

80 FERC 62,038

UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Ridgewood Maine Hydro	)	Project No. 11482-000
Partners, L.P.	)	Maine

ORDER ISSUING ORIGINAL LICENSE

(Minor Project)

(Issued July 17, 1997)

INTRODUCTION

On February 7, 1991, the Director, Office of Hydropower Licensing, determined that the existing unlicensed Marcal Project, located on the Little Androscoggin River, a navigable

waterway of the United States, 1/ in the Town of Mechanic Falls, Androscoggin County, Maine, would require licensing to continue operating. 2/

The project is currently owned and operated by Ridgewood Maine Hydro Partners, L.P. (Ridgewood Maine); 3/ which, along with its predecessor, Consolidated Hydro Maine Inc. (Consolidated Hydro) has operated the project since 1986. On May 23, 1994, Consolidated Hydro filed an application for an original license for the continued operation and maintenance of the 1.31 megawatt (MW) Marcal Project under Part I of the Federal Power Act (FPA).

1/ Federal Energy Regulatory Commission. 1990.  
Navigability  
Report (Little Androscoggin River hydro project,  
Licensing, Androscoggin County Maine). Office of Hydropower  
Division of Project Compliance and Administration.  
Washington, D.C. August, 1990.

2/ 54 FERC 62,095 (1991). The Little Androscoggin River  
is a  
major tributary of the Androscoggin River, a navigable  
waterway of the United States. See 20 FPC 99.  
Moreover,

the project is located on a stream which is a navigable waterway of the United States. Thus, the project is required to be licensed pursuant to Section 23(b)(1) of the Federal Power Act, 16 U.S.C. 817(1).

3/ Hydro  
noticed  
comments  
Marcal  
licensee,

Ridgewood Maine was formerly known as Consolidated Maine, Inc. (Consolidated Hydro). Commission staff the proposed name change on October 21, 1996. No on the proposed name change were filed. Consequently, Ridgewood Maine is the applicant of record for the Project. Accordingly, I refer to the applicant/ herein, as Ridgewood Maine.

some new construction, as described below.

## BACKGROUND

On August 25, 1994, a public notice was issued that provided an opportunity for filing protests or motions to intervene. Motions to intervene, but not in opposition, were filed by the Maine State Planning Office (MSP0), the U.S. Environmental Protection Agency (USEPA), and Synergics, Inc. [on behalf of Hackett Mills Hydro Associates (Hackett Mill Hydro)]. No agency or other entity objected to issuance of this license. Comments received from interested agencies and individuals have been fully considered in determining whether, or under what circumstances, to issue this license.

The Commission's staff (staff) issued a Draft Environmental Impact Statement (DEIS) for the Lower Androscoggin River Basin, including the Marcal Project, on December 8, 1995. The staff analyzed and considered all the comments filed on the DEIS in preparing the Final Environmental Impact Statement (FEIS), 4/ which was issued on August 2, 1996. The FEIS, which is incorporated by reference in this order, is available for inspection in the Commission's public file for the project. 5/ The staff also prepared a Safety and Design Assessment (S&DA),

which is similarly available.

## PROJECT DESCRIPTION

The existing Marcal Project consists of a dam with two spillway sections, an intake area, a 470-foot-long penstock, a powerhouse with two generating units, an impoundment with a surface area of about 27 acres, a transmission line, and appurtenant facilities. The project has a total installed capacity of 1.31 MW, and an average annual generation of about

4/ Androscoggin Energy  
Final Environmental Impact Statement – Lower River Basin Hydroelectric Projects, Maine, Federal Regulatory Commission, Office of Hydropower Licensing, FERC/FEIS-0100, July 1996.

5/ of Project geographic an  
The DEIS and FEIS address the licensing and relicensing the Marcal Project and the Gulf Island-Deer Rips (FERC No. 2283), respectively. Moreover, the scope of analysis for the DEIS and the FEIS encompassed additional seven hydroelectric projects on the lower

Island-

Androscoggin and the Little Androscoggin Rivers. In a separate proceeding, Commission action on Central Maine Power Company's application to relicense the Gulf

Deer Rips Project is currently pending.

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4.52 gigawatt-hours (GWh). A more detailed project description can be found in the ordering paragraph (B)(2), and in the FEIS. 6/

No new capacity is proposed. However, for environmental enhancement measures, Ridgewood Maine proposes to: (1) limit water level fluctuations in the Marcal impoundment to no greater than one foot from May 1 through October 15 and two feet from October 16 through April 30; (2) provide a project minimum flow of 56 cubic feet per second (cfs), or inflow, whichever is less; (3) provide a seasonal bypass minimum flow of 20 cfs, or inflow, whichever is less from June 1 through November 1; (4) construct

downstream fish passage facilities; (5) develop a permanent carry-in boat access facility on the project's impoundment; and (6) develop a canoe portage route around the project dam.

#### PROJECT OPERATION AND UTILIZATION OF STREAMFLOW

Historically, the Marcal Project was operated to take advantage of seasonal drawdowns in several upstream storage reservoirs. Moreover, project generation was augmented by seasonal flow releases from two non-project impoundments.

Presently, the Little Androscoggin River is relatively unregulated upstream of the Marcal Project. However, the lower reaches of the river continue to be regulated through the operation of the Marcal Project. Consequently, the Marcal Project likely affects the generating capability of three downstream hydroelectric projects, including the Hackett Mills Project (FERC No. 6398), 7/ the Upper Barkers Mill Project (FERC No. 3562), and the Lower Barkers Mill Project (FERC No. 2808).

The staff states that the Hackett Mills Project, and the Upper and Lower Barkers Mill Projects generate according to a schedule of flow releases from the Marcal Project. Based on its analysis of project operations at the Marcal Project, the staff recommended in the DEIS that the Ridgewood Maine operate the

Marcal Project in a run-of-river mode. At that time, the staff concluded that run-of-river operation would be the least costly

6/ FEIS at pp. 2-6 through 2-11.

Mills  
7/ Synergics Inc., who owns the downstream Hackett Mills Project through its wholly-owned subsidiary, Hackett

affects Hydro Associates, contends that the Marcal Project

(1) the operation of the Hackett Mills Project by either:

prevents the reducing the flow in the river to a level which

a operation of its project; or (2) increasing the flow to

level that exceeds the capacity of its project. see

1994. Synergics Inc.'s motion to intervene dated October 17,



operational alternative, and the least detrimental to the operations of the three downstream projects. The applicant, in its comments filed February 6, 1996, argued that the staff's analysis in the DEIS was flawed, and included additional operational information for the staff to consider. In the FEIS, the staff, based on this new information, modified its original operational recommendation for the Marcal Project. The staff adopted Ridgewood Maine's proposed mode of operation with a proviso that any license issued for the Marcal project include a condition prohibiting the Marcal Project from being operated in a manner that would be economically detrimental to the three downstream projects (i.e., forced spill).

Therefore, to protect the three downstream projects against forced spills resulting from the operation of the Marcal Project, Article 306 of this license requires Ridgewood Maine to operate the Marcal Project such that discharge from the Marcal Project does not exceed any of the hydraulic capacities of the three downstream projects, except when high river flows preclude such operation.

#### COASTAL ZONE MANAGEMENT

The proposed Marcal Project is not located in the coastal zone boundary designated by Maine's Coastal Zone Management

Program. Our assessment is that no coastal zone consistency certification is needed for this project.

#### WATER QUALITY CERTIFICATION

Section 401(a)(1) of the Clean Water Act (CWA) requires an applicant for a federal license or permit, for any activity that may result in a discharge into navigable waters of the United States, to provide to the licensing or permitting agency a certification from the state in which the discharge originates that such discharge will comply with certain sections of the CWA. 8/ Section 401(d) of the CWA provides that state certification shall set forth conditions necessary to ensure that applicants comply with specific portions of the CWA, and with appropriate requirements of the state law. 9/

The Maine Department of Environmental Protection (MDEP) issued the Section 401 water quality certificate (WQC) on May 27, 1997. 10/ The WQC contains six conditions, each of which contain

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33 U.S.C. 1341(a)(1).

9

33 U.S.C. 1341(d).

see Appendix A to this order.

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specific provisions that outline the condition's requirements. My findings regarding the WQC conditions are as follows.

Condition 1 requires Ridgewood Maine to maintain water levels in the project within one foot of full pond from May 1 through October 15, and within two feet of full pond from October 16 through April 30. These impoundment level restrictions are included as part of the license.

Condition 2 stipulates that Ridgewood Maine shall, at all times, release a total minimum flow of 56 cfs, or inflow, whichever is less, from the project. 11/ Moreover, Ridgewood Maine is required to release, from the project dam to the bypassed reach, a minimum flow of 20 cfs when the project is

generating, or a minimum flow of 56 cfs, or inflow, whichever is less, when the project is not generating. These minimum flow requirements are included as part of the license.

Specific provisions of Conditions 1 and 2 require Ridgewood Maine to submit plans for providing and monitoring water levels in the project impoundment and project-related minimum flows. 12/ These plans would be reviewed by, and must receive the approval of, the MDEP Bureau of Land and Water Quality (MDEP-BLWQ). Reference to MDEP approval would give the MDEP authority beyond that provided for in Section 401. Thus, MDEP approval of these plans will not become part of this license. 13/ Rather, Articles 404 and 405 require Ridgewood Maine to prepare, after consultation with the MDEP, among other agencies, plans, for Commission approval, to provide project-related minimum flows and to monitor water surface elevations and minimum flows.

Condition 3 states that a downstream fish passage facility shall be installed at the project dam. Installation of a downstream fish passage facility is required as part of this license.

Condition 4 provides that Ridgewood Maine shall conduct a study to determine the effectiveness of the downstream fish

11

the This flow would consist of any generating flows plus  
bypass minimum flow.

12

plans for Provision C of Condition 2 states ". . ., submit  
impoundment providing and monitoring water levels in the project  
releases . . ." Condition 2 pertains to specific minimum flow  
of from the Marcal Project. Accordingly, I believe the intent  
Provision C was to require a plan to monitor project-related  
minimum flows rather than impoundment levels.

13

pp. see Great Northern Paper, Inc., 77 FERC 61,068 at  
61,271-72 (1996).

Monitoring the effectiveness of the downstream fish passage facility is required as part of this license.

Condition 3 stipulates that the downstream fish passage facility shall commence seasonal operation within two years of license issuance. Ridgewood Maine would submit final design drawings, a construction schedule, and operating and maintenance plans for the required facility. 14/ Moreover, Condition 4 requires Ridgewood Maine to submit a five-year downstream fish passage effectiveness plan. The drawings, construction schedule, and operations, maintenance, and effectiveness study plans would be reviewed by, and must receive the approval of, the MDEP-BLWQ. The MDEP-BLWQ also seeks to reserve the right, after notice and opportunity for hearing, to require such reasonable changes in design and/or operation of the fish passage facilities as may be deemed necessary to adequately pass anadromous fish around the project. Such provisions would give the state the ability to control the timing of activities under a federal license, as well as approval authority over activities required by a federal license. These provisions are beyond the scope of Section 401 and will not become part of this license.

Rather, Article 406 requires Ridgewood Maine to prepare, after consultation with the MDEP, among other agencies, a final plan, for Commission approval, to construct, operate, and

maintain a downstream fish passage facility at the Marcal Project. Moreover, Article 407 requires Ridgewood Maine, after consultation with the MDEP, as well as other agencies, to file, for Commission approval, a downstream fish passage effectiveness plan. Article 407 also reserves the Commission's right to require reasonable changes in the structure and/or operations of the downstream fish passage facility.

Condition 5 stipulates that upstream fish passage shall be provided at the Marcal Project at such time as it is deemed appropriate by the Maine Department of Marine Resources (MDMR) and the Maine Atlantic Salmon Authority (MASA). 15/ Ridgewood

14

Ridgewood Maine would submit such items in accordance with the schedule established in a FERC license for the project.

15

Upstream fish passage for the projects on the Little Androscoggin River, including the Marcal Project, would provide migrating anadromous fish on their spawning run with access to essential habitat in the watershed above the projects. In the FEIS, the staff describes the benefits of providing upstream fish

passage on the Little Androscoggin River. However, there is  
insufficient information in the record at this time to  
require  
such facilities at the Marcal Project. The MDEP, in the  
WQC,

(continued...)

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Maine would submit final design drawings, a construction schedule, and operating and maintenance plans for the required facility. 16/ Future installation of upstream fish passage at the Marcal Project is required as part of this license. However, the provisions of this condition which give the MDEP-BLWQ approval authority over various aspects of a federal license are beyond the purview of Section 401. Thus, such provisions will not become part of this license. Rather, Article 408 requires Ridgewood Maine to prepare, after consultation with the MDEP, among other agencies, a final plan, for Commission approval, to construct, operate, and maintain an upstream fish passage facility at the Marcal Project at some future date.



Condition 6 requires Ridgewood Maine to develop and maintain a public fishing and carry-in boat access facility, as well as a canoe portage route around the project. Development of the recreation access facility and the canoe portage trail are included as part of this license. Condition 6 also requires Ridgewood Maine to submit final design drawings, a construction schedule, and a maintenance plan for the recreation facilities. This information would be reviewed and approved by the MDEP-BLWQ. Such a requirement would give the state the ability to control the timing of activities under a federal license, as well as approval authority over activities required by a federal license. This requirement is beyond the scope of Section 401 and will not become part of this license. Rather, Article 411 requires Ridgewood Maine to prepare, after consultation with the Maine Department of Conservation (MDC) and the MDEP, among other entities, a revised recreation plan for the Marcal Project. The revised plan would be submitted to the Commission for approval.

## SECTION 18 – AUTHORITY TO PRESCRIBE FISHWAYS

(...continued)

MDMR states that such facilities will not be required until the  
management and/or MASA develop an anadromous fish restoration and  
such plan for the Little Androscoggin River Basin. The staff  
describes a similar approach in the FEIS, and concludes that  
valuable an approach is appropriate. This approach would provide  
agencies guidance to the river's hydro owners and the resource  
and regarding the adequacy of existing fish management measures  
facilities, and the need for any future passage measures to  
Basin. restore anadromous species to the Lower Androscoggin River

16

accordance Ridgewood Maine would submit these items in  
this with a schedule agreed to between Ridgewood Maine and the  
consulting agencies. The MDEP-BLWQ would review and approve  
information.

Under Section 18 of the FPA, the Commission must require a licensee, at its own expense, to construct, operate, and maintain such fishways as may be prescribed by the Secretary of the Interior or the Secretary of Commerce, as appropriate.

The U.S. Department of the Interior (Interior), on October 11, 1994, submitted the following two conditions pursuant to Section 18 of the FPA:

- (1) The licensee shall ensure that the design, location, installation (including scheduling), maintenance, and operation of fishways at the Marcal Project conform to the specifications of the U.S. Fish and Wildlife Service (USFWS); and
- (2) The Secretary of the Interior's authority to prescribe the construction, operation, and maintenance of fishways is reserved under Section 18 of the FPA.

As discussed in the FEIS, Interior's prescription does not constitute a prescription under Section 18 of the FPA. 17/  
However, I will follow the staff's recommendation in the FEIS,

and require installation of fish passage facilities, pursuant to the Commission's Section 10(a)(1) authority. Article 406 requires Ridgewood Maine to install, operate, and maintain downstream fish passage facilities at the Marcal Project.

Although fish passage facilities may not be prescribed by Interior at the time of project licensing, the Commission's practice has been to include a license article that reserves Interior's authority to prescribe facilities for fish passage when so requested. 18/ Article 409 reserves authority to the Commission to require Ridgewood Maine to construct, operate, and maintain such fishways as may be prescribed by Interior pursuant to Section 18 of the FPA.

#### RECOMMENDATIONS OF FEDERAL AND STATE FISH AND WILDLIFE AGENCIES

17/ Condition 1, as it is written, does not include a specific description of what type of fish passage facility would be required by Interior at the Marcal Project. Moreover, Condition 2 merely seeks to reserve authority to prescribe fishways pursuant to Section 18 of the FPA at a later date.

61,079 18/ The Commission made it clear in Lynchburg (39 FERC  
at p. 61,218) that conditions which essentially seek to  
themselves reserve authority to prescribe a fishway are not  
fishway prescriptions. This view was upheld in  
Wisconsin Public Service Corporation, 62 FERC 61,095 (1993); aff  
d,  
Wisconsin Public Service Corporation v. FERC, 32 F.3d  
1165 (1994).

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Section 10(j)(1) of the FPA requires the Commission, when issuing a license, to include license conditions, based on recommendations of federal and state fish and wildlife agencies, for the protection of, mitigation of adverse impacts to, and enhancement of fish and wildlife resources. In this proceeding, Interior filed Section 10(j) recommendations for the Marcal Project. 19/ No state fish and wildlife agencies, or any other

entity, filed recommendations under Section 10(j). 20/

In the DEIS, the staff addressed Interior's concerns, recommended adopting some of the fish and wildlife recommendations, and found some recommendations to be inconsistent with the FPA, as discussed below.

In determining whether to accept or reject recommendations of fish and wildlife agencies under Section 10(j), the Commission first determines whether each recommendation is supported by substantial evidence in the record. If not, the recommendation is found inconsistent with the requirements of Section 313(b) of the FPA, which requires Commission orders be supported by substantial evidence.

Second, the Commission determines whether a substantiated recommendation is inconsistent with the FPA or other applicable law. Any such inconsistency is usually with the Commission's determination under the equal consideration/comprehensive development standards of the FPA [Sections 4(e) and 10(a)] that the recommendation unduly conflicts with another project purpose or value.

Finally, the Commission must show how the fish and wildlife conditions that are adopted will "adequately and equitably

protect, mitigate damages to, and enhance fish and wildlife habitat (including related spawning grounds and habitat) affected by the project."

The staff recommended adoption of, and this license contains conditions consistent with, Interior's recommendation that Ridgewood Maine develop and implement a minimum flow and project operational monitoring plan (Articles 404 and 405).

19/ see letter dated October 14, 1994.

license  
the  
20/ The MSP0, in providing Section 10(j) comments on the application for the Marcal Project, states that the decisions, and terms and conditions made by the MDEP on application for Section 401 water quality certification shall represent the sole position of the State of Maine regarding the Marcal license application.

Although considered outside the scope of Section 10(j), 21/ the staff recommended the adoption of, and this license contains a condition consistent with, Interior's recommendation that Ridgewood Maine periodically monitor recreational use at the Marcal Project (Article 412).

The staff found Interior s recommendations for a minimum bypass flow of 56 cfs and development of shoreland protection measures to be inconsistent with the comprehensive planning standard of Section 10(a) of the FPA, including the equal consideration provision of Section 4(e) of the FPA. Under Section 10(j)(2) of the FPA, whenever 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, the Commission shall attempt to resolve such inconsistencies with the fish and wildlife agencies, giving due weight to the recommendations, expertise, and statutory responsibilities of such agencies.

The staff informed Interior of the two inconsistencies, and



requested that they consider other options that would be agreeable to Interior and that would adequately protect fishery resources and terrestrial wildlife consistent with other project purposes. 22/ Interior responded to the staff's request, but did not provide any options. 23/

In an attempt to resolve the inconsistencies between the staff's recommendations and those of Interior, and because the staff had revised its operational recommendations for the Marcal Project, 24/ a Section 10(j) meeting was held on April 8, 1996,

21

Interior's  
Project  
for  
fish

The staff made a preliminary determination that recommendation to monitor recreational use at the Marcal was an inappropriate fish and wildlife recommendation under Section 10(j), in that it did not provide specific measures the protection, mitigation of damages to, and enhancement of and wildlife resources.

22

see letter dated December 1, 1995.

23

see letter dated February 22, 1996.

24

operation at The staff initially recommended run-of-river  
the Marcal Project. The staff believed that operating the  
Marcal Project in a peaking mode resulted in forced spill at the  
three downstream projects, which would adversely affect the  
projects' economics. Based on comments submitted on the DEIS, the  
staff revisited the issue of project operations at the Marcal  
Project. The staff's detailed review of their studies showed that  
peaking operation at the Marcal Project caused no spill at the  
downstream

(continued...)

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in Lewiston, Maine. The staff and Interior partially resolved  
the minimum bypass flow issue, but were unable to resolve the  
shoreland protection/buffer zone issue, as discussed below. 25/

## Section 10(j)(2) Findings

In accordance with Section 10(j)(2) of the FPA, if the Commission, after attempting to resolve any inconsistencies, does not adopt a recommendation of a fish and wildlife agency, the Commission is required to publish findings that: (1) an agency recommendation is inconsistent with the purposes and requirements of Part I of the FPA, or other applicable law [Section 10(j)(2)(A)]; and (2) conditions selected by the Commission comply with the requirements of Section 10(j)(1) of the FPA and will adequately and equitably protect, mitigate damages to, and enhance fish and wildlife [Section 10(j)(2)(B)]. My findings are as follows.

### 1. Section 10(j)(2)(A) Finding

Minimum bypass flow – As discussed in the FEIS, the most significant increases in aquatic habitat occur between leakage (1.5 cfs) and 20 cfs. 26/ Moreover, the FEIS shows that changes in aquatic habitat at flows above 20 cfs are generally in the form of incrementally small beneficial changes relative to the considerable positive benefits provided by 20 cfs. 27/

Using the existing conditions as baseline, Interior's operational recommendations, including releasing a bypass minimum

flow of 56 cfs, would result in a loss of 730 Megawatt-hours

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(...continued)

Marcal projects. This was because the peaking flows from the Project were below the maximum hydraulic capacities of the downstream projects.

25

summary the FEIS (at pp. 5-59 through 5-62) and the meeting dated April 19, 1996, which are available for inspection in Commission's public file for this project.

26

smallmouth On average, 20 cfs provides an 87 percent increase in brook trout habitat, and an 85 percent increase in bass habitat, over existing habitat conditions.

27

eight an 11 A 56 cfs minimum flow provides: (1) an additional to 27 percent increase in habitat for smallmouth bass; (2) percent decline in juvenile brook trout habitat; and (3) a

percent increase in adult brook trout habitat.

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(MWh) of energy, and would cost Ridgewood Maine about \$16,000 annually. 28/

At the Section 10(j) meeting, the USFWS, acting on behalf of Interior, reiterated its position relative to bypass flows at the project, but provided little additional evidence to substantiate its position. The USFWS offered only a rather limited description of the habitat needs for Atlantic salmon, in qualitative terms. 29/ Given the virtual absence of any definitive additional evidence, the staff concluded that the USFWS's recommendation pertaining to minimum bypass flows at the Marcal Project was not warranted at this time.

During the Section 10(j) meeting, the staff, the USFWS, and Ridgewood Maine discussed different avenues to resolve the bypass

flow issue, but could not find any common ground on the specific flow requirements. However, subsequent to the Section 10(j) meeting, Ridgewood Maine and the USFWS, among others, 30/ jointly agreed to certain provisions related to bypass flows, future flow needs in the bypassed reach, and reopening the bypass flow issue at a future date. 31/ The provisions agreed to include: (1) filing a report, every five years, with the Commission that summarizes the status of the anadromous fish restoration efforts in the lower Androscoggin and Little Androscoggin Rivers; and (2) if warranted, conduct a study to reassess the bypassed reach minimum flow relative to the salmon s habitat requirements. The staff provides a detailed description of the agreement's provisions in the FEIS. 32/

The staff generally agrees with the provisions outlined in the agreement. However, the staff states that it is important to establish the criteria that will be used to determine when the bypass flow should be reassessed in the future, which is unclear at this point. I agree with the staff s assessment. In Article 403 I am requiring Ridgewood Maine to release a minimum flow of

28

changes Cumulatively, Interior s recommended operational  
would result in a loss of 1,560 MWh of energy, and cost the

Mill Marcal, Hackett Mills, Upper Barkers Mill, and Lower Barkers

Projects an estimated \$34,000 annually.

29

the Atlantic salmon was not a species considered during  
minimum flow study.

30

and The Maine Department of Inland Fisheries and Wildlife  
the MDMR were also parties to the agreement.

31

on The letter of agreement was filed with the Commission  
June 18, 1996.

32

FEIS at pp. 4-103 and 4-104.

20 cfs to the bypassed reach. 33/ I am not requiring Interior s  
recommended flow of 56 cfs, as I believe this flow, at this time,

would be inconsistent with Sections 10(a) and 4(e) of the FPA. The benefits of Interior's recommended minimum bypass flow would be minor. Article 403 also includes a re-opener provision, as outlined in the agreement and discussed in the FEIS. Moreover, the MASA is included as a consulting agency during the flow reassessments.

Shoreland protection measures/buffer zones – Interior recommended establishing a shoreline buffer zone (of unspecified width) at the Marcal Project for the protection of wetlands and associated wildlife. Based on a 200-foot-wide buffer, the staff estimates that this measure would involve the purchase or lease of about 100 acres of land surrounding the Marcal impoundment. 34/ Conservatively, acquiring the rights to the 100 acres could cost \$175,000. 35/

The Marcal Project is a minor project, and this license waives the applicability of pertinent portions of Sections 14 and 15 of the FPA. The Commission's regulations, at 18 C.F.R. 4.61(f), do not require the licensee of a minor project to control any land around the project reservoir other than those ". . . necessary to allow operation and maintenance of the project and control of the shoreline and reservoir." Given that Ridgewood Maine is not proposing changes in land use around the Marcal impoundment, and that no information in the record



suggests that the project shoreline is jeopardized by development or other erosional problems, and taking into account the cost of acquiring a buffer, I agree that there is no need for a buffer zone at this time. 36/ Interior s buffer zone recommendation is inconsistent with the provisions of Sections 10(a) and 4(e) of the FPA.

33

As stipulated in Condition 2 of the project's WQC, Ridgewood Maine will be required to release 20 cfs to the bypassed reach when the project is generating and 56 cfs, or inflow, whichever is less, when the project is not generating.

34

This estimate is based on a 200-foot-wide buffer zone for shoreland protection as established by Commission Order 313 (34 FPC 1546, 1965).

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This estimate is based on an average land value of \$1,750 per acre. see Central Maine Power Company s estimate for land

surrounding the nearby Gulf Island-Deer Rips Project.

36

(1996) see Great Northern Paper, Inc., 77 FERC 61,066

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2. Section 10(j)(2)(B) Finding

Pursuant to Section 10(j)(2)(B), I find that the conditions included in this license comply with the requirements of Section 10(j)(1).

This license requires Ridgewood Maine to: (1) restrict impoundment fluctuations to one foot from May 1 through October 15 and two feet from October 16 through April 30 to protect aquatic habitat in the impoundment (Article 401); (2) release a year-round project minimum flow of 56 cfs, or inflow, whichever is less, to protect water quality and aquatic habitat below the Marcal Project (Article 402); 37/ (3) release a year-round

minimum flow to the project's bypassed reach, consisting of 20 cfs when the project is generating, or 56 cfs, or inflow, whichever is less, when the project is not generating (Article 403); (4) file plans to monitor compliance with project operations (Articles 404 and 405); (5) file plans to install, operate, maintain, and monitor the effectiveness of, downstream fish passage facilities at the Marcal Project (Articles 406 and 407); (6) file a revised recreation plan (Article 411); (7) periodically monitor recreation use at the project (Article 412); and (8) prepare a cultural resource management plan (Article 410). This license also requires Ridgewood Maine to file a final schedule and plan for providing upstream fish passage at the Marcal Project at a future date (Article 408), and reserves the Commission's authority to require the construction, operation, and maintenance of such fishways as are prescribed by Interior pursuant to Section 18 of the FPA (Article 409).

The above measures will ensure that fisheries, aquatic habitat, and water quality are protected, or in some cases enhanced, by the continued operation of the Marcal Project. I conclude that the license conditions adequately and equitably protect, mitigate damage to, and enhance fish and wildlife resources affected by the project. Moreover, these conditions comply with the requirements of Section 10(j) of the FPA.

## COMPREHENSIVE PLANS

Section 10(a)(2) of the FPA requires the Commission to consider the extent to which a project is consistent with federal and state comprehensive plans for improving, developing, or conserving a waterway or waterways affected by the project. Under Section 10(a)(2) of the FPA, federal and state agencies filed a total of 14 comprehensive plans that address various resources in Maine. Of these, the staff identified and reviewed

37

flow  
flows

The project minimum flow would consist of the minimum released to the bypassed reach and any necessary generating to establish the total flow of 56 cfs.

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ten plans relevant to this project, and the projects in the Lower Androscoggin River Basin. 38/ No conflicts were found.

The staff also reviewed federal and state plans that were relevant to the projects but weren't listed as Commission approved comprehensive plans. They are as follows: (1) Androscoggin River habitat suitability and fish management potential, Maine Department of Inland Fisheries and Wildlife, 1986; (2) New Hampshire wetlands priority conservation plan, New Hampshire Office of State Planning, 1989; (3) Lower Androscoggin River recreation study and management plan, Androscoggin Valley Council of Governments, 1983; (4) the Androscoggin River Basin overview, New England River Basins Commission, 1981; and (5) Maine Atlantic salmon restoration and management plan, 1995-2000, Atlantic Sea-Run Salmon Commission, 1995. No conflicts were found with any of these plans.

#### COMPREHENSIVE DEVELOPMENT

Sections 4(e) and 10(a)(1) of the FPA require the Commission, in acting on applications for license, to give equal consideration to all uses of the waterway on which a project is located. When the Commission reviews a project, the environment, recreation, fish and wildlife, and other nondevelopmental values of the involved waterway are considered equally with power and other developmental values. In deciding whether, or under what conditions, a hydropower license should be issued, the Commission

State: (1) Strategic plan for management of Atlantic salmon in the State of Maine, Maine Atlantic Sea-Run Salmon Commission, July 1984; (2) Maine rivers study-final report, Maine Department of Conservation, May 1982; (3) State of Maine comprehensive rivers management plan, Maine State Planning Office, Volumes 1-3, May 1987; (4) State of Maine comprehensive rivers management plan, Maine State Planning Office, Volume 4, December 1992 [includes Maine's statewide river fisheries management plan, Maine State Planning Office, June 1982]; and (5) State of Maine comprehensive rivers management plan, Maine State Planning Office, Volume 5, February 1993.

Federal: (1) Final environmental impact statement - restoration of Atlantic salmon to New England rivers, Department of the Interior, May 1989; (2) North American wildlife management plan, U.S. Fish and Wildlife Service, May 1986; (3) North American waterfowl management plan, U.S. Fish and Wildlife Service, May 1986; (4) Fisheries USA:

the

recreational fisheries policy of the U.S. Fish and  
Wildlife Service, U.S. Fish and Wildlife Service, undated; (5)  
the nationwide rivers inventory, National Park Service,  
January 1982.

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must weigh the various economic and environmental tradeoffs  
involved in the decision.

Based on the staff's independent review and evaluation of  
the proposed project, the proposed project with additional  
environmental measures, and the no-action alternative, I have  
selected the proposed project with additional required  
environmental measures as the preferred option. I selected this  
option because: (1) the required measures would protect and  
enhance water quality, fishery resources, wetlands and associated

wildlife, recreation, and aesthetics; (2) the electricity generated from a renewable resource would be beneficial because it would continue to replace the use of fossil-fueled, steam-electric generating plants; thereby, conserving nonrenewable energy resources and reducing atmospheric pollution; and (3) the recommended alternative would be best adapted to a comprehensive plan for the use of water power development, while protecting and enhancing natural resource values and uses. The environmental enhancement measures that are required as part of the preferred option are outlined above, in the section discussing the recommendations of the fish and wildlife agencies.

In determining whether a proposed project will be best adapted to a comprehensive plan for developing a waterway, pursuant to Section 10(a)(1) of the FPA, I consider a number of public interest factors, including the economic benefits of project power. Based on current economic conditions, <sup>39/</sup> without future escalation or inflation, and a 30-year license term, the project as proposed by Ridgewood Maine, with additional required environmental measures, would produce about 4,100 MWh of power at an annual cost of about \$145,000 more than the current cost of equivalent alternative power in the region. <sup>40/</sup>

Although the staff's evaluation shows that project power would cost more to produce than currently available alternative



power, project economics is only one of the many public interest factors considered in determining whether or not, or under what conditions, to issue a license. I acknowledge that the continued operation of the project would be more economical under Ridgewood Maine's proposal, than under the conditions adopted herein. However, Ridgewood Maine is ultimately responsible, and best able, to determine whether continued operation of the existing

39

FERC

see Mead Corporation, Publishing Paper Division, 72

61,027 (July 13, 1995).

40

Upper

The Marcal, Hackett Mills, Lower Barkers Mill, and

power at

Barkers Mill Projects would produce about 19,440 MWh of

of

an annual cost of about \$676,000 more than the current cost

equivalent alternative power in the region.

project, including the conditions adopted herein, is a reasonable decision in these circumstances.

I conclude that it is in the public interest to issue the license, as conditioned herein, and leave to Ridgewood Maine the decision of whether or not to continue to operate the project as so conditioned. 41/ Moreover, Based on the staff s review, I find that the Marcal Project, as licensed with the added requirements of the WQC and our recommendations, is best adapted to the comprehensive development of the Little Androscoggin River.

#### TERM OF LICENSE AND BACK ANNUAL CHARGES

As articulated in City of Danville, 42/ the Commission's policy is to establish 30-year terms for projects with little or no proposed redevelopment, new construction, new capacity or environmental measures; 40-year terms for projects with a moderate amount of proposed redevelopment, new construction, new capacity or mitigative and enhancement measures; and 50-year terms for projects with proposed extensive redevelopment, new construction, new capacity, or mitigative and enhancement measures.

This license authorizes moderate redevelopment at the existing project. 43/ Accordingly, the license issued for the Marcal Project will be for a prospective term of 40 years.

Section 10(e) of the FPA provides that licensees shall pay to the United States annual charges to reimburse the United States costs of administering Part I of the FPA. 44/ When the Commission issues a license for a project that has been operating without necessary FPA authorization, it also assesses an amount

41

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In analyzing public interest factors, the Commission into consideration the fact that hydroelectric projects unique regional electrical system operational benefits, and proposed or existing projects may provide substantial not directly related to utility operation; benefits that lost if a license were denied solely on economic grounds.

City of Augusta, et al., 72 FERC 61,114, at p. 61,599 n. 57 (1995).

42

see City of Danville, Virginia, 58 FERC 61,318

(1992).

43

The applicant is proposing to (1) install a minimum flow release structure in the project dam, (2) construct a downstream fish passage structure, and 3) construct a canoe portage trail and a carry-in boat access facility on the project impoundment.

44

16 U.S.C. 803(e).

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equal to the annual charges that would have been assessed from the date that the licensee knew or should have known that a license was required.

A hydroelectric project is required to be licensed if, among other things, it is located on a navigable water of the United States. 45/ In this case, the project affects the Little

Androscoggin River, which was found navigable by the Commission in August 1990.

As articulated in City of Danville, 46/ for pre-1935 projects on navigable streams, 47/ it is Commission policy to require payment of an amount equivalent to the annual charges that would have been collected beginning April 1, 1962. 48/ Consequently, I will assess back annual charges from April 1, 1962 to June 30, 1997 for this project. These are the annual charges that would have been paid, had the license been obtained on April 1, 1962.

#### SUMMARY OF FINDINGS

The staff concludes that the continued operation of the Marcal project, when assessed in a basin-wide context with other projects on the Little Androscoggin and lower Androscoggin River, would be a major federal action affecting the quality of the human environment. Thus, a DEIS and an FEIS were issued that encompassed this project. Background information, analysis of impacts, and support for related license articles are contained in the FEIS.

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

safe if operated and maintained in accordance with the requirements of this license. Analysis of related issues is

45

see Sections 3(8) and 23(b)(1) of the FPA, 16 U.S.C. 796(8) and 817(1).

46

pre- In a license for a previously unauthorized existing 1935 project located on a navigable waterway.

47

the The Marcal Project dam was constructed ca. 1866, and powerhouse, as it currently exists, was constructed in 1889. See FEIS at page 1-2.

48

Hampshire, 27 April 1, 1962 is the date of the Federal Power Commission's order in Public Service Company of New Hampshire, 27 FPC 830 (1962). This order established a new policy governing license terms and back annual charges for existing, unlicensed projects on waterways where the project operator either knew, or should have known, that the waterway was navigable.

provided in the project's S&DA, which is available in the Commission's public file for this project.

Based upon my review of the record in this proceeding, I conclude that the Marcal Project would not conflict with any planned or authorized development. Moreover, the Marcal Project is best adapted to the comprehensive development of the affected waterway for beneficial public uses.

The Director orders:

(A) This license is issued to Ridgewood Maine Hydro Partners, L.P. (licensee), for a period of 40 years, effective the first day of the month in which this order is issued, to operate and maintain the Marcal Project. This license is subject to the terms and conditions of the FPA, which are incorporated by reference as part of this license, and subject to the regulations the Commission issues under the provisions of the FPA.

(B) The project consists of:

(1) All lands, to the extent of the licensee's interests in those lands shown by Exhibit G filed on May 23, 1994:

Exhibit G-	FERC No. 11482-000	Showing
1	1005	Project Boundary

(2) Project works consisting of:

(a) A dam, consisting of (1) a westerly abutment, adjoining the Elm Street Bridge; (2) a concrete spillway section, about 29.5 feet long by 15.4 feet high, with a crest elevation of 273.3 feet National Geodetic Vertical Datum (NGVD); (3) a granite blocked pier, about six feet long; (4) a granite blocked spillway section, about 96 feet long by an average height of 12 feet, with a crest elevation of 271.3 feet (NGVD), topped with two-foot-high pin-supported wooden flashboards; and (5) an easterly abutment adjoining the foundation of an abandoned mill building, with two four-foot-wide by five-foot-deep sluice gates (one gate is



inoperable);

- (b) An intake area leading to the penstock, which consists of (1) a forebay canal, about 38 feet wide by 120 feet long, equipped with 45-foot-long by 11-foot-deep steel trashracks with 3/8-inch steel bars at two-inch spacings; and (2) a triangular headgate flume, with a 12-foot by 12-foot wooden headgate;

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- (c) A 470-foot-long by 11-foot diameter buried steel penstock;
- (d) A powerhouse equipped with two horizontal generating units, consisting of a 960-kilowatt (kW) General Electric generator driven by a S. Morgan Smith double-runner turbine, with two 36-inch diameter runners, rated at 707 and 625 horsepower (HP), respectively, and

a 350-kW Westinghouse synchronous generator driven by a S. Morgan Smith double-runner turbine, with two 27-inch diameter runners, each rated at 308 HP, and having (1) a hydraulic capacity of 120 cfs to 560 cfs; (2) an average head of 37.7 feet; and (3) a power factor of 1.0 kW/kilovolt ampere (kVA);

- (e) A tailrace channel about 290 feet long by 40 feet wide, with a normal tailwater elevation of 235.6 feet (NGVD);
- (f) An impoundment, with (1) a normal headpond elevation of 273.3 feet (NGVD); (2) a surface area of about 27 acres; and (3) a gross storage capacity of about 103 acre-feet;
- (g) A 34.5-kV transmission line, consisting of 122 feet of underground line and 260 feet of overhead line; and
- (h) Appurtenant facilities.

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

Exhibit A: The following Exhibit A sections, filed on May

23, 1994:

Exhibit A, the section titled PROJECT DESCRIPTION, describing the principal existing and proposed facilities, including the spillway, powerhouse, impoundment, turbines and generators, transmission line, and appurtenant facilities (pages A-1 through A-4).

Exhibit F: The following Exhibit F drawings, filed on May 23, 1994:

Exhibit	FERC No. 11482-000	Showing
F-1	11482-1001	Marcal Hydroelectric Project - Site Plan
F-2	11482-1002	Marcal Hydroelectric Project - Dam and Intake Plan

F-3	11482-1003	Marcal Hydroelectric Project - Elevation and Sections of Dam
F-4	11482-1004	Marcal Hydroelectric Project - Powerhouse Plan

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

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

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

4(b), except the second sentence; 4(e), insofar as it relates to approval of plans by the Chief of Engineers and the Secretary of the Army; 6, insofar as it relates to

public notice and to the acceptance and expression in the license of terms and conditions of the FPA that are waived here; 10(c), insofar as it relates to depreciation reserves; 10(d); 10(f); 14, except insofar as the power of condemnation is reserved; 15; 16; 19; 20; and 22.

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

Article 201. The licensee shall pay the United States the following annual charges:

1. From April 1, 1962 to June 30, 1997, for the purpose of reimbursing the United States for the cost of administration of Part I of the FPA, a reasonable amount as determined in accordance with the provisions of the Commission's regulations in effect from time to time. The authorized installed capacity for that purpose is 1,310 kilowatts (kW).

2. From July 1, 1997, for the purpose of reimbursing the United States for the cost of administration of Part I of the FPA, a reasonable amount as determined in accordance

with the provisions of the Commission's regulations in effect from time to time. The authorized installed capacity for that purpose is 1,310 kW. Under the regulations currently in effect, projects with an authorized installed

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capacity of less than or equal to 1,500 kW are not assessed with an annual administrative charge.

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

the authorized representative of the Commission and in accordance with appropriate federal, state, and local statutes and regulations.

Article 203. Within 45 days from the date of issuance of this license, the licensee shall file an original set and two duplicate sets of aperture cards of the approved drawings. The set of originals must be reproduced on silver or gelatin 35 mm microfilm. The duplicate sets are copies of the originals made on diazo-type microfilm. All microfilm must be mounted on type D (3-1/4" x 7-3/8") aperture cards.

Prior to microfilming, the FERC Drawing Number (11482-0001, 1002, etc.) shall be shown in the margin below the title block of the approved drawing. After mounting, the FERC Drawing Number must be typed on the upper right corner of each aperture card. Additionally, the Project Number, FERC Exhibit (e.g., F-1, G-1, etc.), Drawing Title, and date of this license must be typed on the upper left corner of each aperture card.

The original and one duplicate set of aperture cards must be filed with the Secretary of the Commission. The remaining duplicate set of aperture cards shall be filed with the Commission's New York Regional Office.

Article 301. The licensee shall commence construction of the project works within 2 years from the issuance date of the license and shall complete construction of the project within 4 years from the issuance date of the license.

Article 302. The licensee shall, within 90 days of completion of construction of facilities authorized by this license, including those facilities authorized in Articles 404, 406, and 411, file for approval, revised Exhibits A, F, and G drawings, to describe and show those project facilities as-built.

Article 303. Before starting construction, the licensee shall review and approve the design of contractor-designed cofferdams and deep excavations, and shall make sure construction of cofferdams and deep excavations is consistent with the

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approved design. At least 30 days before starting construction of the cofferdam, the licensee shall submit one copy to the



Commission's Regional Director and two copies to the Commission (one of these copies shall be a courtesy copy to the Commission's Director, Division of Dam Safety and Inspections), of the approved cofferdam construction drawings and specifications and the letters of approval.

Article 304. The licensee shall, at least 60 days prior to the start of construction, submit one copy to the Commission's Regional Director and two copies to the Commission (one of these shall be a courtesy copy to the Director, Division of Dam Safety and Inspections), of the final contract drawings and specifications for pertinent features of the project, such as water retention structures, powerhouse, and water conveyance structures. The Commission may require changes in the plans and specifications to assure a safe and adequate project. If the licensee plans substantial changes to the location, size, type, or purpose of the water retention structures, powerhouse, or water conveyance structures, the plans and specifications must be accompanied by revised Exhibit F and G drawings, as necessary.

Article 305. At least 90 days before starting construction of those project works not required for dam safety, the licensee shall file for approval, with the Director, Office of Hydropower Licensing, three copies of a project financing plan. The plan must show that the licensee has acquired the funds, or commitment

for funds, necessary to redevelop the project in accordance with this license. The licensee shall not acquire any property through condemnation proceedings or start any project construction (other than dam safety repairs) or ground disturbing activities (other than those required for subsurface site exploration) that are inseparably associated with the project before the financing plan is approved. The requirements of this article shall not apply to, or restrict, those activities ordered by the Commission's New York Regional Office or the Division of Dam Safety and Inspections in the interest of public or dam safety.

Article 306. The licensee shall limit the instantaneous discharge from the Marcal Project, such that the project discharge does not exceed the maximum hydraulic capacity of any downstream hydroelectric project on the Little Androscoggin River, except when the inflow to the Marcal Project's impoundment is greater than such hydraulic capacities.

Article 401. Upon approval of the plan required in Article 405, the licensee shall maintain a minimum impoundment elevation of 272.3 feet National Geodetic Vertical Datum (NGVD) from May 1 through October 15, and a minimum impoundment elevation of 271.3 feet (NGVD) from October 16 through April 30.

These minimum impoundment surface elevations may be temporarily modified if required by operating emergencies beyond the control of the licensee, or for short periods upon mutual agreement between the licensee, the Maine Department of Inland Fisheries and Wildlife (MDIFW), the Maine Department of Marine Resources (MDMR), and the Maine Department of Environmental Protection (MDEP). If the impoundment water surface elevation is so modified, the licensee shall notify the Commission, the MDIFW, the MDMR, and the MDEP as soon as possible, but no later than ten days after each such incident.

Article 402. Upon approval of the plans required in Articles 404 and 405, the licensee shall release from the Marcal Project into the Little Androscoggin River downstream from the confluence of the project's bypassed reach and tailrace, a minimum flow of 56 cubic feet per second, or inflow, whichever is less for the protection and enhancement of fishery resources and

water quality in the Little Androscoggin River downstream of the Marcal Project.

This flow may be temporarily modified if required by operating emergencies beyond the control of the licensee, or for short periods upon agreement between the licensee and the U.S. Fish and Wildlife Service (USFWS), the Maine Department of Inland Fisheries and Wildlife (MDIFW), the Maine Department of Marine Resources (MDMR), and the Maine Department of Environmental Protection (MDEP). If the flow is so modified, the licensee shall notify the Commission, the USFWS, the MDIFW, the MDMR, and the MDEP as soon as possible, but no later than ten days after each such incident.

Article 403. Upon approval of the plans required in Articles 404 and 405, and as a component of the minimum flow required in Article 402, the licensee shall release from the Marcal dam to the project's bypassed reach a minimum flow of 20 cubic feet per second (cfs) when the Marcal Project is on-line and generating or 56 cfs, or inflow, whichever is less, when the Marcal Project is off-line and not generating. The licensee shall release these minimum flows, as measured in the project's bypassed reach, for the stated purpose of protecting and enhancing fishery resources, water quality, and aquatic invertebrates in the bypassed reach.

These flows may be temporarily modified if required by operating emergencies beyond the control of the licensee, or for short periods upon agreement between the licensee and the U.S. Fish and Wildlife Service (USFWS), the Maine Department of Inland Fisheries and Wildlife (MDIFW), the Maine Department of Marine Resources (MDMR), and the Maine Department of Environmental Protection (MDEP). If the flow is so modified, the licensee shall notify the Commission, the USFWS, the MDIFW, the MDMR, and

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the MDEP as soon as possible, but no later than ten days after each such incident.

In the context of modifying the minimum flow requirement in the future, the licensee, beginning five years from the date of issuance of this license and every five years thereafter, shall file with the Commission an anadromous fishery report which summarizes the status of any anadromous fish restoration efforts

in the Lower Androscoggin River Basin, including the Little Androscoggin River. The report shall be prepared in consultation with the USFWS, the MDIFW, the MDMR, the MDEP, and the Maine Atlantic Salmon Authority (MASA). The report shall include, but not be limited to: (1) a summary of the number of anadromous fish (including Atlantic salmon, American shad, alewives, and blueback herring) passed upstream at fish passage facilities located downstream from the Marcal Project; (2) a summary of the numbers of anadromous fish species trapped and trucked to areas within the Little Androscoggin River Basin; (3) the criteria that will be used to determine whether, or under what conditions, the bypass minimum flow should be modified (for example, a trigger number of juvenile salmon); and (4) an assessment of the need for a fish passage facility at the Marcal Project.

If, as a result of an anadromous fishery report prepared pursuant to the above condition, the licensee, the USFWS, the MDIFW, the MDMR, the MDEP, and the MASA conclude that significant numbers of juvenile Atlantic salmon are utilizing the Marcal Project area, the licensee shall conduct a study to reassess the bypassed reach minimum flow relative to the Atlantic salmon's habitat requirements. The licensee shall conduct the study in consultation with the USFWS, the MDIFW, the MDMR, the MDEP, and the MASA, and within 120 days of completing the study, file the results and conclusions of the study, and any relevant agency

correspondence, with the Commission.

If the conclusions of the study indicate that the bypassed reach minimum flow should be modified to accommodate habitat needs of juvenile Atlantic salmon, the Commission may direct the licensee to file, with the Commission, an amendment to license to change the bypass minimum flow requirement.

Article 404. Within 180 days from the date of issuance of this license, the licensee shall file with the Commission, for approval, a plan describing the methods for releasing the project minimum flow and the bypass minimum flow at the Marcal Project.

The plan shall include, but not be limited to: (1) the mechanism(s) and structure(s) that the licensee proposes to use; (2) a description of the level of manned and automatic operation of the flow release structure(s); and (3) a description of how the flows required by Articles 402 and 403 will be maintained when the impoundment is refilled after generation drawdowns, or

after any maintenance and/or repairs to the project dam or flow release structure(s). The plan shall also include a schedule for: (1) implementation of the plan; (2) consultation with the appropriate federal and state agencies concerning the proposed method(s) of releasing the required flows; and (3) filing the agency comments and licensee s response to agency comments with the Commission.

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

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



information.

The Commission reserves the right to require changes to the plan. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission. Any flow release mechanism(s) or structure(s) constructed by the licensee shall be shown on the as-built drawings filed pursuant to Article 302 of this license.

Article 405. Within 180 days from the date of issuance of this license, the licensee shall file, for Commission approval, a comprehensive plan for monitoring impoundment water surface elevations, required by Article 401, and stream flows in the project s bypassed reach and in the Little Androscoggin River downstream from the project, required by Articles 402 and 403, respectively.

The plan shall include, but not be limited to: (1) the use of one or both of the existing U.S. Geological Survey (USGS) streamflow gaging stations (USGS Gage No. 01057000 or USGS Gage No. 01040002) located on the Little Androscoggin River, if appropriate; and (2) the use of and/or the installation of new staff gages, impoundment surface level monitoring devices, and recording stream gaging equipment, as needed, to determine instantaneous headpond and tailwater elevations, flows in the

bypassed reach, and flows through the powerhouse and in the project s tailrace.

The plan shall also include, but not be limited to descriptions of: (1) the proposed location, design, and

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calibration (including methods and schedule) of the monitoring equipment; (2) the relative extent of manned versus automatic operation of the monitoring equipment; (3) the methods for recording and maintaining flow data; (4) the mechanism(s) for providing flow data to the U.S. Fish and Wildlife Service (USFWS), the Maine Department of Inland Fisheries and Wildlife (MDIFW), the Maine Department of Marine Resources (MDMR), the Maine Department of Environmental Protection (MDEP), and the USGS within 30 days from the date of the agency s request for the data; and (5) a schedule for (a) implementation of the plan, (b) consultation with the appropriate federal and state agencies concerning the data from the monitoring, and (c) filing the data,

agency comments, and licensee s response to agency comments with the Commission.

The plan shall also include provisions consistent with the 10-day notification requirements stipulated in Articles 401, 402, and 403. Furthermore, should impoundment elevations or minimum flows, as measured by the approved monitoring and gaging plan, fall below the levels required by Articles 401, 402, and 403 for reasons other than those stipulated in each of those articles, the plan shall include a provision whereby the licensee files, with the Commission, a report of the incident 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 also shall include: (1) operational data necessary to determine compliance with this article; (2) a description of any corrective measures implemented at the time of the occurrence and the measures implemented or proposed to ensure that similar incidents do not recur; and (3) comments or correspondence, if any, received from the MDIFW, the MDMR, the MDEP, and the USFWS 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.

The licensee shall prepare the impoundment level and flow monitoring plan containing the above-mentioned elements after consultation with the USFWS, the MDIFW, the MDMR, and the MDEP. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee s reasons, based on project-specific information.

plan. Changes to project operation shall not begin until the licensee is notified by the Commission that the plan is approved. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

Article 406. The licensee shall install, operate, and maintain downstream fish passage facilities at the Marcal Project to reduce fish entrainment and provide efficient downstream fish passage past the project.

Within 180 days after the date of issuance of this license, the licensee shall file with the Commission, for approval, a final plan for downstream fish passage at the Marcal Project that includes: (1) a provision for developing and implementing interim downstream fish passage measures, if feasible, to ensure safe passage of anadromous fish past the project until permanent facilities are constructed and operational; (2) functional design drawings of the licensee's proposed permanent downstream fish passage facilities; (3) quantification of the flows required to operate the proposed facilities; (4) an operation and maintenance plan; and (5) a schedule for installing the facilities.

The licensee shall prepare the downstream fish passage plan after consultation with the U.S. Fish and Wildlife Service, the Maine Department of Inland Fisheries and Wildlife, the Maine

Department of Marine Resources, the Maine Atlantic Salmon Authority, and the Maine Department of Environmental Protection. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the drawings, flow requirements, and the installation/operational schedule after they have been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the licensee's plan. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission. The permanent downstream fish passage facilities shall be shown on the as-built drawings filed pursuant to Article 302 of this license.

Article 407. Upon completing construction of the downstream fish passage facilities, the licensee shall monitor the use of the downstream fish passage facility.

Within 180 days after the date of issuance of this license, the licensee shall file with the Commission, for approval, a plan for post-construction studies to monitor the effectiveness of the fish protection and downstream fish passage facilities, and their associated operational flows, to efficiently pass downstream migrating anadromous fish.

The monitoring plan shall include a schedule for: (1) implementation of the plan; (2) consultation with the appropriate Federal and state agencies concerning the results of the monitoring; and (3) filing the results, agency comments, and licensee s response to agency comments with the Commission.

The licensee shall prepare the plan in consultation with the U.S. Fish and Wildlife Service, the Maine Department of Inland Fisheries and Wildlife, the Maine Department of Marine Resources, the Maine Atlantic Salmon Authority, and the Maine Department of Environmental Protection. The licensee shall include with the

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

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

If the results of the monitoring indicate that changes in project structures or operations, including alternative flow requirements, are necessary to facilitate fish passage, the Commission may direct the licensee to make such reasonable changes in the design and/or operations of the downstream fish passage facility, as necessary.

Article 408. As warranted, the licensee shall install, operate, and maintain upstream fish passage at the Marcal Project, or provide an alternative fish passage plan, to facilitate passage of anadromous fish past the project to the



watershed's upstream habitat. No fish passage measures shall be required for the Marcal Project until such time as the Maine Department of Marine Resources (MDMR) and the Maine Atlantic Salmon Authority (MASA) produce a fish restoration and management plan (fishery plan) for the Little Androscoggin River.

The licensee shall cooperate in any future efforts by the MDMR and the MASA to develop and implement the fishery plan for the Little Androscoggin River. The licensee's involvement shall

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begin at such time as the MDMR and the MASA initiate development of the fishery plan, and shall be limited to providing information on operational considerations and design criteria for fish passage at the Marcal Project.

The licensee shall file, with the Commission, annual status reports concerning the MDMR's and the MASA's development of the

fishery plan. Such filings shall begin 180 days after the issuance date of this license, and by October 1 of each year thereafter. The licensee shall continue to file the annual status reports with the Commission until such time as the final fishery plan has been completed. The annual status reports shall include a description of progress made in the previous year and the expected goals to be reached in the upcoming year.

Upon completion of the final fishery plan, the licensee shall consult with the U.S. Fish and Wildlife Service (USFWS), MDMR, the MASA, the Maine Department of Inland Fisheries and Wildlife (MDIFW), and the Maine Department of Environmental Protection (MDEP) concerning any upstream fish passage measures needed at the Marcal Project to facilitate migration of anadromous fish past the project. Based on these consultations, and within 180 days of the fishery plan's completion, the licensee shall file with the Commission, for approval, a report that includes: (1) the final Little Androscoggin River fish restoration and management plan; and (2) a discussion of any recommendations (including the economic and environmental effects of such recommendations) by the licensee, the USFWS, the MDMR, the MASA, the MDIFW, and the MDEP for fish passage at the Marcal Project. The report filed with the Commission shall also include all relevant documentation of the licensee's consultation with the USFWS, the MDMR, the MASA, the MDIFW, and the MDEP.

If the licensee, the USFWS, the MDMR, the MASA, the MDIFW, and the MDEP identify a need for specific upstream fish passage measures at the Marcal Project to facilitate migration of anadromous fish past the project, the Commission reserves the right to direct the licensee to file with the Commission an amendment to license to modify project structures and/or operations, as appropriate.

Article 409. Authority is reserved to the Commission to require the licensee to construct, operate, and maintain, or to provide for the construction, operation, and maintenance of, such fishways as may be prescribed by the Secretary of the Interior pursuant to Section 18 of the Federal Power Act.

Article 410. The licensee, before starting any land-clearing or land-disturbing activities within the Marcal Project's area, other than those specifically authorized in this license, including recreation development at the project, shall

consult with the Maine State Historic Preservation Officer (SHPO).

If the licensee discovers a previously unidentified property that may be eligible for listing in the National Register of Historic Places (discovery) during the course of constructing or developing project works or other facilities at the project, the licensee shall stop all land-clearing and land-disturbing activities in the vicinity of the discovery and consult with the SHPO.

In either instance, the licensee shall prepare a cultural resource management plan (plan), prepared by a qualified cultural resource specialist, after having consulted with the SHPO. The plan shall be prepared in accordance with the Section 106 Process, 36 C.F.R. Part 800, Subpart B, Section 800.3 through 800.5, with the licensee acting in the role of Agency Official. The licensee shall file the plan for Commission approval and, upon approval, implement the plan. The plan shall include with it documentation concerning the nature and extent of consultation with the SHPO and a schedule for avoiding or mitigating effects and conducting additional studies, if such are deemed necessary and appropriate. The Commission may require changes to the plan.

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

Article 411. Within 180 days of license issuance, the licensee shall, in consultation with the U.S. Fish and Wildlife Service (USFWS), the Maine Department of Conservation (MDC), the Maine Department of Environmental Protection (MDEP), town of Mechanic Falls (Mechanic Falls), and Central Maine Power Company (Central Maine), prepare and file, for Commission approval, a revised project recreation plan. The purpose of the plan is to enhance recreation access at the project, including canoe portage around the project facilities. The licensee shall implement the revised recreation plan upon Commission approval.

In the portion of the revised project recreation plan dealing with the permanent carry-in boat access facility, the licensee shall include provisions for: (a) a gravel access road, (b) a gravel parking area for at least ten vehicles, (c) a carry-in boat launch, (d) barrier-free access at a riverbank fishing site, (e) fencing, security lighting, and signage, (f) trash removal and maintenance, and (g) a dry hydrant for use by the

Mechanic Falls Fire Department.

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Following implementation of the revised project recreation plan, the licensee shall file as-built drawings of the facilities pursuant to Article 302 of this license.

The licensee shall include evidence of consultation with the USFWS, the MDC, the MDEP, Mechanic Falls, and Central Maine on the revised project recreation plan, including copies of comments and recommendations on the plan after it has been provided to the USFWS, the MDC, the MDEP's, Mechanic Falls, and Central Maine, and specific descriptions of how the USFWS's, the MDC s, the MDEP's, Mechanic Falls' and Central Maine's comments are accommodated in the plan. The licensee shall allow a minimum of 30 days for the USFWS, the MDEP, the MDC, Mechanic Falls, and Central Maine to comment before filing the revised plan with the Commission. If the licensee does not adopt a recommendation, the

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

Article 412. The licensee, after consultation with the U.S. Fish and Wildlife Service, the Maine Department of Conservation, the National Park Service, the Maine Department of Inland Fisheries and Wildlife, the Maine Department of Marine Resources, the Maine Atlantic Sea-Run Salmon Commission, and the Maine Department of Environmental Protection (agencies), shall monitor, and report to the Commission, recreation use of the Marcal Project area to determine whether existing recreation facilities are meeting recreation demands. In accordance with the Commission's Recreation Report - FERC Form 80, monitoring studies shall begin within six years of the issuance date of this license, and be conducted and reported to the Commission in accordance with Section 8 of the Commission's regulations. The report shall include:

(1) annual recreation use figures;

(2) a discussion of the adequacy of the licensee's recreation facilities at the project site to meet recreation demand;

(3) a description of the methodology used to collect all

study data;

(4) if there is a need for additional facilities, a recreation plan proposed by the licensee to accommodate recreation needs in the project area;

(5) documentation of agency consultation and agency comments on the report after it has been prepared and provided to the agencies; and

(6) specific descriptions of how the agencies' comments are accommodated by the report.

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The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations prior to filing the report with the Commission. The Commission reserves the right to require such facilities so as to enhance recreation use of the project area.



Article 413. (a) In accordance with the provisions of this article, the licensee shall have the authority to grant permission for certain types of use and occupancy of project lands and waters and to convey certain interests in project lands and waters for certain types of use and occupancy, without prior Commission approval. The licensee may exercise the authority only if the proposed use and occupancy is consistent with the purposes of protecting and enhancing the scenic, recreational, and other environmental values of the project. For those purposes, the licensee shall also have continuing responsibility to supervise and control the use and occupancies for which it grants permission, and to monitor the use of, and ensure compliance with the covenants of the instrument of conveyance for, any interests that it has conveyed, under this article. If a permitted use and occupancy violates any condition of this article or any other condition imposed by the licensee for protection and enhancement of the project's scenic, recreational, or other environmental values, or if a covenant of a conveyance made under the authority of this article is violated, the licensee shall take any lawful action necessary to correct the violation. For a permitted use or occupancy, that action includes, if necessary, canceling the permission to use and occupy the project lands and waters and requiring the removal of any non-complying structures and facilities.

(b) The type of use and occupancy of project lands and waters for which the licensee may grant permission without prior Commission approval are: (1) landscape plantings; (2) non-commercial piers, landings, boat docks, or similar structures and facilities that can accommodate no more than ten watercraft at a time and where said facility is intended to serve single-family type dwellings; and (3) embankments, bulkheads, retaining walls, or similar structures for erosion control to protect the existing shoreline. To the extent feasible and desirable to protect and enhance the project's scenic, recreational, and other environmental values, the licensee shall require multiple use and occupancy of facilities for access to project lands or waters. The licensee shall also ensure, to the satisfaction of the Commission's authorized representative, that the use and occupancies for which it grants permission are maintained in good repair and comply with applicable state and local health and safety requirements. Before granting permission for construction of bulkheads or retaining walls, the licensee shall: (1) inspect the site of the proposed construction, (2) consider whether the planting of vegetation or the use of riprap would be adequate to control erosion at the site, and (3) determine that the proposed

construction is needed and would not change the basic contour of the reservoir shoreline. To implement this paragraph (b), the licensee may, among other things, establish a program for issuing permits for the specified types of use and occupancy of project lands and waters, which may be subject to the payment of a reasonable fee to cover the licensee's costs of administering the permit program. The Commission reserves the right to require the licensee to file a description of its standards, guidelines, and procedures for implementing this paragraph (b) and to require modification of those standards, guidelines, or procedures.

(c) The licensee may convey easements or rights-of-way across, or leases of, project lands for: (1) replacement, expansion, realignment, or maintenance of bridges and roads for which all necessary state and federal approvals have been obtained; (2) storm drains and water mains; (3) sewers that do not discharge into project waters; (4) minor access roads; (5) telephone, gas, and electric utility distribution lines; (6) non-project overhead electric transmission lines that do not require

erection of support structures within the project boundary; (7) submarine, overhead, or underground major telephone distribution cables or major electric distribution lines (69 kV or less); and (8) water intake or pumping facilities that do not extract more than one million gallons per day from a project reservoir. No later than January 31 of each year, the licensee shall file three copies of a report briefly describing for each conveyance made under this paragraph (c) during the prior calendar year, the type of interest conveyed, the location of the lands subject to the conveyance, and the nature of the use for which the interest was conveyed.

(d) The licensee may convey fee title to, easements or rights-of-way across, or leases of project lands for: (1) construction of new bridges or roads for which all necessary state and federal approvals have been obtained; (2) sewer or effluent lines that discharge into project waters, for which all necessary federal and state water quality certification or permits have been obtained; (3) other pipelines that cross project lands or waters but do not discharge into project waters; (4) non-project overhead electric transmission lines that require erection of support structures within the project boundary, for which all necessary federal and state approvals have been obtained; (5) private or public marinas that can accommodate no more than ten watercraft at a time and are located at least one-

half mile from any other private or public marina; (6) recreational development consistent with an approved Exhibit R or approved report on recreational resources of an Exhibit E; and (7) other uses, if: (i) the amount of land conveyed for a particular use is five acres or less; (ii) all of the land conveyed is located at least 75 feet, measured horizontally, from the edge of the project reservoir at normal maximum surface elevation; and (iii) no more than 50 total acres of project lands

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for each project development are conveyed under this clause (d)(7) in any calendar year. At least 45 days before conveying any interest in project lands under this paragraph (d), the licensee must submit a letter to the Director, Office of Hydropower Licensing, stating its intent to convey the interest and briefly describing the type of interest and location of the lands to be conveyed (a marked exhibit G or K map may be used), the nature of the proposed use, the identity of any federal or state agency official consulted, and any federal or state

approvals required for the proposed use. Unless the Director, within 45 days from the filing date, requires the licensee to file an application for prior approval, the licensee may convey the intended interest at the end of that period.

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

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

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

(3) The instrument of conveyance must include covenants running with the land adequate to ensure that: (i) the use of the lands conveyed shall not endanger health, create a nuisance, or otherwise be incompatible with overall project recreational

use; and (ii) the grantee shall take all reasonable precautions to insure that the construction, operation, and maintenance of structures or facilities on the conveyed lands will occur in a manner that will protect the scenic, recreational, and environmental values of the project.

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

(f) The conveyance of an interest in project lands under this article does not in itself change the project boundaries. The project boundaries may be changed to exclude land conveyed under this article only upon approval of revised exhibit G or K drawings (project boundary maps) reflecting exclusion of that land. Lands conveyed under this article will be excluded from

the project only upon a determination that the lands are not necessary for project purposes, such as operation and maintenance, flowage, recreation, public access, protection of environmental resources, and shoreline control, including shoreline aesthetic values. Absent extraordinary circumstances, proposals to exclude lands conveyed under this article from the project shall be consolidated for consideration when revised exhibit G or K drawings would be filed for approval for other purposes.

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

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

(G) This order is final unless a request for rehearing is filed within 30 days from the date of its issuance, as provided



in Section 313(a) of the FPA. The filing of a request for rehearing does not operate as a stay of the effective date of this license or of any other date specified in this order, except as specifically ordered by the Commission. The licensee's failure to file a request for rehearing shall constitute acceptance of this license.

Kevin P. Madden  
Acting Director, Office of  
Hydropower Licensing

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APPENDIX A

Water Quality Certification Conditions for the Marcal Hydroelectric Project Issued May 27, 1997 by the State of Maine Department of Environmental Protection.

1. WATER LEVELS

- A. Except as temporarily modified by (1) approved maintenance activities, (2) inflows to the project area, (3) operating emergencies beyond the applicant's control, as defined below. or (4) flashboard failure, water levels in the project impoundment shall be maintained within one foot of full pond (flashboard crest elevation) from May 1 through October 15, and within two feet of full pond from October 16 through April 30.
  
- B. Operating emergencies beyond the applicant's control include, but may not be limited to, equipment failure or other temporary abnormal operating 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 water levels in the project impoundment as required by Part A of this condition. These plans shall be reviewed by and must receive the approval of the DEP Bureau of Land and Water Quality.

## 2. MINIMUM FLOWS

A. Except as temporarily modified by approved maintenance activities or operating emergencies beyond the applicant's control, as defined below, the following instantaneous minimum flows shall be released from the project:

- (1) At all times, a total minimum flow of 56 cfs or inflow, whichever is less, consisting of any generating flows plus the bypass flows required below.
- (2) When the project is on-line and generating, a minimum flow of 20 cfs shall be released from the dam to the bypassed river reach.
- (3) When the project is off-line and not generating, a minimum flow of 56 cfs or inflow, whichever is

less, shall be released from the dam to the bypassed river reach.

- B. Operating emergencies beyond the applicant's control include, but may not be limited to, equipment failure or other temporary abnormal operating 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 water levels in the project impoundment as required by Part A of this condition. These plans shall be reviewed by and must receive the approval of the DEP Bureau of Land and Water Quality.

### 3. DOWNSTREAM FISH PASSAGE

- A. A downstream fish passage facility shall be installed and shall commence seasonal operation at the project dam within two years of issuance of a new FERC license for the project.
  
- B. The applicant shall, in accordance with the schedule established in a new FERC license for the project, submit final design drawings, a construction schedule, and operating and maintenance plans for the fish passage facility required by Part A of this condition, prepared in consultation with appropriate state and federal fisheries agencies. These plans shall be reviewed by and must receive the approval of the DEP Bureau of Land and Water Quality.

### 4. FISH PASSAGE EFFECTIVENESS STUDY

- A. The applicant shall, in consultation with appropriate state and federal fisheries agencies, conduct a study to determine the effectiveness of the downstream fish passage facilities installed pursuant to this certification during the 5-year period following the

commencement of operation of the facilities.

- B. The applicant shall, in accordance with the schedule established in a new FERC license for the project, submit a downstream fish passage effectiveness study plan ,prepared in consultation with appropriate state and federal fisheries agencies. This plan shall be reviewed by and must receive the approval of the DEP Bureau of Land and Water Quality.

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- C. The applicant shall, in accordance with a schedule agreed to between the applicant and the consulting agencies, submit the results of the downstream fish passage effectiveness study and any recommendations for changes in the design and/or operation of the downstream fish passage facilities to the consulting agencies and the DEP. The Department reserves the right, after notice and opportunity for hearing, to

require such reasonable changes in design and/or operation of the fish passage facilities as may be deemed necessary to adequately pass anadromous fish through the project site. Any such changes must be approved by FERC prior to implementation.

## 5. UPSTREAM FISH PASSAGE

- A. Upstream fish passage facilities shall be installed, or an alternate fish passage plan provided, at such time as is deemed appropriate by the Department of Marine Resources and/or the Atlantic Salmon Authority to allow the migration of spawning anadromous fish into the watershed above the project dam, provided, however, that no such facilities or plan shall be required until the Department of Marine Resources and/or the Atlantic Salmon Authority produce an anadromous fish restoration and management plan for the Little Androscoggin River Basin.
  
- B. The applicant shall, in accordance with a schedule agreed to between the applicant and the consulting agencies, submit final design drawings, a construction schedule, and operating and maintenance plans for the fish passage facility required by Part A of this

condition, prepared in consultation with appropriate state and federal fisheries agencies. These plans shall be reviewed by and must receive the approval of the DEP Bureau of Land and Water Quality.

## 6. RECREATIONAL FACILITIES

- A. A public carry-in boat access and bank fishing facility shall be developed and maintained on the project impoundment.
- B. A public canoe portage trail shall be developed and maintained around the project dam.

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- C. The applicant shall, in accordance with the schedule established in a new FERC license for the project, submit final design drawings, a construction schedule.



and a maintenance plan for the recreational facilities required by Parts A and B of this condition, prepared in consultation with the Department of Conservation. These plans shall be reviewed by and must receive the approval of the DEP Bureau of Land and Water Quality.