APPENDIX 1 Upstream and Downstream Dams

APPENDIX 1 Upstream and Downstream Dams

APPENDIX 2

Ownership/Regulatory Status Union Gas Hydroelectric Facility

Appendix 2

Union Gas 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 Union Gas hydroelectric facility ("the Union Project"), the fourth hydroelectric project below Messalonskee Lake, is a 1.8MW station located on the Messalonskee Stream in Waterville, Maine. The third hydroelectric project on Messalonskee Stream is the Automatic Project (FERC Project no 2555). This project is independently owned and operated and not a part of the Messalonskee Project. Construction of the Union Project was completed in the early 19th century by the Union Gas & Electric Company 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. 40) 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 upstream Rice Rips and Oakland hydroelectric stations.

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, L.L.C. 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

88 FERC1 61.122

UNITED STATES OF AMERICA FEDERAL ENERGY REGULATORY COMMISSION

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

FPL Energy Maine Hydro LLC

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

(188ued July 28, 1999) (EXPIRES JUNE 30, 2036) ORDER ISSUING NEW LICENSE

Maine) filled an application for a new license pursuant to continued operation of four projects: the Oakland Project to No. 2559, which has two developments; the Oakland Project to 2557; the Automatic Project No. 2555; and the Union Gas to downstream, are located on Messalonskee Stream, a tributary of the Nemabec River, in Kemmebec County, Maine. Although the sought a single new license that would encompass all four Central Maine Power Company (Central

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

16 U.S.C. §§ 797(e), 808.

Original licenses were issued for the Oakland and Rice Rips Projects on February 24, 1969, 41 PPC 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 7

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In an order issued concurrently with this one, we affirm our earlier finding, in Kennebec Water District, 84 FERC Gas Project (1994), that the Messalonskee Stream from the Office of Wassalonskee's confluence with the Kennebec is a mayigable 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).

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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 a license applicant for those projects. 5/ This order issues Project No. 2556, which comprises the Oakland, RLC Rips, and Union Gas Projects. By Separate order we are also esting a hitchee to the District for the continued operation of the

BACKGROUND

Notice of the application was published, and comments were filled by the Maine State Planning Office (Planning Office) and the U.S. Department of the Interior (Interior). The Rennebec motion to intervene in response to the notice of Commission Staff's Draft Environmental Impact Statement (EIS), which was to the project. Rennebec Trout's material impact Statement (EIS), which was the project.

The environmental review of this application was original, new, or subsequent licenses for projects in the Kennehec River Basin. The Draft EIS evaluated the potential were filed, and the Commission steff considered these comments preparing the Final EIS, which was issued in July 1997. § We fully considered the motions and comments received from interested agencies and individuals in determining whether, and under what conditions, to issue this license. If

70 FERC ¶ 62,003 (1995).

85 FERC ¶ 62,208 (1998).

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.

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 BIS. See, g.g., 81 FBRC ¶ 61,249 at pp. 62,114-15. These issues included our choice of an environmental 17

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PROJECT DESCRIPTION

The Messalonskee Project consists of four developments. Stream, includes a 12.5-foot-high, 150-foot-long, L-Shaped dam, 150 feet wide and 12.5-foot-high, 150-foot-long, L-Shaped dam, 10,000 acre-feet. Releases from Messalonskee Lake dam are designed to provide flows for generation at the hydroelectric developments on Messalonskee Stream - FPL Hydros sother three developments and the District's Automatic Project No. 2555. 8/

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

The Rice Rips development includes a 220-foot-long, 31-foot-bigh 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-MM 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 91-foot-high flashboards; a powerhouse containing one 1.5-mm generator; and a 1.5-mile-long impoundment with a gross storage capacity of 600 acre-feet.

1/(...continued)

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

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

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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-MM generator; and a 4.5-mile-long impoundment.

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with releases scheduled on the basis of customer load requirements and specified drawdown limits that vary seasonally four developments that be summer to 1.0 foot in the winter. The some developments that generate electric power have been operated their reservoir levels permitted by their licenses, 10/ The Messalonskee Lake Dam 18 operated manually by FPL Hydro,

A more detailed description of project facilities is contained in ordering paragraph (8)(2).

APPLICANT'S PLANS AND CAPABILITIES

In accordance with Sections 10 and 15 of the FPA, 11/ we the following: (1) conservation efforts; (2) compilance 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; power; (6) transmission service; (7) and (8) actions affecting the public.

Conservation Efforts

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

Ability to Comply with the New License

In accepting the transfer of the license from Central Maine, 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.

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

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

¹⁶ U.S.C. \$5 803 and 808. ने

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.

Ability to Provide Efficient and Reliable Electric 4

In accepting the transfer of the license from Central Maine, and conditions of the existing license and the FPA.

Before the license transfer, Central Maine studied the and the utilization of flows on the operation of the project, 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 would not be economical to upgrade turbine level of flow utilization. Central Maine determined that it this time,

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

Need for Power s.

To assess the need for power, we looked at the needs in the is located in the New England Power Fool (NEPOOL) area of the Inchred in the New England Power Fool (NEPOOL) area of the Blectric Reliability Council (NERC). NERC annually forecasts ten-year period. NERC's most recent report 12/ on annual supply total summer demand in the nation and the region for and demand projections indicates that, for the period 1998-2007, hours (HM) to 26,313 MM, and winter demand from 22,158 megawatt 23,601 kMm. Independent power producers such as FPL Hydro are that the project's power, low cost, displacement of nonrenewable fossil-fired generation, and contibution to the region's diversified generation mix will help meet a need for power in the

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Transmission Service

The project's transmission facilities include the generator developments' powerhouses. FPL Hydro proposes no changes that would affect transmission facilities.

Cost Effectiveness of Plans

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PPL Hydro has no plans for changing project facilities or 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,

Actions Affecting the Public 8

Environmental enhancement measures, new safety measures, an improve environments included in the license will generally 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 (CMA), 11/
project unless the certifying agency has either issued water
gquality certification for the project or has waived certification
by failing to act on a request for certification within a
Section 401(d) of the CMA provides that state certification shall
become a condition on any federal license or permit that is
Environmental Protection (Maine DEP) issued Section 401 water
quality certification for all four projects, subject to certain

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

33 U.S.C. S 1341(a) (1). ने

33 U.S.C. § 1341(d). न

As we have acknowledged in Kennebec Water Power Company, sirERC ¶ 61,254 (1997), we are required by the decision of the

MERC's Electricity Supply and Demand Database, Data set 77

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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 through all project developments at all times, including into the that the top 0.5 foot of Whessalonskee lake shall be used to requirement natural flows to meet the 15-cfs minimum flow requirement. (See also license Atticle 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 lineasee to submit plans for providing and monitoring the 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 Bmerican Rivers, et al. v. EEEC, 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 license's obligation, under the Federal Power Act, to take timely action necessary to protect human life or the environment.

LE/ 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.

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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 in the supporting documentation for the application for Section 401 certification (see also Article 403). 11/

Condition 5 requires the licensee to implement the "Messalonskee Lake Materiow! Management Plan" and to begin conducting wetland assessments and Materiow! surveys needed to maintain or enhance waterfow! nesting at Messalonskee Lake Within 5 further requires FPL Hydro to consult With Maine Department of Inland Fisheries and Wildlife (Maine IFW) regarding the survey modify water levels as deemed appropriate by Maine DEP as necessary to protect nesting waterfow!.

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 transfer 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).

^{11/} 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,

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SECTION 18 PISHWAY PRESCRIPTIONS

Section 18 of the PPA 19/ states that the Commission shall 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 may prescribe. By letter of requested that the Secretary's authority to prescribe fishways be Commission to require the license teserves authority to the maintain such fishways as the Secretary as a the secretary authority to prescribe fishways be commission to require the license to construct, operate, and prescribe in the future.

RECOMMENDATIONS OF FEDERAL AND STATE FISH AND WILDLIFE AGENCIES

Section 10(j) (1) of the FPA 20/ requires the Commission, recommendations of federal and state fish and wildlife agencies, recommendations of federal and state fish and wildlife agencies, 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 the pelieves that any such recommendation may be inconsistent with applicable law, section 10(j) (2) requires the Commission and the applicable law, section 10(j) (2) requires the Commission and the weight to the recommendations, expertise, and statutory responsibilities of such agencies. If the Commission then does recommendation, it must explain how the recommendation, it must explain 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 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. 5 911.

16 U.S.C. S 803 (f) (1).

21/ 16 U.S.C. \$ 661 et Beg.

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messure to protect, enhance, or mitigate damages to fish and Section 10(a) of the FPA, and, in Article 412, we are requiring the licensee to file with the Commission a plan to menitor recreational use at the developments comprised by the

Interior submitted three recommendations relating to minimum discharge from the Wessalonske would require the licensee: to four downstream bydroelectric developments an instantaneous flow of 100 cfs or inflow, whichever is less; at the Rice Rips casolopment, to discharge from the dam into the bypassed keach 25 cfs of the required minimum flows; and to file with the commission, after consultation with FWS and other agencies, a recommendations were advanced primarily, to improve habitat for teach. 22/ Interior also recommended that the licensee file a Messalonskee Lake Dam. Finally, interior accommended that the licensee file a Messalonskee Lake Dam. Finally, interior recommended that the associated wildlife use at the Messalonskee Project.

In the Draft BIS, staff made a preliminary determination would be inconsistent with the comprehensive developments would be inconsistent with the comprehensive development standard vol Sections 10(3) (1) and 4(e) of the FPA, because those releases during the summer, because water quality could be roo snerate affected without periodic high generation flows to flush water through the Rice Rips impoundment, and because the annual costs 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 BIS characterized as 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.

Draft RIS at pp. 5-62-63. The Draft EIS noted that only union das could generate with a flow of 100 cfs, but inflow to Wessalonskee 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 flows.

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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, 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 BIS determined that Interior's recommendation for support, because Interior had not shown that the existing fish screen at the fam required replacement. 26/ Finally, the Draft BIS adopted Interior's recommendation for monitoring wellands associated wildlife, provided that the intent of the Lake Waterfowl Wanagement Plan, submitted by Central Maine to the Lake Waterfowl Management Plan, submitted by Central Maine to the did not support monitoring and associated wildlife use at any of the Wessalonskee edvelopments and associated wildlife use at any of 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 DRP that the existing fish screen was satisfactory. In

- Maine DEP's certification requires that 15 cfs be released from Messalonskee Lake and instantaneously passed at all developments, 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. 37
 - instantaneous minimum flow would provide about 76 percent of the maximum brown trout weighted usable area (WUM). Draft BIS at p. 4-71. The Draft BIS found that the 15-cfe instantaneous minimum flow would provide about 76 percent of 25/
- Draft RIS at p. 5-63. र्थ
- The text supporting Interior's Section 10(f) recommendations specifically requested that this management plan, which had already been submitted, be made a license condition. 7
- Draft EIS at p. 5-63. 28/

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addition, Interior stated that, although the focus of the wetland and wildlife monitoxing should be Messalonskee Lake due to the shortance of its wetland habitat, other wetlands downstream recreational enhancements implemented under the new license. The the review of the recreation plans for all of the Messalonskee the revelopments, and the scope of the licensee's existing plans for changed. This recommendation was adopted in the Farices 409 through 412 of the licensee setseting plans for changed. This recommendation was adopted in the Final EIS, and consult with FMS in developing and monitoring the recreation

The flow issue was not resolved at the Section 10(j) detering. However, Maine DEP agreed to conduct an analysis to determine whether the 100-cfs minimum flows recommended by condition would conflict with its water quality certification 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 and intextor's minimum flows, as long as the Maine DEP's guaranteed minimum flows, as long as the Maine DEP's into Mesaalonskee Lake. Maine DEP also concluded, based on a technical analysis conducted by its staff, that sufficient water quality standards even in the absence of summer generation flows, and that interior's more stable flow (inflow equals quality, especially during the summer generation 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 IS. release, for the reasons indicated in the Draft EIS. However the EIS acknowledged Maine DEP: s concluded on separating 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 stall the licensee) and the resource agencies reached agreement on certain subsidiary matters, they continued to disagree on the

We will adopt Interior's 100-cfs minimum flow commendation. Staff's concern that this flow regime would satisfied by Maine DEP's water quality certification is satisfied by Maine DEP's assurances to the contrary. Similarly, flows resulting from the release of Interior's higher constant minimum flows would not deprive the Rice Rips impoundment of Moxeover, Maine DEP now believes that Interior's flow requirement technical conference, Central Maine and the summer. At the agreed that the water released from the Union Gas impoundment agreed that the water released from the Union Gas impoundment Gas Dam; this determination waters than the water below the Union that the water released from the Union Gas impoundment Gas Dam; this determination. Interior's higher minimum flows could displace cool water in the trout habitat below that dam with warmer water from the

Maine IFW manages a successful trout fishery below the Union development receives 3,700 user-days a year, mostly for bank fishing below the powerhouse. 29/ The experimental nature of in the Braft RIS, that the annual costs of the flows would be high in relation to the benefits the fishery would receive. 31/HOWNOW, although the fishery was started as an experimental HOWNOW, it is no longer designated experimental. 31/ The fact that the fishery we setablished warrants placing greater

BIS at p. 3-154. त्र

Draft EIS at p. 5-62-63. Moreover, in relation to fishery in the Rice Rips bypassed reach, the Draft 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.

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

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weight on the benefits to the fishery in relation to the loss of

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

Article 401 requires the licensee to discharge from 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. 32/ Article 401 also requires that, at the Rice Rips

Summary of Section 10(j) meeting. F 34/

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

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

Although the focus of the flow regime is the enhancement of the brown trout fishery, the record concains evidence of benefits to the shad fishery as well. See EIS at p. 4-81. 35/

(cont funed...) Since the benefit to the fishery below the Union Gas Dam is Ä

Brown trout are considered a prized game fish, and Maine IFW manages the reach below Union Gas Dam specifically for a brown trout fishery. 77

development, 25 cfs of the reguired 100 cfs, or inflow, be released from the dam into the bypassed reach, but in no case nonths of license issuance, to file with the Commission a plan to Article 408 requirements at the Commission a plan to Article 408 requires the incenses, within 3 Article 408 requires the licenses, 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 fisheries and rectational 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 fisherial lation of a scress and recommends that there is no current demand for such 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 includes boat access. The Commission staff recommends construction of carry-in flatwater recreation in the area at the Rice Rips impoundment based on its site vigit and review of the demand projections for arry-in flatwater recreation in the area. 18/ We concur with this a requirement that the licensee construct these facilities.

Kennebec Trout contends that a fishing facility accessible Park instead of the Union Gas tailwater. Kennebec Trout recommends that we require the licensee to set aside \$25,000 for disabilities at a location to be determined through construction of a fishing facility accessible to persons with resource agencies and alocation to be determined through consultation site below the Union Gas powerhouse well susted for a fishing facility accessible to persons with the facility accessible to persons with the facility accessible to persons with disabilities and that the facility accessible to persons with disabilities and that the Article 411 of the license requires the licensee to construct,

.continued) 32/(..

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

BIS at pp. 4-161 and 4-162. À

BIS at p. 4.164. 195

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

COMPREHENSIVE PLANS

Section 10(a)(2) of the FPA requires the Commission to or state comprehence to which a project is consistent with federal conserving a vaterway or vaterways affected by the project. Under Section 10(a)(2), federal and state agencies filted a total of these, we identified nine plans relevant to the project.

COMPREHENSIVE DEVELOPMENT

Sections 4(e) and 10(a)(1) of the FPA 42/ require the conmission, 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

Kennebec Valley proposed a number of additional recommendations relating to parking and access and to water guality in the project area. The EIS explained either why staff's concerns should be satisfied by the recommendations were inappropriate or unsecessary. See EIS at pp. B-278 through B-284. As the EIS responded addquately to Kennebec Valley's concerns, we will not relterate those responses in detail here.

1981, Atlantic Sea Run Salmon Commission, Maine River Study State Comprehensive River Management Plan, 1987, Maine Department of Conservation; State Comprehensive River Management Plan, 1987, Maine State Maine Office; Hydrology of Floods . Kennebec River Basin, Floods, Kennebec River Basin, Maine, Part II, 1988, U.S. Army Corps of Engineers; Maine, Part II, 1988, U.S. Arwy Corps of Engineers; Fisherdes Wildlife Service; North American Waterfowl Management Plan, 1986, Interior and Canadian Wildlife Service; North American Waterfowl Management Plan, Restoration of Atlantic Salmon to New England Rivers, 1989, Strategic Plan for Management of Atlantic Salmon in Maine, न

16 U.S.C. \$5 797(e) and 803(a)(1). 42/

comprehenaive plan for improving or developing a waterway or license this project, and the terms and conditions included herein, reflect such consideration.

The EIS analyzed the environmental effects of the continued measures to protect and enhance environmental resources. These measures will provide minimum flows and limit reservoir drawdowns to improve fish and wildlife resources, enhance recreational resources in the project vicinity, and protect

In determining whether a proposed project will be best beneficial public purposes, plan for developing a waterway for 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 deflation beyond the license issuance date. The basic purpose of estimate of the potential future inflation, escalation, or estimate of the potential power benefits and the costs of a project, and reasonable alternatives to provide a general project, and reasonable alternatives to project power. The estimate helps to support an informed decision concerning what is naking its decision, the Commission considers the project power making its decision, the Commission considers the project power enhancement measures and with the Sproposed mitigation and modifications and additions to the applicant's proposed.

As proposed by FPL Hydro, the Messalonskee Project would annually at an annual cost of about \$43,000 (28.6 mills/kWh) of energy. The annual value of the project's power would be \$1,016,000 (33.5 mills/kWh) based on the current cost of alternative power. We this value on the cost of alternative resources, which in the case is the cost of alternative resources, which in whether the proposed project is currently economically 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

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

As licensed by the Commission, the project will produce an about \$570,000 (33.2 mills/kWh). The current annual cost of licensed project's power is about \$91,000 (57.1 mills/kWh). The current annual value of the Thus, we find the project as licensed is economically kWh). costing \$411,000 annually (23.9 mills/kWh) less than the current

Based on our review of the agency and public comments, and 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 interest but the term that we determine to be in the public 50 years. Our policy establishes 30-year terms or projects that capacity, or enhancement, new construction, new moderate redevelopment, new construction, new moderate redevelopment, new construction, new enhancement; and 50-year terms for projects that propose enhancement; and 50-year terms for projects that propose enhancement; and 50-year terms for projects that propose enhancement. FPL Mydro does not propose any new capacity, or development at the Messalonskee Project.

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

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

(continued...)

⁷² FERC ¶ 61,027 (1995). 43

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

Use of Reserved Authority in Hydropower Licenses to

Kennebec River Basin EIS, we concluded that issuing licenses with the expiration dates Central Maine suggested would further this policy, not only by ensuring that those licenses would further this simultaneously, & by ensuring that those licenses would expire coordination of their expiration dates with the expiration dates we issued licenses for projects in the basin, 47, Consequently, in 2036. Following that policy here, we will idense terms expiring a 37-year term for the Messalonskee Project, effective the first day of the month in which this license is lessee for

SUMMARY OF FINDINGS

The Final BIS includes background information, analysis of related license articles. The project will not result in any major, long-term adverse environmental impacts.

45/(...continued)

Ameliozate 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.
- 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 license has yet expiring within the next ten years: Harris Project No. 2142 (2001); and Anson Project No. 2365, Abenaki Project No. 2344, and Lockwood Project No. 2365, Abenaki Project No. 2364, and Lockwood Project No. 2365, Abenaki Project No. 2001] be issued for those projects with expiration dates condinated with those of the licenses we are issuing in the present orders. We cannot, of course, commit ourselves here is issuing such licenses; moreover, the terms of such on other factors, such as the amount of new construction such coordination possible.

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The design of this project is consistent with the engineering standards governing dam safety. The project will be requirements of this license.

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

The Commission orders:

(A) This license is issued to FPL Energy Maine Hydro LLC, 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 teference as part of this license, and subject to the regulations the Commission issues under the provisions of the FPA.

- The project consists of:
- All lands, to the extent of the licensce's interest in those lands, shown in the following exhibits;

		Lake				
		Detail Map - Messalonskee Lake Development	Oakland	Rice Rips	Union Gas	
Showing . Project Map		Detail Map - Development	Detail Map - Oakland Development	Detail Map - Rice Rips Development	Detail Map - Union Gas Development	
FERC Drawing No. 2556	1001	1002	1003	1004	1005	
Exhibit G.	-	2	m	4	v	

- The project works, consisting of the following developments and components:
- (a) The Messalouskee 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 tlashboards, two 10-foot-high by 12-foot-wide Taintor 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

(b) The Oakland Development, consisting of: (1) 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 wide; (11) a 1,900-foot-long impoundment with a surface of 10 acres, a gross storage capacity of 50 AF, and fiberglass-lined to-foot-dameter steel pensions; (11) a 466-foot-long concrete-steel with stone masonry powerhouse, 90 feet high francis turbine and Allis-Ghalmers generator wite a rated capacity of 2,800 kW; and (v) appurtenant facilities;

(c) The Rice Rips Development, consisting of: (i) a 220100-long concrete 'Ambursen. dam containing: a 51-foot-long,
11-foot-long by 30-foot-wide, gated concrete core wall; a
16-foot-long seet [lashboard section; a 73-foot-long
50-foot-long, earthen section with concrete furake section;
50-foot-long, earthen section with concrete core wall; [11]
1,000 AP; [11] a 2.293-foot-long, 10-foot-diameter, wood
containing a 67-foot-long secondary spillway section and a
17-foot-long primary spillway section with 5-foot-high
powerhouse, 31 feet by 43 feet, houting one vertical Francis
turbine and General Ricchic generale with a rated capacity
1,000 AP; [11] a 10-foot-long secondary spillway section with 5-foot-high
powerhouse, 31 feet by 43 feet, houting an a stated capacity
1,000 AP; [11] a 11,100 AP; [11] a rated capacity of 1,600 kW; and (v1) appurtenant facilities.

(d) The Union Gas Development, consisting of: (i) a 343.

foot-long, 31-foot-high, stone-masoury gravity dam
containing: a non-overflow section measuring 122 feet from
the east fiver bank to an anyle point where it continues is
long gated intake section and 54 feet downstream; a 32-footwide deep gates is 32-foot by 11-foot wooden gatehouse; is
long gated, in a 32-foot by 11-foot wooden gatehouse; a
supported flashboards; a 41-foot-long, masonry intake
section with two 8-foot-diameter intakes; and a 73-foot-long
masoury powerhouse, 50 feet high by 66 feet
stone masoury powerhouse, 50 feet high by 66 feet
long, housing one vertical Francis turbine and General
long, housing one vertical Francis turbine and General
1,500 kH; [111] a 1.5-mile-long impoundment with a gross
storage capacity of 600 AF; and (1v) appurtenant facilities.

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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 filled 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

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

Showing	Messalonskee Lake Davelorment	Dam - Plan, Elevation, Sections Oakland Development - Dam Intake, Penstock & Surge Tank	Elevations & Sections Oakland Develonment	Powerhouse Plans Sections Rice Rips Develorment	Plan, Elevation & Sections Rice Rips Develorment	Penstock Plan & Details Rice Rips Develorment	Pond Plan & Sections Rice Rips Development	Powerhouse Plans, ElevationsE Sections Union Gas Develorment	Plan, Elevation & Sections Union Gas Develorment	Powerhouse Plan, Elevation &
FERC Drawing No. 2556	1006	1007	1008	1009	1010	101	1012	1013	1014	
Exhibit F.	r r	N	m	4	ĸ	v	7	tœ	б	

(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 necessary or appropriate in the project roughly; and all riparian or other rights the project to receive the project.

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

This license is subject to articles set forth in Form 9

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L-3 (October 1975), entitled 'Terms and Conditions of License for Constructed Major Project on Navigable Waters' and the following additional articles. Article 101. The licensee shall pay the United States an license is fasted, for the first day of the month in which this States is fasted, for the purposes of reimbursing the United 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.

Act, a specified reasonable rate of return upon the net investment in the project shall be used for determining surplus earnings of the project the testablishment and maintenance of amortization reserves. The licensee shall set aside in a project amortization reserve account at the end of each fiscal year one-specified rate of return per annum on the net investment. To the specified rate of return per annum on the net investment. To the specified rate of return per annum for any fiscal year, the section of return per annum for any fiscal year, the smount of that deficiency from the licensee shall deduct the amount of that deficiency from the amount of any surplus earnings subsequently accumilated, until amount of any surplus earnings subsequently computed, in the project amounts earnings if any, cumulatively computed, in the project amounts established in the project amortization reserve account until further order of the Commission.

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 be the interest rate on 10-year government bonds (reported as the interest rate on 10-year government bonds (reported as the Interest rate on 10-year constant maturity series) computed points (400 basis points) apecified reasonable rate of return used in computing

benefitted by the construction work of another licensee, a permittee, or the United States on a storage reservoir or other line function work of another licensee, a permittee, or the United States on a storage reservoir or other (including extensions of that term by annual licenses the advanter benefits were not previously assessed and if 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

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same manner as for benefits received during the term of this new

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Article 201. Within 45 days of the date of issuance of the cards of the licensee shall file three original sets of aperture 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 1 topy of form FRRC 587 with the aperture cards. *

shown in the margin below the fERC Drawing Number shall be drawing. After mounting, the title block of the approved or whigh. After mounting, the FERC Drawing Number mist 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 corner of each aperture card.

Two sets of the aperture cards shall be filed with the Compliance. The third set of aperture cards shall be filed wordlied to the third set of aperture cards shall be filed wordlied to the third set of aperture cards shall be filed wordlied to the third set of aperture cards shall be filed wordlied to the third the

kevel 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. Within 60 days of the installation Article 401.

然

Stream as inclusive and the shall minimum flows and the standard st The licensee shall release instantaneous minimum flows of

Minimum flow releases from the three developments may be the control of the licensee, and for short periods upon mutual agreement between the licensee, U.S. Fish and Wildlike Service, the Maine Department of Inland Fisheries and Wildlike Service, Maine Department of Inland Fisheries and Wildlike Service, 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 CRDER 茶

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

Atticle 402. Within 60 days of installation of water level and etreamflow 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 Mesqalonskee Stream and the Kennebec River.

The Ncensee shall limit the maximum draw-down of water August 11, and 1.0 foot for the remainder of the year, of full pond eleverison of 235.9 feet. The top 0.5 foot of Messalouskee flows required in Article 401 of this license. The licensee shall limit the maximum draw-down of water levels in the Oakland Indicensee shall limit the maximum draw-down of water levels in the Oakland The licensee shall limit the maximum draw-down of water levels in the Nater levels in the Nater levels in 139.1 feet. The licensee shall limit the maximum draw-down of water levels in light levels in the Union Gas impoundment to 1.0 foot of full pond elevation of water levels in light the maximum draw-down of water levels in light the maximum draw-down of water levels in light the maximum draw-down of full light light the maximum draw-down of full light light light light light light light light full light fill light l

The maximum drawdown limitations may be temporarily modified licensee, and for short periods upon mutual agreement between the licensee, and for short periods upon mutual agreement between the licensee, the U.S. Fish and Wildlife Service, Waine Department of Environmental Protection. If the drawdown limitations are so modified, the licensee shall notify the Commission as soon as Notification of drawdown that exceed the restriction of Mandowship, but no later than ten days after each such Nacident. Wessalonskee lake or any of the three impoundments from Nacident through and including July 31 shall include the reason for Nacident drawdown and documentation of prior consultation with the Maine Department of Inland Fisheries and Wildlife.

and streamflow monitoring devices required by Article 404, the licensee shall, to prevent fish stranding by Article 404, the dam, implement the following downramping below the Union Gas development: When closing wicket gates, closures from 70 percent open to 40 percent open shall occur over a fixed 30 minute closing per minute. No restrictions shall apply to wicket gate closing per minute. No restrictions shall apply to wicket gate closings from 100 percent open to 70 percent open. percent open to 0.0 percent open. ...

Article 404. Within blx months of license issuance, the operate, and maintain water-level and streamflow monitoring equipment necessary to monitor and recent compliance with the minimum flows required by Article 401, impoundment drawdown limits required by Article 402, and downramping at Union Gas-

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

OCT.12, 2000. SEE ORDER KARTICLE 404 AMENDED

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the method of data collection; a provision for providing the data to the censuited 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 Inland Fisheries and Wildlife and Department of Environmental Protection prior to any incorposed draw-down of up to 8 feet for flood control. This plan the standards of the U.S. Geological Survey. schedule for installing the monitoring equipment; the proposed location, design, and calibration of the monitoring equipment; The plan shall include, but need not be limited to:

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

The licensee shall include with the plan documentation of the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments of 30 days for the plan. The licensee shall allow a minimum recommendations before filling the plan with the Comments and comments and the manual the licensee does not adopt a recommendations of some adopt a recommendation, the filling the plan with the Commission. If include the licensee's reasons, based on site-specific

The Commission reserves the zight to require changes to the licensee is notified that the plan is approved. Upon Commission approval, the licensee shall implement the plan is approved. changes required by the Compission..

a plan to article 405, Within 60 days of license issuance, the
release the minimum flows required by Article 401 of this
license. The plan shall include, at a minimum;

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

** # ARTICLES 404 \$ 405 MODIFIED BY PARAGRAPHS ORDER MOD. \$ APPR. MIN. MOD/APPR MIN. FLOW ... : FEB. 21, 2002. (See Order) (See Order) AND BY ORDER AMENDING ORDER FLOW REL. & MON. PLANS JUNE 1, 2001. (B) THROUGH (G) of

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The Commission reserves the right to require changes to the plan. The plan for releasing the required minimum flows shall is approved. Upon Commission approval, the licensee is notified that the plan implement the plan including any changes required by the

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

licensee shall file for Commission approval a water quality monitoring plan to ensure that development operations and 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 Within six months of license issuance, dam, and identify periods of generation during sampling. plan shall include, but need not be limited to: Article 407.

- the Maine Department of Bnvironmental Protection's most recent river sampling protocol, or other protocol approved by the Maine Department of Snvironmental the methodology, including sampling protocol based 3
- a schedule for implementation of the plan;

(2)

- a schedule for consultation with the consulted agencies the results of the monitoring; and concerning 3
 - a schedule for filing the results, agency comments, and licensee's response to agency comments with the (2)

the Maine Department of Brutzonenial Protection, U.S. Fish and Middilfe Service, Mational Marine Fisheries Service, Maine Department of Inland Fisheries and Middiffe, and Maine Beartment of Maine Fisheries and Middiffe, and Maine Department of Marine Resources; The licensee shall include With the Dian recommendation 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 comment and to make recommendations before filling the plan with The licensee shall prepare the plan after

ORDER * ARTICLE 407 MODIFIED BY PARAGRAPH (B) of

MOD. & APPR. WATER QUAL, MON. PLAN MAR. 30, 2001 Sec Order

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

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

If the results of the 5-year monitoring program indicate 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

ALLICIE 40B. Within three months of license issuance, the management plan file for Conwission approval a waterford management plan that would describe the methods to implement the management plan shell wetland assessment and wildlife monitoring outlined in the "Messalonskee Lake Waterford Management Plan" filed with the provide a basis for determining trends in waterford use and plan shall specify, at a minimum: (a) the methods to be used to Messalonskee Lake. The waterford management assess the status and trends in the quantity of wetlands in waterford, wading bixd, and black term use of the Messalonskee Conducting and reporting the periodic assessment of the methods-to be used to monitor lake wetlands. The plan shall also include a schedule for Messalonskee Lake wetlands and associated wildlife use. The Periodic assessment of 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 completing each assessment, the licensee shall file a report with assessment results, and any recommendations for modifications of project operations the implementation of other measures to enhance waterfowl habitar as animate to 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 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 the agencies to comment of the plan.

MOD. & APPR. WATERFOWL MNGT. PLAN. MAY 17, 2000 # ARTICLE 408 MODIFIED BY PARAGRAPH (B) of ORDER *

Order. See

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 plan with the Commission for approval.

The Commission reserves the right to require changes to the including any changes required shall implement the plan, also reserves the right to require modifications. The Commission operation or water levels in the lake if the assessment results show that such modifications are watering.

licensee shall file for Commission of incense issuance, the showing existing recreational development and indicating the entities responsible for operation and maintenance of the facilities for the Oakland development. The plan shall also taxel (1) a picnic and development. The plan shall also taxes (1) a picnic and day-use area on the south shore of the parking area for 5 to 6 vehicles and a footpath from footpath for walking area for 5 to 6 vehicles and a footpath from footbath for walking and shorefront activities; (4) management of the recreational facilities at the site; and (5) interpretive Within six months of license issuance, the Article 409.

The plan shall provide for, but need not be limited to: (1) 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 Department of Environmental Protection, the Maine Department of Environmental Protection, the Waine Department of Conservation, the U.S.-Rish and Wildlife Service, and the Watural Resources Conservation Service. The licensee of comments and recommendation of communication, copies has been prepared and provided to the entities, and specific descriptions of how the entities! comments are accommendated by the plan. The licensee shall allow a minimum of 30 days for the plan. The licensee shall allow a minimum of 30 days for the the plan with the Commission for approval. If the licensee does not adopt a recommendation, the filing shall include the licensee of sitensee's reasons, based on site-specific information.

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 The Commission reserves the right to require changes to the

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Atticle 410. Within six months of license issuance, the should file for Commission approval a recreation plan entities responship for operation and indicating 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 Messalonskee Stream and the Rice Rips impoundment from the Oakland dam to Rice Rips dam; (2) a parking area; and (3) carryin boat access to the Rice Rips impoundment from the

The plan shall provide for, but need not be limited to: (1) 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 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 recommentation of consultation, copies of comments and and provided to the entities, and specific descriptions of the entities, and specific descriptions of how licensee shall allow a minimum of 30 days for the entities to comments and comments and to make recommendations prior to filling the plan with recommendation, the filling shall include the licensee does not adopt a benefit to the filling shall include the licensee is reasons, based on development.specific information.

The Commission reserves the right to require changes to the recreation facilities shall begin until the licensee for new that the plan is approved. Upon approval, the licensee shall commission,

Article 411. Within six months of license issuance, the showing state that 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. *

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

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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 Naine Department of Environmental Protection, the Maine Department of Environmental Protection, the Maine Department of Conservation, the U.S. Fish and Mildlife Service, the city of Waterville, the Materville 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 accommendated by the plan. The licensee shall allow a minimum of 30 days for the entities to comment and to make recommendation 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

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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.

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The licensee shall prepare the recreation use monitoring plan after consulting with the Maine Department of Inland Fisheries and Wildlife, U.S. Pish 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) crosion and sediment control during construction; and (3) an implementation schedule.

The licensee shall prepare the plan after consultation with the U.S. Finh 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

Sec Order,

.556-004, et al. Project .

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

The Commission reserves the right to require changes to the licensee is notified that the plan is approved. Upon approval, required by the Commission.

Agreement Among the Federal Energy Regulatory Commission, the Advisory Council on Historic Preservation, and the Waine State Historic Preservation of Historic Preservation, and the Waine State Historic Preservation Officer for the Management of Historic State Structures and Eligible Archaeological Sites that may be Affected by New Licenses Issuing to Central Maine Power Company and Projects in Maine executed on September 29, 1993, including but the Oakland, Rice Rips, and Union Gas Menagement Plan (CRMP) for implement the programmatic Agreement is terminated, the licensee shall reserves the authority to require changes to the Commission during the term of the license. If the Programmatic Agreement is the Programmatic Agreement is any ground disturbing activities or taking any other engaging in may affect any historic properties within the project's area of The licensee shall implement the "Programmatic

Article 415. (a) In accordance with the provisions of this permission for certain types of use and occupancy of project lands and waters and to convey certain interests in project lands and waters for certain types of use and occupancy of project commission approval. The lifensee may exercise the authority proposes of protecting and enhancing the scenic, recreational, purposes of protecting and enhancing the scenic, recreational, purposes the lifensee shall also have continuing responsibility compliance with and to monitor the use of the project. For those grants permission, and to monitor the use of, and ensure for, any interests that it has conveyed, under this article or any other computer the accompancy of the instrument of conveyance a permitted use and occupancy violates any condition of this or other environmental values, or it a covenant of a conveyance article or any other condition imposed by the licensee for or other environmental values, or it a covenant of a conveyance or or other environmental values, or it a covenant of a conveyance of a fine service and authority of this article is violated, the includes, it necessary, canceling the permission to use and occupy the project lands and waters and requiring the removal of any non-complying etructures and facilities.

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(b) The type of use and occupancy of project lands and water for which the licensee may grant permission without prior

- (1) landscape plantings;
- 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 Berve single family type dwellings; (2)
 - embankments, bulkheads, retaining walls, o similar structures for erosion control to protect the existing shoreline; and 3
- food plots and other wildlife enhancement. 3

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

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

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

To implement this paragraph (b), the licensee may, among 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 those standards this paragraph (b) and to require modification of this paragraph (b) and to require modification of the standards, or procedures.

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

- 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) severs 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);
- (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 lauds 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 lesses of project lands for:
 - 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 K map may be used), the nature of the proposed use, the identity of any federal or state agency official consulted, and any federal or state approvals required for the proposed use. Unless the Director, within 45 days from the filing date, requires the licensee to file an application for prior approval, the licensee may convey the intended interest at the end of that period.

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

determine that the proposed use of the lands to be conveyed is not inconsistent with any approved exhibit R or approved report does not have an approved exhibit B; or, if the project recreational resources of an exhibit B; or, if the project recreational resources, that the lands to approved report recreational resources, that the lands to be conveyed do not have

coverants running with the land: (1) the use of the lands conveyed shall not endanger health, create a nuisance, or (1) the grantee be incompatible with overall project recreational use; that the construction, operation, and maintenance of structures or facilities on the conveyed lands will occur in a manner that the project the grantee shall and so the conveyed lands will occur in a manner that the project the scenic, recreational, and environmental values of the project; and (iii) the grantee shall not unduly restrict

11censee to take reasonable remedial action to require the violation of the terms and conditions of this article, for the protection and enhancement of the project's scenic, for the and other environmental values.

this article does not in itserest in project lands under The project boundaries. The project boundaries may be changed to exclude land conveyed drawings (project boundaries may be changed to exclude land conveyed drawings (project boundary maps) reflecting exclusion of that land. Lands conveyed under this article will be excluded from necessary for project purposes, such as operation and environmental resources, and shoreline control, including proposals to exclude lands conveyed under this article from the project shall be consolidated from the extraordinary circumstances, project shall be consolidated for control, salled from the exhibit G or K drawings would be filed for approval for other

(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

(E) The licensee shall serve copies of any Commission order to be consulted on matters related to that filling. Proof of service on these entities must accompany the filling with the

Project No. 2556-004, et al.

the Commission is final unless a request for rehearing by issuance, as provided in Section 313 of the date of the 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 acceptance of this order.

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

(SEAL)

South P. Boergers, Secretary.

APPENDIX A

WATER QUALITY CERTIFICATION CONDITIONS

THEREFORE, the Department GRANTS certification that there is reasonable assurance that the continued operation of the Messatonskee 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 actor, (3) operating emergencies beyond the applicant's control, as defined below, (4) by flashboard failure, or (5) upon mutual agreement between the applicant and maintained. the following werer levels shall be

Messalonskee Lake (cycling)

Within 0.5 feet of full pond from 6/1-8/31 and within 1.0 feet from 9/1-

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

Within 1.0 feet of full pond elevations;

M

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.

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 preatment Plant ox 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.

DOWNRAMP ING

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.

WATERFOWL NESTING

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- 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 ď
- The applicant shall consult with the Maine Department of Inland Fisheries and Wildlife regarding the findings results of these assessments and waterfowl surveys. The proposals for maintaining or enhancing wetlands and waterfowl nearing shall be submitted to the DEP Bureau results, any applicant proposals, and DIFAH comments, the Department shall order such continuation or modification of water levels established by this approval as is deemed necessary and appropriate to m

RECREATIONAL FACILITIES

9

- The applicant shall maintain and improve recreational facilities and public access within the project boundaries including: installing project identification signs at all projects, evaluating project identification green belt/milti use; area between the Oakland and Rice Rips Development, improving parking at the Rice Creating a carry.in access site to the Rice improving parking at carry.in access site to the Rice improving parking at the Automatic Ä
 - The applicant shall, in accordance with the schedule established in a new FBRC license for the project, submit a schedule for implementing Part A of this Department of Conservation and the DEP Bureau of Land and Water Quality and must be approved by the Bureau of Land Bureau of Land Bureau of Land æ

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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 subject to the review and approval the Department prior to

COMPLIANCE WITH APPLICABLE LAWS

8

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.

EFFECTIVE DATE

e,

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)

Balley, Commissioner, dissenting in part:

I am not persuaded that the 100-cfs minimum flow is the best that the 15 cfs minimum flow would braft and Final EIS concluded of habitat enhancement for brown trout. Even assuming 100 cfs would provide an acceptable degree 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 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 Balley

APPENDIX 2-2 FERC Order Issued October 12, 2000

93 FERSS 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. 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.

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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.

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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. 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, 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. 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. 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. 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. 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.

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).

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.

(SEAL)

David P. Boergers, Secretary. APPENDIX 2-3
Order Modifying and Approving Minimum Flow Release
Issued June 1, 2001

95 FERC | 62, 191

UNITED STATES OF AMERICA FEDERAL ENERGY REGULATORY COMMISSION

FLP Energy

Project No. 2556-030 &-035

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

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(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, its plan to release minimum flows required by article 401, for the Messalonskee I pject. The April 2000 filings also included the licensee's plan filed under amended article 404, to monitor the flow releases, impoundment drawdown limits, and dewnramping requirements, required by amended articles 401 and 402, 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

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

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.

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

with the impoundment drawdown limits of article 402, and with the article 403 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 (D!FW), 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 taintor 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.

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 I 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

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, 2001 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

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 getc 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, which ever 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.

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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.

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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

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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 menitoring 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.

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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 reven 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.

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

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FLP Energy

Project No. 2556-038

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

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(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

3.6

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

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

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

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

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

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.

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.

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, 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, 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. 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," the licensee was required to install two new gates at the Rice Rips dam in order to consistently pass the

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.

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 lbid.

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.

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 it 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 nongeneration, 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.

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