conjunction with sampling being performed by the Oakland Waste Water Treatment Plant in Rice Rips Lake.
- B. Within 6 months following the issuance of a new FERC license for the project, the applicant shall submit a water quality sampling plan to the Department for review and approval.
- C. If it is determined, based on a review of the sampling discussed in Part A of this condition and the sampling performed by the Oakland Waste Water Treatment Plant, that Messalonskee Stream is not meeting Class C standards for dissolved oxygen or Rice Rips Lake is not meeting Class GPA standards for trophic state, the Department reserves the right, after notice and opportunity for hearing, and upon consideration of the joint responsibility of the Town of Oakland and the applicant, to require such reasonable structural and/or operational changes to the Oakland Waste Water Treatment Plant or the Messalonskee Project as are deemed necessary to meet applicable Class C or Class GPA standards, except that no changes to the

Messalonskee Project will be required until at least 5 years have passed from the effective date of a new FERC license for the project.

4. DOWNRAMPING

The applicant shall implement the new downramping sequence at the Union Gas development as outlined in the supporting documentation for the application for 401 certification.

5. WATERFOWL NESTING

A. The applicant shall implement the provisions of the "Messalonskee Lake Waterfowl Management Plan" and begin conducting wetland assessments and waterfowl surveys within 2 years of the issuance of a new FERC license for the project.

B. The applicant shall consult with the Maine Department of Inland Fisheries and Wildlife regarding the findings of the wetland assessments and waterfowl surveys. The results of these assessments and the applicant's proposals for maintaining or enhancing wetlands and waterfowl nesting shall be submitted to the DEP Bureau of Land and Water Quality. After reviewing the results, any applicant proposals, and DIF&W comments, the Department shall order such continuation or modification of water levels established by this approval as is deemed necessary and appropriate to protect nesting waterfowl.

6. RECREATIONAL FACILITIES

A. The applicant shall maintain and improve recreational facilities and public access within the project boundaries including: installing project identification signs at all projects; evaluating the feasibility of a 'green belt/multi use' area between the Oakland and Rice Rips Development; improving parking at the Rice Rips Development; evaluating the feasibility of creating a carry-in access site to the Rice Rips Impoundment, and improving parking at the Automatic Development.

B. The applicant shall, in accordance with the schedule established in a new FERC license for the project, submit a schedule for implementing Part A of this condition. This schedule shall be reviewed by the Department of Conservation and the DEP Bureau of Land and Water Quality and must be approved by the DEP Bureau of Land and Water Quality.

7. LIMITS OF APPROVAL

This approval is limited to and includes the proposals and plans contained in the application and supporting documents submitted and affirmed to by the applicant. All variances from the plans and proposals contained in said documents are subject to the review and approval of the Department prior to implementation.

8. COMPLIANCE WITH APPLICABLE LAWS

The applicant shall secure and appropriately comply with all applicable federal, state and local licenses, permits, authorizations, conditions, agreements and orders required for the operation of the project.

9. EFFECTIVE DATE

This water quality certification shall be effective on the date of issuance of a new hydropower project license by the Federal Energy Regulatory Commission (FERC) and shall expire with the expiration of the FERC license.

FPL Energy Maine Hydro LLC

Project Nos. 2556-004
2557-004, 2559-003

(Issued July 28, 1999)

Bailey, Commissioner, dissenting in part:

I am not persuaded that the 100-cfs minimum flow is the best resolution of this issue. Both the Draft and Final EIS concluded that the 15 cfs minimum flow would provide an acceptable degree of habitat enhancement for brown trout. Even assuming 100 cfs would provide maximum benefit for brown trout, this elevates that interest disproportionately, in my view, above equally competing concerns to be considered under the Federal Power Act.

In addition, this issue highlights my belief that section 10(j) recommendations more often than not become mandatory. Although today's order recounts that we hoped the parties could settle the issue, I see little incentive for settlement, if the Commission is reluctant to weigh in on the matter by using the discretion appropriately ours under section 10(j).


Vicky A. Bailey
Commissioner

APPENDIX 2-2
FERC Order Issued October 12, 2000

93 FERC ¶ 61,047

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: James J. Hoecker, Chairman;
William L. Massey, Linda Breathitt,
and Curt Hébert, Jr.

FPL Energy Maine Hydro LLC

Project Nos. 2556-016
2557-013
2559-014

ORDER ON REHEARING

(Issued October 12, 2000)

On July 28, 1999, the Commission issued a new license to FPL Energy Maine Hydro LLC (FPL Hydro) for the continued operation of the 5.9-megawatt (MW) Messalonskee Project No. 2556, located on the Messalonskee Stream, a tributary of the Kennebec River, in Kennebec County, Maine.¹ On August 27, 1999 FPL Hydro filed a request for rehearing of the Commission's order. FPL Hydro contends that certain minimum flow requirements imposed in the license are inconsistent with the Commission's comprehensive development standard and are not supported by substantial evidence. For the reasons indicated in this order, we grant rehearing on this issue and will modify the flow requirements. We also address several less substantive requests for modification of other license articles.

BACKGROUND

The Messalonskee Project consists of four hydropower developments. Messalonskee Lake is a storage reservoir located at the beginning of Messalonskee Stream. Releases from Messalonskee Lake dam are designed to provide flows for generation at FPL Hydro's other three hydropower developments, which, proceeding downstream, are the Oakland, Rice Rips, and Union Gas developments, as well as at the

¹88 FERC ¶ 61,122.

001013-0891-3

FERC DOCUMENT
P-2556-016
OCT 12 2000

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Kennebec Water District's Automatic Project No. 2555, located between the Rice Rips and Union Gas developments.²

Section 10(j)(1) of the Federal Power Act (FPA) requires the Commission, when issuing a license, to include conditions based upon recommendations of federal and state fish and wildlife agencies, submitted pursuant to the Fish and Wildlife Coordination Act, for the protection of, mitigation of damages to, and enhancement of, fish and wildlife. If the Commission believes that any such recommendation may be inconsistent with the purposes and requirements of Part I of the FPA or other applicable law, Section 10(j)(2) requires the Commission to attempt to resolve any such inconsistency with the recommending agency.

The U.S. Department of the Interior submitted Section 10(j) recommendations for the Messalonskee developments, including Kennebec Water District's Automatic Project.³ As pertinent here, Interior recommended that the licensee discharge an instantaneous flow of 100 cubic feet per second (cfs) or inflow, whichever is less, from the Messalonskee Lake dam and from each of the four downstream developments, and discharge 25 cfs of those flows from the Rice Rips dam into the bypass reach at that development. These recommendations were advanced primarily to improve habitat for brown trout below the Union Gas dam and in the Rice Rips bypass reach.

In a January 1996 Draft Environmental Impact Statement (EIS) prepared for the Messalonskee and Automatic Projects, as well as for several other projects in the Kennebec River Basin, Commission staff made a preliminary finding that Interior's 100-cfs minimum flow would be inconsistent with the comprehensive development standard of Sections 10(a)(1) and 4(e) of the FPA and with the Maine Department of Environmental Protection's (Maine DEP) water quality certification condition that 15 cfs be released through all of the project developments at all times. The Draft EIS concluded

²The Oakland, Rice Rips and Union Gas developments of the Messalonskee Project were originally licensed as separate projects, Project Nos. 2559, 2557, and 2556. Messalonskee Lake was included in the Oakland Project. The developments were consolidated into one project in the order issuing new license, but all three project numbers are listed in the title of this order because the request for rehearing was filed in all three dockets. A subsequent license for the Automatic Project was also issued on July 28, 1999. 88 FERC ¶ 61,117.

³At the time, the Oakland, Rice Rips, Automatic, and Union Gas developments were owned and operated by Central Maine Power Company, which had filed a single relicense application for these projects before transferring them to the present owners.

Project No. 2556-016, et al.

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that the 15-cfs minimum flow, which was also the flow release proposed by the license applicant for each development, including the Rice Rips bypass reach, would provide an acceptable degree of habitat enhancement for brown trout below the Union Gas dam and in the Rice Rips bypass reach. Subsequent discussions at a Section 10(j) meeting of Commission staff, Interior, and other interested entities failed to resolve this flow dispute.

In the Final EIS, issued in July 1997, staff continued to maintain that the 15-cfs minimum flow release would be preferable to Interior's flow releases. Nevertheless, staff recommended adoption of Interior's minimum flow recommendations as not inconsistent with applicable law. In October 1998, Commission staff held a technical conference to determine whether mutually agreeable flows could be determined for both the Union Gas and Rice Rips reaches. Although the licensee, Interior, and the Maine agencies stated that they would continue discussions on appropriate minimum flow requirements, no resolution of the issue was reached.

In issuing the new license, we adopted the recommendation of the Final EIS and required Interior's minimum flows in Article 401. Our decision to adopt Interior's flows, despite the staff's evaluation that the 15-cfs flows would be adequate, was based on several factors. Following the Section 10(j) meeting, Maine DEP notified the Commission that it found no conflict between Interior's minimum flows and its water quality certification, as long as its 15-cfs minimum flows were released regardless of inflow into Messalonskee Lake. Concerns expressed by the staff with regard to the effect of the higher Interior flows on water quality and temperature appeared to be satisfied by subsequent developments or information.⁴ Staff had been unwilling to recommend Interior's more costly flow measures for what had been an experimental trout fishery below the Union Gas development; however, the fishery later became established and not

⁴Staff had been concerned that, because flows would be too low to permit generation at the developments for most of the summer if Interior's minimum flows had to be released, the absence of periodic high generation flows to flush water through the Rice Rips impoundment would negatively affect water quality. However, Maine DEP concluded, based on a technical analysis conducted by its staff, that, under any operating scenario, sufficient flushing would be provided at the Rice Rips impoundment to meet water quality standards. Maine DEP also concluded that Interior's flow would probably benefit water quality, especially in the summer months. Staff had been concerned that Interior's high minimum flows could displace cool water in the trout habitat below Union Gas dam with warmer water from the Union Gas impoundment. At the technical conference held after issuance of the Final EIS, the license applicant, Interior, and the Maine resource agencies agreed that there would not be a significant difference in water temperature.

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merely experimental. Finally, we concluded that Interior's flows, in comparison to the proposed flows, would provide an increase in available brown trout habitat with a relatively small reduction in power benefits.

On rehearing, FPL Hydro argues that Interior's recommended minimum flows are inconsistent with the FPA's comprehensive development standard,⁵ under which the Commission must ensure that any license issued shall be such as in the Commission's judgment will be best adapted to a comprehensive plan for improving or developing a waterway for all beneficial public uses. FPL Hydro contends that the recommended flows would not provide significantly greater fish habitat during much of the year than the flows proposed in the license application, and that any such increases in habitat would be considerably outweighed by the loss of generation from adopting the recommended flows and by the costs to the licensee of this generation loss. FPL Hydro also argues that the recommended minimum flows are not supported by substantial evidence, because there has been no demonstration that those flows would produce any measurable benefit, beyond FPL Hydro's own proposed flows, in providing needed habitat or meeting the management goals for the brown trout fishery.

DISCUSSION

1. Minimum flows.

In our license order, we concluded that Interior's flow regime was consistent with the comprehensive development standard in light of the importance of the brown trout fishery in Messalonskee Stream and of the relatively modest loss in power benefits that adopting these flows would entail. FPL Hydro challenges that conclusion in several respects.

Maine Department of Inland Fish and Wildlife (Maine DIFW) manages the brown trout fishery in the Union Gas tailwater to maximize fishing opportunity for brown trout from May 1 to June 15 and during the latter half of September. In adopting Interior's flows, we determined that a 100-cfs flow release would provide the maximum habitat, or maximum weighted usable area (WUA), for brown trout in the Union Gas tailwater. FPL Hydro states that, according to the record, the proposed 15-cfs minimum flow would provide 76 percent of the maximum brown trout habitat in the tailwater. FPL Hydro argues that the expected increase in brown trout habitat from adopting Interior's, rather than its own, flows will not be fully realized. FPL states that, from March through June, flows through the developments are so high that only 73 percent or less of the maximum

⁵Section 10(a)(1).

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WUA for adult brown trout is available in the Union Gas tailrace.⁶ In addition, the average inflows into Messalonskee Lake during July, August and September are only 31, 22, and 20 cfs, respectively. Since only inflow would be released under those conditions, Interior's minimum flows would thus typically result in an actual flow increase through the four developments of only 16, 7, and 5 cfs for those three months, respectively, over a minimum flow of 15 cfs.

Brown trout stocked by Maine DIFW are probably present in the Rice Rips bypass reach from May to mid-June and from mid-September through October. The Final EIS determined that adult brown trout habitat in the bypass reach would be maximized at a flow of 27 cfs; thus, Interior's recommended 25-cfs flow would provide nearly the maximum available habitat. The EIS also determined that, at a flow of 16 cfs, 94 percent or more of the maximum brown trout habitat would be available. Under the original license, the bypass reach received leakage flows of 12 to 15 cfs during non-generation periods. FPL Hydro asserts that the Article 401 flows of 25 cfs for this bypass reach are unnecessary, because the leakage flows, roughly equivalent to the flows proposed in the application, were sufficient to allow the establishment of a brown trout fishery and would provide most of the necessary habitat.

FPL Hydro argues that the cost of Interior's minimum flows greatly outweighs any possible benefits. Citing figures from the Final EIS, FPL Hydro states that, while adopting the 15-cfs minimum flow would reduce project generation on Messalonskee Stream by only 0.848 gigawatt hours (GWh), adopting the 100-cfs minimum flow, with the 25-cfs flow in the Rice Rips bypass reach, would reduce annual project generation by 3.484 gigawatt hours (GWh). Adopting Interior's minimum flows would also increase the annual cost of lost generation to \$66,200, as opposed to \$20,500 using the 15-cfs minimum flows. FPL Hydro notes that this would represent a 310 percent annual increase in generation losses and a 222 percent annual increase in the value of lost generation, and that adoption of Interior's flows would result in a 70 percent decrease in summer generation on the stream.⁷ FPL Hydro asserts that Interior's recommended flows would result in a 22 percent loss of kilowatt hours of the combined power generation at all of the developments on the stream. In respect to Rice Rips, FPL Hydro, again citing the EIS, states that the higher, 25-cfs, minimum flow in the bypass reach would result in an increase in annual lost generation at that development, over the 15-cfs flow, from

⁶While 100-cfs flows would provide the maximum WUA, the WUA would decrease as flows either increase or decrease from that level.

⁷These figures include generation losses and lost generation costs at the combined Messalonskee developments, including the Automatic Project.

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0.295 GWh to 0.355 GWh, and an increase in the annual cost of lost generation from \$5,800 to \$6,900. Because the proposed 15-cfs minimum flow would provide most of the maximum brown trout habitat in the Rice Rips bypass and the Union Gas tailwater, FPL Hydro asserts that the habitat increases in these reaches using Interior's minimum flows are not justified by the disproportionate costs.

In adopting the recommended flows, we were aware of the circumstances, including the habitat gains and generation losses, to which FPL Hydro draws our attention, inasmuch as they were documented in the EIS. FPL Hydro is correct that, because flows are generally low from July through September, the maximum WUA for brown trout will usually not be attainable during these months. We also recognize that the 15-cfs flow regime would provide most of the available habitat for brown trout in both reaches. We acknowledge that adopting Interior's flow regime would reduce project generation, especially in the summer, and that this loss in generation would reduce the average annual value of the project's power.

However, as noted in the license order, Commission staff determined that the annual cost of providing Interior's 100-cfs minimum flow at all of the Messalonskee developments (including the Automatic Project) would be only 5.3 percent of the annual power value.⁸ The staff also determined that, while the combined Messalonskee developments would be able to generate only about 3 percent of the time during the summer with a release of 100 cfs, they would be able to generate only about 10 percent of the time under existing conditions, which approximate the release of FPL Hydro's proposed flows. FPL's assertions, which mainly restate circumstances we have already considered, do not alter the fact that some gains in available habitat could be achieved with a loss of a relatively small percentage of the project's power benefits.

FPL Hydro also asserts that release of the required flows during the summer months will severely restrict its ability to accomplish a partial refill of Messalonskee Lake during low inflow periods. Although Maine DEP has stated that Interior's minimum flows would not conflict with the water quality certification minimum flow condition, FPL Hydro argues that it may not be able to maintain the level of Messalonskee Lake required by the certification if it must release not only the 15 cfs required by the

⁸As noted, FPL Hydro asserts that Interior's flows would result in a 22 percent loss of kilowatt hours of generation. FPL Hydro contends that this figure (its own estimate), rather than staff's 5.3 percent, represents the cost of lost generation. However, the figures are not comparable. Staff estimated the percent loss in power value, while FPL Hydro estimated the percent loss of generation.

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certification at all times, but also Interior's higher minimum flows when they are available.⁹

We acknowledge that, if FPL Hydro is required to release 100 cfs or inflow during the summer months, inflow that could have been used for partial refill of Messalonskee Lake will have to be released through all project developments. Since FPL Hydro is also required by the water quality certification to release 15 cfs from Messalonskee Lake even when inflow is lower, its inability to refill the lake when somewhat higher inflows occur could cause the lake to drop below the levels specified in the certification. It is unclear how often this situation might actually be encountered. However, the water quality certification appears to provide relief from this conflict by requiring that the lake levels be maintained "[e]xcept as temporarily modified by . . . (2) inflows to the project area." This indicates that, if there is insufficient inflow to keep the lake at the specified levels while the licensee is releasing the 15 cfs required by the certification, the state would not consider the licensee to be in violation of the certification conditions.

Although we do not find FPL Hydro's arguments persuasive on the points discussed above, we agree with FPL Hydro that the recommended flows are not supported by substantial evidence. This lack of support also alters our evaluation of the recommendations' consistency with the FPA's comprehensive development standard.

As noted, Maine DIFW's management goal for the Union Gas tailrace is to maximize fishing opportunity for brown trout from May 1 through June 15, and for the latter half of September. FPL Hydro argues that our license order does not explain what the needs of a recreational brown trout fishery are at different times of the year, and why maximization of brown trout habitat can be achieved only by requiring 100-cfs minimum flows at all times throughout the year. FPL Hydro particularly questions the need for these higher flows in light of the progression of the fishery from an experimental to an established one under the existing flow regime. Further, FPL Hydro contends that there is no evidence that providing maximum habitat rather than 75 percent habitat is required to support a fishable population of brown trout in the tailrace, especially considering that current fishing access sites are at less than 25 percent capacity even though a fishable trout population exists. As to the fishery in the Rice Rips bypass reach, FPL Hydro states

⁹The certification provides that the licensee must maintain Messalonskee Lake within 0.5 foot of full pond from June 1 through August 31 and within 1.0 foot of full pond from September 1 through May 31, and that the licensee shall use the top 0.5 foot of Messalonskee Lake to augment natural flows to meet the 15-cfs minimum flow requirement.

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that there is no substantial evidence that increasing the minimum flow from 15 to 25 cfs will have any significant beneficial impact on the trout fishing opportunity.

Reviewing the record, we find that we have no convincing responses to FPL Hydro's arguments. Interior's recommendations were grounded almost wholly on the premise that, according to the licensee's flow study, 100-cfs and 25-cfs flows would provide the maximum habitat for brown trout in the Union Gas tailrace and Rice Rips bypass reach, respectively. While there is no dispute that this study accurately determined the extent of habitat that would be produced if these flows were available, we can find no evidence that these fisheries would actually benefit from this additional habitat. The fisheries in both the tailrace and the bypass reach are managed by Maine DIFW to maximize brown trout availability at particular times of the year. The record demonstrates that fisheries have in fact developed in these reaches under existing flow conditions. Recreational use of the fishery appears to be limited, as use of unimproved recreation sites at both Union Gas and Rice Rips are at 25 percent or less capacity on weekends during the recreational season.¹⁰ The establishment of the existing fishery and the limited use of the fishery suggest that the modest additional habitat that would be produced under Interior's flow regime is not warranted. The substantial evidence test is not met merely by the general assumption that additional habitat is beneficial for fish.

Because the recommendations lack substantial evidence, the balancing of benefits and costs that underlay our adoption of Interior's recommendations no longer applies. Although the reduction of generation under Interior's flow regime would result in the loss of a relatively small percentage of the total project power benefits, this loss of generation and power benefits would not be inconsequential. There is no justification for imposing these costs if there are no demonstrable benefits to outweigh them. Therefore, we also find that Interior's recommended flows are inconsistent with the comprehensive development standard of Section 10(a)(1) of the FPA.¹¹

Because Interior's recommendations entail costs that outweigh any benefits to fish and are not reasonably related to the goal of maintaining or enhancing the fisheries in the

¹⁰Final EIS at pp. 3-153 to 154.

¹¹We note that, in its Section 10(j) recommendations, Interior stated that the 1,900-foot reach between the Messalonskee Lake dam and the Oakland impoundment would also benefit from the increased minimum flow. This statement does not alter our conclusions, as we can find no evidence in the record to indicate that any fishery in that reach would be improved by the higher releases.

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Messalonskee Stream,¹² we will modify Article 401 to require that a minimum flow of 15 cfs be released at all times from all of the project developments and from the Rice Rips bypassed reach.

2. Other requests.

In a letter accompanying the request for rehearing, FPL Hydro requested several other actions.¹³

FPL Hydro asks that we modify the language of Article 402 to conform to the language contained in the water quality certification issued for the project. Article 402 pertains to maintenance of pond levels and allows for the maximum drawdown limits to be "temporarily modified if required by operating emergencies beyond the control of the licensee, and for short periods upon mutual agreement" among the licensee and specified resource agencies. The water quality certification provides that the pond water levels shall be maintained "except as temporarily modified by (1) approved maintenance activities, (2) inflows to the project area, (3) operating emergencies beyond the applicant's control [definition omitted], (4) flashboard failure, or (5) upon mutual agreement" between FPL Hydro and Maine DEP.

The water quality certification appears to offer greater flexibility in modifying the drawdown limits than does Article 402. Since water quality certification conditions are mandatory license conditions, we would not apply Article 402, even with its present wording, to restrict those situations in which the licensee may modify the drawdown

¹²See City of Centralia, Washington v. FERC, 213 F.3d 742 at 750 (2000).

¹³Some of these actions have already been taken by Commission staff pursuant to delegated authority. FPL Hydro indicated that it would be requesting an amendment of the license to reflect changes to the project facilities and lands that had been incorporated into the original license, but that had not been reflected in the order issuing a new license. It requested a stay of the requirement to file aperture cards of approved exhibits and drawings contained in Article 204 until after Commission action on the proposed application for amendment. It also requested the deletion of the Article 204 requirement to file Form FERC-587, relating to federal or public lands, with the aperture cards, since the Messalonskee Project includes no such lands. In addition, FPL Hydro asked for an extension of time to file the minimum flow release plan required by Article 405, since it was requesting rehearing of the minimum flow requirement. In an order issued October 13, 1999, the Chief, Engineering Compliance Branch, granted these requests. 89 FERC ¶ 62,022.

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limits under the certification. Nevertheless, to avoid any confusion in administering the license, we will modify Article 402 to encompass the certification's conditions for deviation from the pond levels.

We will make one other change, not requested by the licensee, to Article 402. Article 402 relates the drawdown requirements to a full pond elevation of 235.9 feet mean sea level (msl). Although this figure was referred to in the EIS and represented the full pond elevation of the lake at one time,¹⁴ later reconstruction of the Messalonskee Lake dam resulted in a normal full pond elevation of 235.4 feet msl.¹⁵ We will modify Article 402 to correct this inaccuracy.

FPL Hydro also asks that Article 404 be modified to remove language relating to the provision of notice to resource agencies prior to drawdowns of up to eight feet for flood control. The Messalonskee Project would have no flood storage drawdown of this magnitude. This language was inadvertently included in Article 404, and we will remove it.

FPL Hydro also asks that we modify Articles 409 and 411 by removing the requirement to consult with the Natural Resources Conservation Service (NRCS) regarding recreation plans, because FPL Hydro has not heard of the NRCS, and because the NRCS has never been involved with the project. The NRCS is an agency within the U.S. Department of Agriculture that administers programs dealing with wetlands, buffers, and other watershed protection programs. The NRCS has expertise which may be useful in preparing the recreation plans. Accordingly, we will not remove the requirement to consult with the NRCS from Articles 409 and 411.

For the reasons stated above, we grant FPL Hydro's request for rehearing of the minimum flow requirement in Article 401. We are also modifying Article 402 to conform with the language of the water quality certification and Article 404 in accordance with our discussion in this order.

¹⁴See Central Maine Power Company, 21 FERC ¶ 62,481(1982).

¹⁵Revised exhibits reflecting this change were approved in Central Maine Power Company, 65 FERC ¶ 62,075 (1993). The text of the water quality certification also refers to a full pond elevation of 235.4 feet msl, although the certification conditions themselves do not specify a full pond elevation figure.

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The Commission orders:

(A) The request for rehearing filed by FPL Maine Hydro LLC in this proceeding is granted to the extent indicated in this order.

(B) Article 401 of the license issued July 28, 1999 for this project is modified to read as follows:

Article 401. Within 60 days of the installation of water level and streamflow monitoring devices required by Article 404, the licensee shall release minimum flows for the protection and enhancement of water quality and aquatic resources in Messalonskee Stream and the Kennebec River.

The licensee shall release instantaneous minimum flows of 15 cfs from Messalonskee Lake and from the Oakland, Rice Rips, and Union Gas developments as measured in the Union Gas tailrace immediately downstream of the Union Gas dam, and an instantaneous minimum flow of 15 cfs to Messalonskee Stream as measured immediately downstream of the Rice Rips dam.

Minimum flow releases from the developments may be temporarily modified if required by operating emergencies beyond the control of the licensee, and for short periods upon mutual agreement between the licensee, U.S. Fish and Wildlife Service, the Maine Department of Inland Fisheries and Wildlife, and the Maine Department of Environmental Protection. If the flow is so modified, the licensee shall notify the Commission as soon as possible, but no later than 10 days after each such incident.

(C) Article 402 is modified to read as follows:

Article 402. Within 60 days of installation of water level and streamflow monitoring devices required by Article 404, the licensee shall manage impoundment fluctuation levels for the protection and enhancement of water quality and aquatic resources in Messalonskee Stream and the Kennebec River.

The licensee shall limit the maximum draw-down of water levels in Messalonskee Lake to within 0.5 foot from June 1 to August 31, and 1.0 foot for the remainder of the year, of full pond elevation of 235.4 feet mean sea level. The top 0.5 foot of Messalonskee Lake shall be managed to provide the guaranteed 15-cfs minimum flows required in Article 401 of this license. The licensee shall limit the maximum draw-down of water levels in the Oakland impoundment to 1.0 foot of full pond elevation of 207.1 feet mean sea level. The licensee shall limit the maximum draw-down of water levels in the Rice Rips impoundment to 1.0 foot of full pond elevation of 139.1 feet mean sea

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level. The licensee shall limit the maximum drawdown of water levels in the Union Gas impoundment to 1.3 foot of full pond elevation of 69.1 feet mean sea level.

The maximum drawdown limitations may be temporarily modified if required by operating emergencies beyond the control of the licensee, approved maintenance activities, inflows to the project area, flashboard failure, and for short periods upon mutual agreement between the licensee, the U.S. Fish and Wildlife Service, Maine Department of Inland Fisheries and Wildlife, and Maine Department of Environmental Protection. If the drawdown limitations are so modified, the licensee shall notify the Commission as soon as possible, but no later than ten days after each such incident. Notification of drawdowns that exceed the restriction for Messalonskee Lake or any of the three impoundments from ice-out through and including July 31 shall include the reason for the drawdown and documentation of prior consultation with the Maine Department of Inland Fisheries and Wildlife.

(D) Article 404 is modified to read as follows:

Article 404. Within six months of license issuance, the licensee shall file for Commission approval a plan to install, operate, and maintain water level and streamflow monitoring equipment necessary to monitor and record compliance with the minimum flows required by Article 401, impoundment drawdown limits required by Article 402, and downramping at Union Gas required by Article 403.

The plan shall include, but need not be limited to: a schedule for installing the monitoring equipment; the proposed location, design, and calibration of the monitoring equipment; the method of data collection; and a provision for providing the data to the consulted agencies, within 30 days from the date of the agencies' request for the data. This plan may incorporate existing monitoring equipment as long as it meets the standards of the U.S. Geological Survey.

The licensee shall prepare the plan after consultation with the U.S. Fish and Wildlife Service, National Marine Fisheries Service, U.S. Geological Survey, Maine Department of Inland Fisheries and Wildlife, Maine Department of Marine Resources, and Maine Department of Environmental Protection.

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

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

The Commission reserves the right to require changes to the plan. The monitoring plan shall not be implemented until the licensee is notified that the plan is approved. Upon Commission approval, the licensee shall implement the plan including any changes required by the Commission.

By the Commission.

(S E A L)


David P. Boergers,
Secretary.

APPENDIX 2-3
Order Modifying and Approving Minimum Flow Release
Issued June 1, 2001

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

FLP Energy

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Project No. 2556-030 &-035

ORDER MODIFYING AND APPROVING MINIMUM FLOW RELEASE AND
MONITORING PLANS UNDER ARTICLE 405 AND 404, RESPECTIVELY

(Issued June 1, 2001)

FLP Energy (licensee) filed, on April 3, 2000, and supplemented on April 17, 2000, under article 405 of the original license,¹ its plan to release minimum flows required by article 401, for the Messalonskee Project. The April 2000 filings also included the licensee's plan filed under amended article 404,² to monitor the flow releases, impoundment drawdown limits, and downramping requirements, required by amended articles 401 and 402,³ and 403 of the original license, respectively. The project is located on Messalonskee Stream, a tributary of the Kennebec River in Kennebec County, Maine.

Article 405 required the licensee to file for Commission approval a plan to release the minimum flow required by article 401. The plan is to include the method for flow release at each development, specific measures to ensure that the minimum flow would be met at all times, an explanation of any modifications to existing facilities necessary to release the minimum flows, and design drawings, hydraulic calculations, and technical specifications for any modifications necessary to meet the minimum flow requirements.

Article 404 required the licensee to file for Commission approval a plan to install, operate, and maintain water level and streamflow monitoring equipment necessary to monitor and document compliance with the minimum flow requirement of article 401.⁴

¹ Order Issuing New License, issued July 28, 1999, 88 FERC ¶ 61,122.

² Article 404, requiring the licensee to file a flow monitoring plan, was amended by the October 12, 2000, Order on Rehearing, 93 FERC ¶ 61,047.

³ Articles 401 and 402 were amended by the October 12, 2000, Order on Rehearing, 93 FERC ¶ 61,047.

⁴ Amended article 401 requires the licensee to release an instantaneous minimum flow of 15 cfs from Messalonskee Lake and from the Oakland, Rice Rips, and Union Gas

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with the impoundment drawdown limits of article 402,⁵ and with the article 403⁶ downramping requirement for the Union Gas development. The plan is to include a schedule for installing the monitoring equipment, the proposed location, design and calibration for the monitoring equipment, the method of data collection, and a provision to provide monitoring data to the consulted agencies within 30 days of the request for data. The licensee is to prepare the plan after consultation with the U.S. Fish and Wildlife Service (FWS), National Marine Fisheries Service (NMFS), U.S. Geological Service (USGS), Maine Department of Inland Fisheries and Wildlife (DIFW), Maine Department of Marine Resources (DMR), and the Maine Department of Environmental Protection (DEP), and documentation of consultation is to be included in the filing.

BACKGROUND

The Messalonskee Project consists of four developments. These are, from upstream to downstream, Messalonskee Lake dam, and the Oakland, Rice Rips, and Union Gas developments. The Messalonskee Lake dams serves to control flows into the stream below; it has no generating facilities. The dams at each of the three developments downstream have one generating unit. The units are normally set to pass 570 cubic feet per second (cfs). The units do not operate below a flow of 300 cfs. Each of the developments has one or more manually operated gates at the dam. Only one gate, a raintor gate at Messalonskee Lake, can be operated remotely. Generation and pond levels can be monitored remotely.

Union Gas dam, and an instantaneous minimum flow of 15 cfs into Messalonskee Stream as measured immediately downstream from the Rice Rips dam.

- 5 Amended article 402 requires the licensee to limit the maximum drawdown of Messalonskee Lake water levels to 0.5 ft below the full pond elevation of 235.4 ft mean sea level from June 1 through August 31, and to 1.0 ft the rest of the year. The top 0.5 ft is to be managed to provide the required 15 cfs continuous minimum flow. The licensee is to limit the maximum drawdown of the Oakland impoundment to 1.0 ft below the full pond elevation of 207.1 ft mean sea level. The licensee is to limit the maximum drawdown of the Rice Rips impoundment to 1.0 ft below the full pond elevation of 139.1 ft mean sea level
- 6 Article 403 requires the licensee to restrict the rate at which the wicket gates at the Union Gas development are closed, to prevent fish stranding. Closures from 70 percent open to 40 percent open are to occur over a fixed 30-minute period, resulting in a gradual gate reduction of one percent closing per minute. No restrictions apply to wicket gate closings from 100 percent open to 70 percent open, or from 40 percent open to completely closed.

The decision to operate the system is wholly dependent on inflow to Messalonskee Lake from upstream lakes, which are managed for recreational water levels. If there is adequate flow for operation, an operator visits each development in the morning, opening or checking gates at Messalonskee Lake, and proceeds downstream to start or check the units. The same sequence is followed at the end of the generating shift(s), to shut the units down. Only the Union Gas development can be started and stopped remotely. Further, Union Gas cycles automatically, based on a pond level sensor, which starts the unit at full pond and shuts it off when the pond is lowered by 1.3 feet (ft).

Article 401 of the original license required the licensee to maintain a continuous minimum flow of 100 cfs from Messalonskee Lake through the project's developments. The October 12, 2000 Order on Rehearing amended article 401 to require a continuous minimum flow of 15 cfs from Messalonskee Lake through the project's developments (see footnote 4). A further Order on Rehearing issued April 2, 2001⁷ upheld the amended minimum flow requirement of 15 cfs.

LICENSEE'S MINIMUM FLOW RELEASE PLAN UNDER ARTICLE 405

Currently, at Messalonskee Lake, a single taintor gate can be opened remotely; a slide gate and a second taintor gate are set manually on site. A single manually operated radial gate exists at the Oakland development. The licensee proposes to install a new spillway gate at the Rice Rips development. At the Union Gas development, there are three manually-operated deep release gates.

The licensee proposed to open one of two taintor gates at the Messalonskee Lake dam, to maintain the required minimum flow during periods of non-generation. One of the two gates can be operated remotely from the project control center at Weston Station. Switching between generation and non-generation modes would require changing the opening of the taintor gate from the setting for effective generation to the setting necessary to pass inflow, or the minimum flow, whichever is greater.

At Messalonskee Lake, passing the minimum flow will require reading the pond level hourly and controlling the opening of a taintor gate to keep a constant pond level, to assure that inflow is passed. At a point when the inflow and release becomes less than 15 cfs, the pond level would be allowed to drop as necessary to supplement inflow to maintain minimum flows, until the pond reaches 0.5 ft below full pond in summer or 1.0 ft below full pond during the remainder of the year. At the time the pond reaches the

⁷ 95 FERC ¶ 61,016.

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drawdown limit, the gate would be closed to maintain pond level within the required limit.

At the Oakland development, the licensee proposed to pass the minimum flow through the generating unit during periods of generation. Because this pond is very small and is normally operated near full, the flow would quickly begin passing over the spillway whenever generation stops. There is also a gate at the dam, which can be opened manually, if necessary. The gate is capable of passing 100 cfs at its fully open position.

At the Rice Rips development, the licensee would install two new gates at the dam in order to consistently pass the minimum flow into the bypassed reach. The new gates would be installed in the dam bay where, currently, a set of hinged steel flashboards exist. One gate will be remotely adjustable to accommodate varying headpond levels or inflow volumes. The gate's maximum capacity would be 100 cfs at fully open with the headpond one foot below full. During periods of generation the minimum flow would be passed through the generating unit. During periods of non-generation, the gate would be opened to pass minimum flow or inflow, whichever is greater.

At the Union Gas development, the minimum flow would be passed through the generating unit during periods of generation. During periods of non-generation, the minimum flow would be passed through a deep gate. There are three motor-operated deep gates at the dam, each capable of releasing 100 cfs at an opening of 0.75 ft with the pond at 1.3 ft below full pond. One gate would be modified to be opened remotely when the generating unit shuts down.

The licensee stated it has a preliminary design for the Rice Rips gates, which requires the removal of the existing hinge boards from the sluiceway, modification of the concrete sill, and installation of the new gates and supporting steel. The design calls for two gates, one 4 ft, six inches wide, the other 8 ft, 8 inches wide. The smaller gate would pass 25 cfs when open 0.75 ft, and 90 cfs when fully open; the larger gate would pass 50 cfs when open 0.75 ft, and 180 cfs when fully open. One of the gates would be remotely adjustable to allow the licensee to accommodate varying headpond elevations and inflows.

The licensee proposed to implement the plan following its approval by the Commission.

LICENSEE'S MONITORING PLAN UNDER ARTICLE 404

The licensee proposed to record the minimum flows (required by article 401) and pond levels (required by article 402) using a computer system which manages the project's automated functions. This recorded data would be used to document compliance with the minimum flow and pond level requirements at the project. The computer system currently records headpond elevation (except for Rice Rips) and generator output for the developments of the project. The licensee proposed to install additional monitoring equipment, with data from the additional equipment to be recorded by the computer system.

The minimum flow release at Messalonskee Lake would be documented by recording gate openings at the developments, and converted to flow volume with calculated capacity curves for the gate opening settings. The Union Gas and Rice Rips developments' gate settings would be similarly read and recorded. The gate setting would be recorded any time the gate opening is changed.

Each development would have a pond level sensor (transducer) monitor on the intake structure headwall. The sensors read water pressure and convert the data to pond level. Pond level sensors currently exist at the Messalonskee Lake, Oakland, and Union Gas developments. A sensor would be installed at the Rice Rips development. The existing sensors would be calibrated against staff gages at the dams and replaced if necessary. The sensor reading would be transmitted to the licensee's computer system continuously. The readings would be recorded hourly. The record would be maintained in electronic form for 45 days, and would be printed in hard copy daily.

The computer system will send an alarm signal to the control center anytime pond levels or minimum flows are not being met. A gate would be remotely opened and/or an operator sent to the site to take corrective action, as necessary.

The licensee proposed to control the ramping rate at the Union Gas development using a programmable logic controller. This controller would be programmed to close the generating unit gate at a rate in compliance with the ramping requirements of article 403. Alteration of the ramping rate would require a manual override of the controller system. Should the manual override of the programmed ramping rate ever be used, a record of the event would be entered in the project log, and reported as required.

The licensee stated the monitoring equipment would be in place, programmed and operational within 18 months of the plan's approval by the Commission.

RESOURCE AGENCIES' COMMENTS AND LICENSEE'S RESPONSES

The licensee consulted with resource agencies in preparation of the plans. The FWS commented on the licensee's minimum flow release and monitoring proposals in a March 27, 2000 letter to the licensee. The FWS stated that it generally concurred with the licensee's minimum flow release and monitoring proposals, but made additional recommendations, as follows.

The FWS recommended that, at Messalonskee Lake, at the Rice Rips and Union Gas developments, the remotely operated taintor gate be designated as the minimum flow release gate, and that its setting be automatically recorded along with the hourly pond level readings. The computer software could then, if it has the capability, automatically calculate and record the hourly minimum flow.

The licensee plans to provide minimum flows at the Oakland development during non-generation periods by allowing the water to overtop the spillway. The FWS noted that this would result in an interruption of the minimum flow during the time that the headpond rises to a level which would provide the required flow following generation shutdown. The FWS recommended that the manually operated gate always be opened when generation ceases to ensure that the minimum flow is continuously provided.

The FWS also recommended that the licensee develop a standard operating procedure that would ensure that the required minimum flow is maintained throughout the Messalonskee project at all times. It suggested that all project operator should be familiar with the procedure, including temporary and interim operators, and that copies of the procedure should be available at each development as a reference for the operators.

The NMFS, USGS, DIFW, DEP, and DMR, did not comment on the plan.

DISCUSSION AND CONCLUSIONS

The licensee's proposed minimum flow release plan should maintain the continuous minimum flow through the project's developments, as required by article 401, with the exception of the Oakland development. The licensee's proposal to maintain minimum flow during non-generation periods by allowing the water to rise to overtop the spillway when generation ceases would result in a period of flows below the required minimum, until the headpond rises to a level sufficient to spill 15 cfs. At the Oakland development, the licensee should either install equipment to remotely open the gate, or manually open the gate, whenever generation ceases, to ensure that the minimum flow is continuously provided. The licensee should inform the resource agencies and the Commission of which method it will use to open the gate to ensure that the minimum

flow requirement is continuously met at the Oakland development within 60 days of this order.

The FWS recommended that the remotely operated gates at Messalonskee Lake dam and at the Rice Rips and Union Gas developments should be designated as the minimum flow release gate at each of the developments. It also recommended that the remotely adjusted gate settings be automatically recorded along with the hourly pond level readings, and the computer software could then automatically calculate and record the hourly minimum flow. Implementation of these recommendations would provide the licensee with more complete operations information and provide a useful management tool. The licensee should routinely use the remotely controlled gates to release the minimum flow. Manually operated gates should be used only when the the remotely operated gates cannot be used, for whatever reason.

The licensee stated it would implement its plan to release the minimum flow upon Commission approval. The licensee's minimum flow release plans also includes plans to install new gates in the place of the current flashboards at the Rice Rips development, and to install equipment to allow remote operation of gates at the Rice Rips and the Union Gas developments. The licensee did not propose a schedule for installing the new equipment and project features. Pursuant to paragraphs 12.4, 12.11, and 12.40 of the Commission's regulations, a plans and specifications package should be submitted to the Commission's Regional Director. Authorization to start construction activities will be given by the Regional Director after all preconstruction requirements are satisfied. Within 90 days of completion of the new gates at the Rice Rips development, the licensee should file for Commission approval revised as-built drawings reflecting the change in project facilities.

The licensee proposed to have the monitoring equipment in place, programmed and operational within 18 months of the plan's approval by the Commission. This is an unusually long period of time to delay the documentation of project operations. The licensee should have the monitoring equipment in place, programmed and operational at each of the project developments within 60 days of its completion of the installation of new flow release equipment and facilities at that development. Within 60 days of the date of this order, the licensee should file with the Commission a schedule for the installation of the monitoring equipment at Messalonskee Lake and at each of the project's developments.

The licensee's proposed plan to monitor minimum flow releases, impoundment elevation, down ramping, as required by article 401, 402, and 403, should allow the licensee to document project operations and compliance with the license requirements.

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The licensee's proposed minimum flow release and monitoring plans, with the discussed modifications, should allow the licensee meet the license requirements and, therefore, be approved.

The Director Orders:

(A) The licensee's minimum flow release and monitoring plans, filed on April 3, 2000, and supplemented on April 17, 2000, under articles 405 and 404, respectively, as modified by paragraphs (B) through (G), are approved.

(B) The licensee shall, at the Oakland development, either install equipment to remotely open the gate or manually open the gate, whenever generation ceases, to ensure that the minimum flow is continuously provided. The licensee shall submit to the resource agencies and file with the Commission the details of the method it will use to open the gate to ensure that the minimum flow requirement is continuously met at the Oakland development within 60 days of this order.

(C) The licensee shall designate the remotely operated gates at Messalonskee Lake and at the Rice Rips and Union Gas developments as the minimum flow release gate at each of the developments. The licensee shall routinely use the remotely controlled gates at each of the developments to release the minimum flow.

(D) Pursuant to paragraphs 12.4, 12.11, and 12.40 of the Commission's regulations, the licensee shall submit a plans and specifications package to the Commission's Regional Director, prior to starting construction activities to install new gates in the place of the current flashboards at the Rice Rips development, and to install equipment to allow remote operation of gates at Messalonskee Lake dam and the Union Gas development.. Authorization to start construction activities will be given by the Regional Director after all preconstruction requirements are satisfied.

* ~~(E) Within 90 days of completion of the new gates at the Rice Rips development, the licensee shall file for Commission approval revised exhibit drawings to describe and show the gates as built.~~

(F) The licensee shall have the monitoring equipment in place, programmed and operational at each of the project developments within 60 days of its completion of the installation of new flow release equipment and facilities at that development. Within 60 days of the date of this order, the licensee shall file with the Commission a schedule for the installation of the monitoring equipment at Messalonskee Lake and at the Oakland, Rice Rips, and Union Gas developments.

* DELETED by IP(C) of ORDER AMENDING ORDER MOD/APPR... 404 AND 405 RESPECTIVELY: FEB. 21, 2002. see Order.

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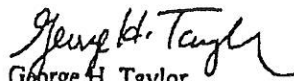
(G) If the minimum flow, as measured by the approved gage, falls below the 15 cfs minimum flow required flow under amended article 401, and inflows exceed the required minimum flow, the licensee shall file a report with the Commission within 30 days of the incident. The report shall, to the extent possible, identify the cause, severity, and duration of the incident, and any observed or reported adverse environmental impacts resulting from the incident. The report shall also include: 1) operational data necessary to determine compliance with article 401; 2) a description of any corrective measures implemented at the time of occurrence and the measures implemented or proposed to ensure that similar incidents do not recur; and 3) comments or correspondence received from the resource agencies regarding the incident. Based on the report and the Commission's evaluation of the incident, the Commission reserves the right to require modifications to project facilities and operations to ensure future compliance.

(H) Unless otherwise directed in this order, the licensee shall file an original and seven copies of any filing required by this order with:

The Secretary
Federal Energy Regulatory Commission
Mail Code: DHAC, PJ-12.3
888 First Street, NE
Washington, DC 20426

In addition, the licensee shall serve copies of these filings on any entity specified in this order to be consulted on matters related to these filings. Proof of service on these entities shall accompany the filings with the Commission.

(I) This order constitutes final agency action. Requests for rehearing by the Commission may be filed within 30 days of the date of issuance of this order, pursuant to 18 CFR § 385.713.


George H. Taylor
Group Leader
Division of Hydropower Administration
and Compliance

APPENDIX 2-4
Order Amending Order Modifying and Approving Minimum Flow Release and Monitoring
Plans Issued February 21, 2002

UNITED STATES OF AMERICA 98 FERC ¶ 62,124
FEDERAL ENERGY REGULATORY COMMISSION

FLP Energy

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Project No. 2556-038

ORDER AMENDING ORDER MODIFYING AND APPROVING
MINIMUM FLOW RELEASE AND MONITORING PLANS
UNDER ARTICLES 405 AND 404, RESPECTIVELY

(Issued February 21, 2002)

FLP Energy (licensee) filed, on November 16, 2001, and supplemented on November 23, 2001, under article 405 and amended article 404¹ of the Messalonskee Project license,² its updated plan to release minimum flows and to monitor minimum flow releases and headpond levels at the project. The project is located on Messalonskee Stream, a tributary of the Kennebec River in Kennebec County, Maine.

BACKGROUND

In April 2000, the licensee filed a plan to release the required minimum flows, and to document compliance with the operational requirements. On June 1, 2001, the Commission approved the licensee's filed plans with modifications.³ On September 17, 2001, the licensee filed a letter stating that it would reevaluate the methods it proposed to pass minimum flows and monitor minimum flows and headpond elevations, because its previously approved plan was predicated on a minimum flow requirement of a 100 cubic feet per second (cfs), as required under the original license, rather than the 15 cfs minimum flow of the amended article 401.⁴

¹ Order on Rehearing, October 12, 2000, 93 FERC ¶ 61,047.

² Order Issuing New License, issued July 28, 1999, 88 FERC ¶ 61,122.

³ Order Modifying and Approving Minimum Flow Release and Monitoring Plans Under Articles 405 and 404, Respectively, 95 FERC ¶ 62,191.

⁴ The Order on Rehearing, October 12, 2000 (93 FERC ¶ 61,047), amended the project's flow release requirements. An April 2, 2001 Order on Rehearing upheld the amended minimum flow requirement of 15 cfs (95 FERC ¶ 61,016).

The Messalonskee Project consists of four developments. These are, from upstream to downstream, Messalonskee Lake dam, Oakland, Rice Rips, and Union Gas⁵ developments. The Messalonskee Lake dam serves to control flows into the stream below; there are no generating facilities. The dams at the downstream developments each have one generating unit.

The decision to operate the system is wholly dependent on inflow to Messalonskee Lake from upstream lakes, which are managed for recreational water levels. If there is adequate flow for generation, an operator visits each development in the morning, opening or checking gates at Messalonskee Lake, and proceeds downstream to start the units. The same sequence is followed at the end of the generating shift(s), to shut the units down.

Article 404 required the licensee to file for Commission approval a plan to install, operate, and maintain water level and stream flow monitoring necessary to monitor and document compliance with the minimum flows required by article 401,⁶ impoundment drawdown limits required by article 402,⁷ and downramping limits at the Union Gas

⁵ On June 23, 2001, the licensee notified the Commission's New York Regional Office (NYRO) of a partial failure of the Union Gas development dam. In order to stabilize the structure, the licensee worked with the NYRO and partially breached the dam in September 2001. Flows through the development are currently run-of-river, while the licensee considers its options for the fate of the development. If the licensee decides to redevelop Union Gas, the licensee would modify its minimum flow and pond level monitoring plan accordingly.

⁶ Article 401 was amended by the October 12, 2000, Order on Rehearing (93 FERC ¶ 61,047). Article 401, as amended, requires the licensee to release an instantaneous minimum flow of 15 cfs from Messalonskee Lake and from the Oakland, Rice Rips, and Union Gas developments, as measured in the Union Gas tailrace immediately downstream from the Union Gas dam, and an instantaneous minimum flow of 15 cfs to Messalonskee Stream as measured immediately downstream from the Rice Rips dam.

⁷ The October 12, 2000 Order on Rehearing also amended article 402. Article 402, as amended, requires the licensee to manage impoundment levels in Messalonskee Lake, by limiting the drawdown of the impoundment from June 1 to August 31 to within 0.5 foot of the full pond elevation of 235.4 feet, and for the remainder of the year, to within one foot of full pond elevation. The top 0.5 foot of Messalonskee Lake is to be managed to provide the 15 cfs minimum flow required by article 401. The licensee is to limit the drawdown of the Oakland impoundment to within one foot of the full pond elevation of 207.1 feet, limit the drawdown of the Rice Rips impoundment to within one foot of the full pond elevation of 139.1 feet, and limit the drawdown of the Union Gas

development required under article 403. The plan is to include a schedule for installing the monitoring equipment, the proposed location, design, and calibration of the monitoring equipment, the method of data collection, and a provision for providing data to the consulted agencies within 30 days of their request for data. The licensee is to prepare the plan after consultation with the U.S. Fish and Wildlife Service (FWS), National Marine Fisheries Service (NMFS), the U.S. Geologic Survey (USGS), Maine Department of Inland Fisheries and Wildlife (DIFW), Maine Department of Marine Resources (DMR), and Maine Department of Environmental Protection (DEP), and documentation of consultation is to be included in the filing. If the licensee does not adopt an agency's recommendation, the licensee shall include the reasons, based on site-specific information.

Article 405 required the licensee to file for Commission approval a plan to release the minimum flow required by article 401. The plan is to include the method for flow release at each development, specific measures to ensure that the minimum flow would be met at all times, an explanation of any modifications to existing facilities necessary to release the minimum flows, and design drawings, hydraulic calculations, and technical specifications for any modifications necessary to meet the minimum flow requirements

During periods of non-generation, a gate at Messalonskee dam will be set to pass the minimum flow, which will pass down through the project's developments. During generation, flow from Messalonskee Lake, and down through the project, is generally set at 570 cfs.

LICENSEE'S PROPOSED PLAN

The licensee stated that monitoring equipment at the Messalonskee Project developments is currently connected to the licensee's computerized energy management system (EMS). The licensee uses the EMS to operate and manage many of its hydroelectric facilities. Data sent to and recorded by the EMS can include headpond elevations (headpond monitor installation pending at the Rice Rips development), tailwater elevations, generating unit gate position, generator output, and in some cases, gate discharge. The licensee proposes to install additional monitoring equipment at the Rice Rips development to be connected to the EMS.

impoundment to within 1.3 feet of the full pond elevation of 69.1 feet.

Under the licensee's approved minimum flow release plan,⁸ the licensee will release a minimum flow of 15 cfs from Messalonskee dam through a slide gate with a capacity of 75 cfs. The minimum flow release gate at Messalonskee dam will be manually operated. The licensee's updated monitoring plan included flow release calculations for various openings of the minimum flow release gate at Messalonskee dam with the headpond at various elevations. The project operator would record the slide gate setting daily, to document the minimum flow release and compliance with the minimum flow requirement.

Under the licensee's approved minimum flow release plan,⁹ the licensee will assure that the minimum flow is continuously provided at the Oakland development by opening a radial gate to an opening of 0.15 foot to release the minimum flow when generation ceases. The radial minimum flow release gate can be remotely operated from the licensee's control center and headpond elevations remotely recorded.¹⁰ Under the updated monitoring plan, if the headpond elevation reaches 0.3 foot below the crest of the dam (206.8 feet elevation), an alarm would sound at the licensee's control center. If headpond elevation falls an additional 0.1 foot (to 206.7 feet), the generating unit would be shut down, and the gate opened to pass the 15 cfs minimum flow. The licensee's updated monitoring plan included flow release calculations for various openings of the minimum flow release gate at the Oakland development with the headpond elevations ranging from 206.7 to 207.1 feet. The project operator would record any change in the gate opening, to document the minimum flow release and compliance with the minimum flow requirement.

Under the licensee's approved minimum flow release plan,¹¹ the licensee was required to install two new gates at the Rice Rips dam in order to consistently pass the

⁸ Order Modifying and Approving Minimum Flow Release and Monitoring Plans Under Articles 405 and 404, Respectively, June 1, 2001, 95 FERC ¶ 62,191.

⁹ Ibid.

¹⁰ Paragraph (B) of the June 1, 2001 order directed the licensee to either install equipment to open the gate remotely, or to manually open the gate, whenever generation ceases to ensure that the minimum flow is continuously released. The licensee was to file the details of the method it chose to use to open the gate at the Oakland development within 60 days of the date of the order. The licensee failed to file the required documentation within 60 days, but in the plan currently under consideration, the licensee stated that the gate can now be remotely operated.

¹¹ Ibid.

minimum flow. In the updated monitoring plan, the licensee proposed to permanently lower one 13.5-foot section of the hinged 0.7-foot flashboards, to assure that the minimum flow is continuously released. The licensee will maintain the headpond at 139.1 feet elevation, to the best of its ability. Headpond elevations at the development would be remotely recorded. If the headpond elevation reaches 0.1 foot below the crest of the flashboards (139.0 feet elevation), an alarm would sound at the licensee's control center. If headpond elevation falls an additional 0.1 foot (to 138.9 feet), the generating unit would be shut down. The licensee's updated monitoring plan included flow release calculations for opening of the hinged flashboards at the Rice Rips development with the headpond elevations within the intended operating range, from 138.9 to 139.1 feet elevation.

As required by the previously approved plan, pond level transducers at each of the developments would read the headpond elevation and transmit the reading to the EMS, which would record headpond elevations in project operations records hourly. Pond level transducers would be calibrated against staff gauges as necessary. If the intended pond levels are not being maintained, the EMS would transmit an alarm signal to the control center, so that operational changes in generation flow or gate opening (at Messalonskee or Oakland) can be made.

The licensee proposed to have the monitoring equipment installed and operational within two months of the Commissions approval of the updated plan. In the interim, the licensee proposed to continue to operate the Oakland and Rice Rips developments in a run-or river mode. The licensee proposed to periodically calibrate the transducers to staff gauges at the dams and replace the transducers, if necessary for accuracy.

The project is monitored remotely. In the updated plan the licensee proposed that, when the monitoring system or project operations are affected by a power outage, a project operator would be dispatched to the project. The operator would record the minimum flow gate settings and pond levels on a data sheet.

The licensee proposed to provide or make available to the consulted resource agencies flow release and headpond level data within 30 days of a written request for data from a specific period. The data could be provided in electronic format, hard copy, or by making records available for inspection and copying, at the agency's request.

If the minimum flow falls below the required 15 cfs, the licensee proposed to file a report with the Commission within 30 days of the incident, as required by paragraph (G) of the June 1, 2001 Commission order.

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RESOURCE AGENCIES' COMMENTS

The licensee consulted with resource agencies in preparation of the plan. In a November 7, 2001 letter to the licensee, included in the updated plan, the FWS stated it generally concurred with the proposed plan, and provided the following specific comments. It noted that the pressure transducers currently used to monitor the headpond levels are stated to be near the turbine intakes, and recommended all transducers should be calibrated under the full range of operating conditions, including non-generation, and any effects of intake flow taken into account in the headpond elevation calculations. The FWS recommended the licensee notify the resource agencies of any interruptions of the required minimum flow within 12 hours of detection of the incident. It recommended the licensee provide project data requested by the resource agencies in both hard copy and electronic format. The licensee did not respond to this recommendation.

In a November 21, 2001 letter, filed with the Commission on November 23, 2001, the DEP concurred with the revised plan.

The NMFS, USGS, DIFW, and DMR, did not comment on the plan.

DISCUSSION AND CONCLUSIONS

The licensee's updated plan modifies the plan approved by the June 2001 Commission order. The licensee proposed to assure that the minimum flow is continuously provided at the Oakland development by remotely opening a radial gate to an opening of 0.15 foot to release the minimum flow when generation ceases to ensure that the minimum flow is continuously released.

Paragraph (B) of the June 1, order required the licensee to install equipment at the Oakland development to remotely open the gate, or to manually open the gate, whenever generation ceases to ensure that the minimum flow is continuously released. The licensee was to specify the details of the chosen method in a filing with the Commission by July 31, 2001. The required information pertaining to the gate at the Oakland development is provided in the licensee's November 16, 2001 filing considered by this order. The licensee should file revised exhibit F, showing the gate at the Oakland development modified to be remotely operated.

The licensee proposed to permanently lower one 13.5-foot section of the hinged 0.7-foot flashboards at the Rice Rips dam, to assure that the minimum flow is continuously released. This is a change from the approved plan, which called for the licensee to install two new gates in place of the flashboards, in order to consistently pass

the minimum flow. The licensee's proposed change is reasonable and will accomplish the objective of assuring that the minimum flow is continuously released. As a result of this change, paragraph (E) of the June 1, 2001 order is unnecessary.

With the breaching of the dam at the Union Gas development, the requirements for minimum flow release and monitoring at the Union Gas development are no longer relevant. These requirements should be deleted. We remind the licensee that, if it decides to rehabilitate the Union Gas development, it would need to modify its minimum flow and pond level monitoring plan accordingly.

The FWS provided additional comments on unchanged portions of the updated plan. The FWS recommended that the pressure transducers near the turbine intakes should be calibrated under the full range of operating conditions, including non-generation, to take into account any effects of intake flow. At Messalonskee dam, the transducer is located on the opposite side of the spillway from the minimum flow release taintor gate. At the Oakland development, the transducer is located on the opposite side of the spillway from the turbine intake. At the Rice Rips development, the transducer is located in the impoundment around a corner from the intake. The three headpond transducers at the project are located a sufficient distance from the withdrawal structures to avoid any probable significant effect from project operations. The licensee's proposal to calibrate the transducers to staff gauges is sufficient to assure accuracy of the transducers.

The licensee should notify the resource agencies of any interruptions of the required minimum flow as soon as is reasonably possible. However, within 12 hours may be impractical under some circumstances. The licensee should notify the resource agencies of any interruptions of the required minimum flow within 24 hours of detection of the incident.

Implementation of the licensee's updated plan should allow the licensee to operate the project in compliance with the flow release requirements of article 405 and provide the data needed to document compliance with the project's operating requirements under article 404. The licensee's proposed amendments to the approved plan, with the modification above, meets the requirements of articles 404 and 405, and should, therefore, be approved.

The Director Orders:

(A) The licensee's proposed changes to the plan to release minimum flows and to monitor minimum flow releases and headpond levels approved by the June 1, 2001 order,

filed with the Commission on November 16, and supplemented on November 23, 2001, pursuant to articles 405 and 404, respectively, as stated in paragraphs (B) through (G), are approved.

(B) The licensee shall permanently lower one 13.5-foot section of the hinged 0.7-foot flashboards at the Rice Rips dam, to assure that the minimum flow is continuously released.

(C) Paragraph (E) of the June 1, 2001 order is deleted.

(D) With the breaching of the dam at the Union Gas development, the requirements for minimum flow release and monitoring at the Union Gas development are no longer relevant, and are deleted from the June 1, 2001 order.

(E) The licensee shall assure that the minimum flow is continuously provided at the Oakland development by remotely opening a radial gate to release the minimum flow when generation ceases.

(F) Within 90 days of completion of the modification to the gate at the Oakland development to be remotely operated, the licensee shall file revised exhibit F drawings, showing the gate, as modified.

(G) The licensee shall notify the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, the Maine Department of Inland Fisheries and Wildlife, the Maine Department of Marine Resources, and the Maine Department of Environmental Protection of any interruptions of the required minimum flow within 24 hours of detection of the incident.

(H) This order constitutes final agency action. Requests for rehearing by the Commission may be filed within 30 days of the date of issuance of this order, pursuant to 18 CFR § 385.713.

George H. Taylor
Chief, Biological Resources Branch
Division of Hydropower Administration
and Compliance

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