

UNITED STATES OF AMERICA 69 FERC • 61, 063
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Elizabeth Anne Moler, Chair;
Vicky A. Bailey, James J. Hoecker,
William L. Massey, and Donald F. Santa, Jr.

Rumford Falls Power Company) Project No. 2333-005

ORDER ISSUING NEW LICENSE

(Issued October 18, 1994)

On December 30, 1991, Rumford Falls Power Company (the Company) filed a license application under Part I of the Federal Power Act (FPA) to continue to operate and maintain the Rumford Falls Project, located on the Androscoggin River, in the Town of Rumford, Oxford County, Maine. 1/ The Company proposes to continue to operate the project in the same manner as it operates at present; the only modifications to the project would be the addition of two canoe access facilities, one upstream and one downstream of the project.

The Commission issued notice of the application on November 17, 1992. On January 13, 1993, the State of Maine State Planning Office (Maine) filed a timely motion to intervene. 2/ On January 15, 1993, the Conservation Law Foundation, American Rivers, Appalachian Mountain Club, and the Maine Audubon Society (Conservation Law) jointly filed a timely motion to intervene, and Trout Unlimited, Maine Council of Trout Unlimited, Atlantic Salmon Federation, and the Maine Council of Atlantic Salmon Federation (Trout Unlimited) jointly filed a timely motion to intervene in opposition to licensing of the project. After fully considering the filings and comments of the intervenors and other agencies and individuals, we have determined that the license, with measures to protect and enhance the environment, should be issued.

- 1/ The Androscoggin River is a navigable waterway of the United States. See New Hampshire Water Resources Board, 20 F.P.C. 99, at p. 100 (1958). The Commission issued the license for this project in 1965. See Rumford Falls Power Company, 33 F.P.C. 1016. The license expired on December 31, 1993, and on January 29, 1994, notice was issued of the issuance of an annual license pursuant to Section 15(a)(1) of the FPA.
- 2/ The motion states that the State Planning Office is responsible for coordinating and developing a consistent state position in licensing proceedings before this Commission.

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PROJECT DESCRIPTION

The existing project consists of two discrete hydropower developments, the upper station and the lower station, which are served by an upper dam and a middle dam, respectively. 3/ The upper station has been in operation since early in this century, and was completed as it now exists in 1918. The lower station was completed by 1955. The two stations have an installed nameplate capacity of 26.55 and 12.8 megawatts (MW), respectively, totaling 39.35 MW. 4/ The project power is used exclusively by Boise Cascade Corporation, of which the Company is a wholly-owned subsidiary, for the operations of Boise Cascade's pulp and paper mill in the Town of Rumford. 5/

The project is operated in a run-of-river mode. 6/ The upper and lower bypass reaches of the two developments are approximately 650 and 2,865 feet, respectively. 7/ Leakage from the dams provides base flows in the bypass reaches. 8/

BACKGROUND

The Androscoggin River flows through New Hampshire and Maine for a distance of about 164 miles to Merrymeeting Bay. The Town of Rumford is located on the river in the mountains of western Maine. The river has been heavily developed for nearly two

- 3/ The project has no "lower dam."
- 4/ The project's maximum hydraulic capacity is 7,300 cubic feet per second (cfs), and the average project generation is about 270,302 MWh. For a complete description of the project works, see ordering paragraph B(2).
- 5/ The estimated capacity requirement of the mill is 85 MW.
- 6/ In 1909 operators of upstream developments and the Company signed an agreement which provides for minimum flows of 1,550 cfs to be maintained below the upstream projects. River flows at the project consequently are relatively consistent.
- 7/ Although the Company's Application, Exh. E, states that the lower bypass reach is approximately 1,000 feet, the Company's Exh. G, sheet 2 of 6, Detail Map of Middle Dam, Canal & Lower Station, indicates that this figure is incorrect.
- 8/ The base flows are about 1 cfs and 21 cfs, respectively. The base flows are augmented by dam spillage when stream flows are in excess of the developments' turbine capacities.

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centuries for hydropower production, pulp and paper related activities, and other industrial uses. As a consequence of this industrial development and of municipal waste discharges over the years, the river has been substantially polluted, and its use for recreation significantly impaired. During the past twenty years, however, as a result of construction of improved treatment facilities along the river, there has been an improvement in the river's water quality, and a return to recreational uses, primarily boating and fishing. The Maine Department of Environmental Protection (Environmental Protection) has designated the river in the area of the project as Class C. Class C waters should be suitable for fishing, recreation in and on the water, drinking water supply after treatment, industrial use, and habitat for fish and other aquatic life. 9/

The Commission staff issued an environmental assessment (EA) for this project on March 25, 1993, a copy of which is attached to and made a part of this order. The EA considered the filings of intervenors and of Federal and State agencies, and made recommendations as appropriate to address their concerns. The EA concluded that the continued operation of the project as proposed would result in minor adverse impacts that would be largely mitigated and offset by project benefits, that issuance of a new license for the project would not constitute a major federal action significantly affecting the quality of the human environment, 10/ and that a new license with measures to protect and enhance the environment should be issued for the project. A Safety and Design Assessment (SDA) was also prepared and is available in the Commission's public file associated with this project.

COMPREHENSIVE DEVELOPMENT

Sections 4(e) and 10(a)(1) of the FPA 11/ require the Commission to give equal consideration to all uses of the waterway on which a project is located. Consequently, when the Commission reviews a project, the recreational, fish and wildlife resources, and other non-developmental values of the involved

9/ For Class C waters dissolved oxygen (DO) concentrations should be 5.0 milligrams per liter (mg/l) or 60 percent of saturation, whichever is greater. Upstream of the Rumford Falls Project, well outside the project boundary, the Androscoggin River is rated Class B, requiring DO concentrations of 7.0 mg/l or 75 percent saturation.

10/ This "finding of no significant impact," or FONSI, is in Section VIII of the EA.

11/ 16 U.S.C. •• 797(e) and 803(a)(1).

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waterway are considered equally with power and other developmental values. In determining whether, and under what conditions, a hydropower license should be issued, the Commission must weigh the various economic and environmental tradeoffs involved in the decision. Section 10(a)(1) provides that, when a license is issued, the project adopted shall be such as in the Commission's judgment will be best adapted to a comprehensive plan for the improvement or development of the waterway.

The EA analyzed the alternatives of licensing the project as presently operated, as proposed, and with additional mitigation and enhancement measures. No other reasonable action alternatives to the project have been identified for assessment. The EA analyzed the effects of the Company's existing project on the Androscoggin River and recommended seven measures in order to protect and enhance the environmental resources. These measures would require the Company to:

1. Operate the Rumford Falls Project in a run-of-river mode for the protection of water quality and aquatic resources in the Androscoggin River.
2. Release a minimum flow of 1 cubic foot per second (cfs) from the Upper Dam and 21 cfs from the Middle Dam of the Rumford Falls Project, for the protection of aquatic resources and water quality in the two bypass reaches of the Androscoggin River.
3. File, and upon approval implement, a plan to measure and report project flows, water surface elevations, and operation records, in order to monitor compliance with the requirements for run-of-river operation and release of minimum flows to the bypass reaches.
4. File, and upon approval implement, a plan to control erosion and slope instability, and to minimize the quantity of sediment.
5. Implement the provisions of the "Programmatic Agreement Among the Federal Energy Regulatory Commission, the Advisory Council on Historic Preservation, and the Maine Historic Preservation Commission for the Management of Historic Properties Affected by the Rumford Falls Hydroelectric Project."
6. Implement the Company's proposed canoe access facility plan for the carry-in canoe facility downstream of the project boundary at the Carlton Bridge site.

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7. File, and upon approval implement, a plan for a canoe access facility at Rumford Point, Maine.

Based on the EA's independent review and evaluation of the proposed project, agency recommendations, and the no-action alternative, we have selected the proposed project, with these protection and enhancement measures, as the preferred option. With these measures, the environmental effects of subsequent operation would be minor, and fish, wildlife, recreation, and cultural resources would be protected or enhanced. The project would generate electricity from a renewable resource, and reliance on existing fossil-fueled, steam-electric generating plants would continue to be reduced. Nonrenewable energy resources would thereby be conserved, and atmospheric pollution and global warming would be reduced. For these reasons, issuance of a license with these additional measures would be best adapted to a comprehensive plan for the development and improvement of the waterway. We are including in the license Articles 401 through 403 and 405 through 408 to implement the EA's recommendations.

Pursuant to Section 10(a)(2) of the FPA, 12/ the Commission is required to consider the extent to which a project is consistent with Federal or State comprehensive plans for improving, developing, or conserving the waterway or waterways affected by the project. 13/ Federal and State agencies filed a total of fourteen comprehensive plans that address various resources in Maine. Of these, the EA identified and reviewed nine plans relevant to this project. 14/ The EA found that

12/ 16 U.S.C. • 803(a)(2).

13/ Comprehensive plans for this purpose are defined by Section 2.19 of the Commission's regulations, 18 C.F.R. • 2.19 (1993).

14/ State plans: Strategic plan for management of Atlantic salmon in the State of Maine, Maine Atlantic Sea-Run Salmon Commission, July 1984; Maine rivers study - final report, Maine Department of Conservation, May 1982; State of Maine comprehensive rivers management plan, Maine State Planning Office, Volume 1-3, May 1987; State of Maine comprehensive rivers management plan, Maine State Planning Office, Volume 4, December 1992; and State of Maine comprehensive rivers management plan, Maine State Planning Office, Volume 5, February 1993.

Federal plans: North American waterfowl management plan, U.S. Fish and Wildlife Service, May 1986; Fisheries USA:
(continued...)

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the project with the foregoing measures for the protection and enhancement of environmental resources did not conflict with the relevant plans.

Based on a review of the agency and public comments filed in this proceeding, as discussed below, and on the EA's independent analysis pursuant to Sections 4(e), 10(a)(1), and 10(a)(2) of the FPA, we conclude that the Rumford Falls Project, with the required enhancement measures and other special license conditions, would be best adapted to comprehensive development of the Androscoggin River.

WATER QUALITY CERTIFICATION

Under Section 401(a)(1) of the Clean Water Act, 33 U.S.C. • 1341(a)(1), the Commission may not issue a license for a hydroelectric project unless the State certifying agency has either issued water quality certification for the project or waived certification by failing to act on a request for certification within a reasonable period of time, not to exceed one year. On January 2, 1992, the Company filed with Environmental Protection an application for water quality certification for the project. Environmental Protection issued the requested certification for the project by an order dated December 17, 1992. 15/ The certification concluded, in essence, that continued operation of the project in a run-of-river mode would result in the affected waters being suitable for all Class C designated uses and made such a mode of operation a requirement of certification. This requirement is reflected in Article 401 of the new license.

RESERVATION OF FISHWAY PRESCRIPTION AUTHORITY

Section 18 of the FPA 16/ includes a provision that the Commission shall require the construction of such fishways as the Secretary of the Interior (Interior) may prescribe. By letter

14/ (...continued)

the recreational fisheries policy of the U.S. Fish and Wildlife Service, undated; Final environmental impact statement - restoration of Atlantic salmon to New England rivers, Department of the Interior, May 1989; and the nationwide rivers inventory, National Park Service, January 1982.

15/ Maine's intervention states that decisions by Environmental Protection on the license application represent the official position of the State.

16/ 16 U.S.C. • 811.

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dated January 21, 1993, Interior requested that any license issued for the Rumford Falls Project include a reservation of authority for Interior to prescribe the construction, operation, and maintenance of fishways. We recognize that a future need for fishways cannot always be determined at the time of licensing. Article 404 of this license therefore reserves authority to the Commission to require the licensee to construct, operate, and maintain such fishways as may be prescribed by Interior pursuant to Section 18.

RECOMMENDATIONS OF FEDERAL AND STATE FISH AND WILDLIFE AGENCIES

Section 10(j) of the FPA 17/ requires the Commission 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. Pursuant to Section 10(j), Interior recommended that the licensee operate the project in a run-of-river mode and that it prepare a plan to ensure such operation. The EA for the project addresses these concerns, and the license includes conditions, as noted above, consistent with these recommendations.

INTERVENORS' CONCERNS

Maine asserts in its intervention that a new license for the Rumford Falls Project may be issued only if the Commission finds that the project is best adapted to the comprehensive hydropower plan developed by Maine. 18/ As noted above, the EA identified and reviewed nine comprehensive plans relevant to this project, one of which is the plan referred to in Maine's intervention, and found that there is no conflict between the plans and the project as conditioned in accordance with the EA's recommendations.

Conservation Law contends that the project does not adequately compensate the public for lost non-power values of the river and is therefore inconsistent with the requirement of Section 4(e) of the FPA that equal consideration be given to the

17/ 16 U.S.C. • 803(j).

18/ Maine's assertion is incorrect. Section 10(a)(1) of the FPA, in requiring that a project be "best adapted to a comprehensive plan for improving or developing a waterway," is not referring to comprehensive plans developed by a State. Such plans are addressed in Section 10(a)(2)(A), which requires only that we consider the extent to which a project is consistent with Federal or State comprehensive plans.

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purposes of energy conservation, the protection, mitigation of damage to, and enhancement of, fish and wildlife, and the protection of recreational opportunities. In this regard, Conservation Law addresses particularly the issues of water quality, aesthetics and access in the bypass reaches, and the need for a buffer zone around the project boundary.

In regard to water quality, Conservation Law submits that the Company must take mitigation measures to help restore lost oxygen content in waters downstream of the project and the paper mill, must study the effects of dioxin and other pollutants in project waters and take necessary remedial action, and must provide mitigation to bring the project into compliance with Maine's water quality standards to restore designated and beneficial uses. These measures are unnecessary. The EA found that Interior and Environmental Protection agreed with the Company's review of water quality data 19/ showing that dissolved oxygen levels consistently meet Class C requirements. The project does not itself create or release pollutants, and the EA concluded that operation of the project in a run-of-river mode would minimize disruption of sediments in the project area. Accordingly, there is no justification for requiring the Company to conduct a study of pollutants. 20/ Maine's water quality certification for the project states that continued operation of the project, as conditioned by the certification, will be suitable for all Class C designated uses; consequently, there is no basis to conclude that the project would not comply with Maine's water quality standards for designated uses. Conservation Law fails to identify any reason for us to require any more stringent or extensive water quality measures.

Conservation Law argues that operation of the project causes the falls to be dry most of the time and that the Company must provide mitigation for the loss of aesthetics, natural fishing, and recreational access due to this operation. The EA analyzed the project's impacts on aesthetic resources. 21/ It noted that the natural cascades within the bypassed reaches are the prominent aesthetic resources at the project. However, views of the cascades within the Upper Dam bypass reach are obstructed by the Upper Dam station and forebay wall, and the cascades in the

19/ See Application, Exh. E, App. 4.

20/ In this regard, Trout Unlimited states that the State ceased stocking trout above Rumford Falls in 1991 following a health advisory that found unsafe dioxin levels in fish. Trout Unlimited does not assert, however, that the project is a factor in dioxin contamination.

21/ See EA Section V.B.5.

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Middle Dam bypass reach are located in an industrialized setting. In a typical year, spillage occurs over the Middle Dam on 165 days, and leakage flows occur at the dams at all other times. The EA concluded that, under these circumstances, existing flows in the bypass reaches are adequate to maintain the limited scenic views of the cascades. The EA also noted that the steep gradient, substrate, and lack of safe access limit the fishery management opportunities in the bypass reaches. Moreover, the Maine Department of Inland Fisheries and the United States Fish and Wildlife Service had concluded that present leakage flows and occasional spillage would be adequate for their present fisheries management programs. For these reasons, the EA concluded that release of minimum flows equivalent to the present leakage flows, plus continued spillage, would also be sufficient for current fishery management objectives. 22/

Conservation Law maintains that the Company failed to investigate the feasibility of obtaining a buffer zone around the entire project area to provide permanent public access to and protection of undeveloped lands. The EA satisfactorily addressed this issue. The EA found that the Company maintains a buffer zone, accessible to the public, for about one mile along both shorelines above the Upper Dam impoundment. Most of the remaining land adjacent to the shoreline and within the project boundary is owned by private individuals and the Town of Rumford. Furthermore, the Company proposed, the EA recommended, 23/ and the license we are issuing requires, 24/ that the Company develop two additional canoe access facilities, upstream and downstream, respectively, of the project. Maine itself has sought no more extensive measures for fishing and recreation purposes on project waters.

Conservation Law argues that, before relicensing the project, the Commission should prepare a comprehensive plan for the Androscoggin River Basin, as well as an EIS in which the project is reviewed along with all other projects undergoing, or soon to be undergoing, relicensing in the basin. Conservation Law contends that, in order to determine environmental impacts of the project and appropriate mitigation measures, the Commission should review the project's operation on the river as part of an entire network of industrial river use that includes hydropower projects, paper mills, and wastewater treatment plants. Trout Unlimited, likewise, urges consolidation of all Androscoggin River licensing proceedings for review in a single EIS, and it

22/ See EA Section V.B.3.

23/ See EA Section V.B.7.

24/ See Articles 407 and 408 below.

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stresses the need for assessment of systemwide impacts based on operation of the river as an integrated hydropower system.

As stated above, prior to issuing a license the Commission, pursuant to Section 10(a)(1) of the FPA, must determine that the proposed project is "best adapted to a comprehensive plan for improving or developing a waterway." The FPA does not, however, require the Commission to prepare a comprehensive plan for a river basin, against which a proposed project is to be measured. 25/ Rather, in determining whether to issue a license, the Commission considers the comprehensive picture of the water system of which the project is a part, based on the record in the particular proceeding. 26/ Here, the EA, in reaching its recommendations, discussed and gave appropriate consideration to such uses and conditions in the Androscoggin River basin as other hydropower projects, industrial and municipal uses, fisheries, and recreation. This approach satisfies the requirements of Section 10(a)(1).

The licensing of this project need not be considered in conjunction with the licensing of other Androscoggin River projects in a single environmental document. The EA noted that an EIS was being prepared for seven projects on the Upper Androscoggin River in New Hampshire and that the Rumford Falls Project would not be included in that EIS. In *Public Service Company of New Hampshire*, 68 FERC • 61,177 (1994), we recently granted applications for new licenses for these seven projects. 27/ We have considered the Rumford Falls application and its associated EA in the context of the EIS for the other seven projects, just as we had considered the

- 25/ See *Saco River Salmon Club*, 55 FERC • 61,039 (1991). Moreover, the FPA does not confer on the Commission responsibility or authority to organize or coordinate the activities of various state and resource agencies that may be involved in managing riverine resources. 55 FERC • 61,039 at p. 61,113.
- 26/ See *Sayles Hydro Associates*, 52 FERC • 61,249, at pp. 61,867-68 (1990), *aff'd*, *LaFlamme v. FERC*, 945 F.2d 1124 (9th Cir. 1991).
- 27/ Individual orders issuing licenses for the seven projects were issued simultaneously and are found at 68 FERC •• 61,170 through 61,174, 61,176, and 61,179.

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applications and the EIS for those seven projects in the context of the already-issued Rumford Falls EA. 28/

The EA in the present proceeding noted that the projects to be encompassed in the Upper Androscoggin EIS were located within an 11-mile reach whose downstream end was about 35 miles from the Rumford Falls Project. The EA determined that the Rumford Falls Project would not be included in that EIS, because the potential for the interaction of water uses to cumulatively affect resources diminishes with distance between them, particularly as to water quality and resident salmonids, resources of special concern in the Androscoggin River basin. 29/ Nevertheless, the EA analyzed the cumulative impacts of continued operation of the Rumford Falls Project on resources and thus adequately considered the role of the project in conjunction with other uses, including hydropower uses, in the basin.

Trout Unlimited asserts that the analysis should consider pre-project conditions, particularly as they pertain to fishery resources. In particular, it refers to efforts to restore Atlantic salmon, brown trout, and American shad in the area of downstream projects on the Lower Androscoggin that have historically blocked upstream passage, and it urges that the analysis consider the relationship between operations at those projects and operations at the Rumford Falls Project.

In our rulemaking to amend our relicensing rules, we determined that the evaluation and consideration of project conditions and appropriate enhancement measures in proceedings involving new licenses would be done in the context of today's environment and needs, not in the context of the pre-project environment. We acknowledged, nevertheless, that enhancement may in many cases constitute a reduction of the negative impacts attributable to a project since its construction. 30/ The EA

28/ In our order granting the seven license applications, we explained why it is unnecessary to include all relicensing actions in the basin within one EIS. 68 FERC • 61,177 at p. 61,861-62. Among other things, we noted that, in *Kleppe v. Sierra Club*, 427 U.S. 390 at 410 (1975), the United States Supreme Court had rejected the proposition that pending proposals for similar actions in a region would necessarily require analysis in a single comprehensive impact statement.

29/ See EA at p. 6.

30/ See Hydroelectric Relicensing Regulations Under the Federal Power Act, FERC Statutes & Regulations, Regulations

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prepared for the Rumford Falls Project noted that, over time, hydropower and other industrial uses of the river had contributed to drastic changes in the natural environment. 31/ However, it also noted that introduction of anadromous fish upstream as far as Rumford Falls was not a current fishery management objective of Federal and State agencies. 32/ In response to Interior's request, the EA recommended the reservation of authority for the prescription of fishways in the future should these objectives change. Thus, the EA did consider pre-project conditions and recommend measures to address them, should fishery restoration efforts be planned for the project area in the future. 33/ We conclude that the EA's evaluation of project conditions and enhancement measures is appropriate under these circumstances. 34/

Trout Unlimited maintains that an EIS should be prepared because the project has significant effects on resident fish and wildlife and on recreation, diminishes water quality, and adversely affects cultural and archeological resources. However, Trout Unlimited offers no evidentiary support for these contentions. The EA addressed each of these resources and found that there would be no significant effects. 35/ Trout Unlimited also argues that an EIS is justified because the

30/ (...continued)

Preambles 1986-1990, • 30,854 at p. 31,401 (May 17, 1989).
We recently affirmed this position in City of Tacoma, Washington, 67 FERC • 61,152 at p. 61,444 (1994) and in Public Service Company of New Hampshire, 68 FERC • 61,177 at p. 61,867-68 (1994).

31/ EA, p. 5.

32/ EA p. 15.

33/ We note that the Company, in its January 29, 1993 reply to Conservation Law's and Trout Unlimited's pleadings, asserts that, even prior to construction of the Rumford Falls Project dams, salmon could not range upstream of Rumford Falls.

34/ We also note that, in Scoping Document II for the Lower Androscoggin River, issued August 1994, staff has indicated that it will address both site-specific and cumulative effects on anadromous fish migration and restoration efforts in the Lower Androscoggin River of the projects whose license applications are encompassed by the EIS to be prepared in that proceeding.

35/ See EA Section V.B.

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project is controversial. The existence of controversy is a factor to be considered in deciding whether or not to prepare an EIS but is not by itself determinative of the issue. 36/ Here, the acquiescence of the pertinent Federal and State agencies in the relicensing of this project underscores the lack of significant controversy regarding the extent of the project's effects. An EIS is warranted only for a major Federal action significantly affecting the quality of the human environment. The EA thoroughly analyzed the impacts of the project and found that, with the required enhancement measures, issuance of a license for the project would not constitute such an action.

Finally, both Conservation Law and Trout Unlimited request that the Commission conduct an adjudicatory hearing to resolve all questions of material fact related to the relicensing of the project. The intervenors' requests broadly assert that there are issues of material fact but fail to specify what facts are in dispute, what evidence they would present at a trial type hearing, and why the matters at issue cannot be resolved on the basis of the pleadings and evidence in the record before us. We find that the information in the record develops the facts adequately, and that there are no significant disputes regarding any material facts that cannot be resolved on the basis of a written record. We therefore deny the requests for an adjudicatory hearing.

On March 22, 1993, Conservation Law filed a motion for leave to file reply comments in response to the Company's January 29 and March 1, 1993 filings, which themselves responded to Conservation Law's and Trout Unlimited's interventions, comments, and requests. The Commission's regulations, at 18 C.F.R. • 4.34(b), do not provide for replies to reply comments. Therefore, Conservation Law's motion will be denied.

CONSIDERATION OF THE APPLICANT'S RECORD

In accordance with Sections 10(a)(2)(C) and 15(a) of the FPA, 37/ we have evaluated the Company's record as a licensee in the following areas:

36/ See Sayles Hydro Associates, 49 FERC • 61,095 (1989). See also Friends of the Ompompanoosuc v. FERC, 968 F.2d 1549 (2d Cir. 1992).

37/ 16 U.S.C. •• 803(a)(2)(C) and 808(a).

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1. Section 10(a)(2)(C): Consumption Efficiency Improvement Programs

The Company is not an electric utility. Its only demand-side consumer is Boise Cascade's pulp and paper products industrial complex. In view of these facts, Section 10(a)(2)(C), which pertains to the applicant's consumption efficiency improvement programs, does not apply to the Company.

2. Section 15(a)(2)(A): The Ability of the Applicant to Comply with Its License and with Other Applicable Provisions of the FPA

We have reviewed the Company's license application and its record of compliance with the existing license in an effort to judge its ability to comply with the articles, terms, and conditions of any license issued, and with other applicable provisions of this part of the FPA. On the basis of the review, we believe the Company can satisfy the conditions of any new license issued to it.

3. Section 15(a)(2)(B): The Plans of the Applicant to Manage, Operate, and Maintain the Project Safely

In Section H of the application, the Company describes in detail its employee-safety and public-safety measures. Among the public safety measures are signs along the Upper Dam impoundment that warn boaters of hazardous conditions associated with the project, a log boom at High Bridge that prevents boaters from being swept toward the Upper Dam, and fences that restrict public access to the hazardous project features. We conclude that the Company's plans are adequate to ensure project safety.

4. Section 15(a)(2)(C): The Plans and Ability of the Applicant to Operate and Maintain the Project in a Manner Most Likely to Provide Efficient and Reliable Electric Service

The Company recently increased the generation capacity of the project by rebuilding units 1 and 2 at the Upper Station in 1987 and 1988. The nameplate capacity of the units has been increased from 7,200 to 8,500 kilovolt-amperes (kVA), which consequently improved the efficiency of the Upper Station.

The Company's membership in the Industrial Energy Consumer Group facilitates the coordination of its energy production ability with the energy requirements of its sole customer, the mill, and system characteristics of Central Maine Power Company (Central Maine), the public utility which services the Town of Rumford. The Company's industrial interruptible rate program enhances its system-wide load management program. Group member contracts are determined by Central Maine and New England Power

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Pool system peaks. Industrial participation in this program has reduced Central Maine's annual system peak by approximately seven percent.

Sensitivity to Central Maine's peak loading characteristics has resulted in the establishment of time-of-use rates for power purchased by the Company and other industrial consumers. Maintenance scheduling practices were modified at the mill to take advantage of this economic incentive. These practices resulted in a 2,000 kW shift from on-peak to off-peak periods.

We conclude that the applicant's operation and maintenance planning is likely to provide efficient and reliable electric service.

5. Section 15(a)(2)(D): The Applicant's Need for the Project's Power

The Company is a totally owned subsidiary of Boise Cascade. All of the power generated by the project is used by Boise Cascade's pulp and paper mill. The present estimated capacity requirement of the mill is 85 megawatts, while the total installed capacity of the project is 39.35 megawatts. Therefore, as long as the mill is operating at its present capacity -- and even if substantial future peak reduction measures are implemented -- the mill's demand for electricity will exceed the supply available from the project.

The project's Upper Station has been generating electricity since 1903, and its Lower Station was added in 1954. The pulp and paper products industry is highly competitive and energy intensive. Boise Cascade's competitive position depends heavily on the availability of a reliable and adequate source of low-cost electric power. The project's supply of low-cost power to the mill over the 90-year period has been an important factor in Boise Cascade's ability to survive and grow in a competitive market. The operating history of the Rumford Falls Project has established, in adequate fashion, the Company's short-term and long-term need for power.

6. Section 15(a)(2)(F): The Impact of the Project on the Applicant's Existing and Planned Transmission Services

The Company states that, since the mill requires approximately 2.5 times more power than the project can produce, electrical connections have been established between the mill and Central Maine's transmission system within Substation No. 5. Not receiving a license would have little effect on the applicant's transmission system other than to cause the primary project lines to be de-energized.

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7. Section 15(a)(2)(G): Whether the Plans of the Applicant Will be Achieved to the Greatest Extent Possible in a Cost Effective Manner

The Company plans no project changes except those periodically required to ensure project safety. We conclude that the project, as presently constructed and as the Company proposes to operate it, fully develops the economical hydropower potential of the site and will continue to provide power in a cost effective manner.

8. Section 10(a)(3)(A): The Applicant's Record of Compliance with the Terms and Conditions of the Existing License

We have reviewed the Company's compliance with the terms and conditions of the existing license. We find that the Company's overall record of making timely filings and of compliance with its license is satisfactory.

9. Section 10(a)(3)(B): The Applicant's Actions Related to the Project Which Affect the Public

Substantial portions of the original land purchased for the project have been returned to public use for recreational purposes. Public access has been provided to the impoundments of both dams, and measures are in place to prevent injury to boaters in the project area. The Company states that, to the best of its knowledge, no actions related to project operations have negatively affected the public, and there have been no formal complaints registered by the public with either the Company or public agencies. We find that no project-related actions affecting the public weigh against issuing a new license.

ECONOMIC EVALUATION

A project is economically beneficial as long as its projected levelized cost is less than the levelized cost of alternative energy and capacity. The project costs consist of the operation and maintenance costs and administrative and general expenses. The Rumford Falls Project will continue to operate as it has in the past with regard to minimum streamflow releases. Therefore, the minimum streamflow release requirements we are including in the license will not cause any reductions to the project generation. The cost of the non-flow measures that we are requiring is minor when compared to the value of the power. The staff has computed the 30-year levelized net benefits of the project, based on the Company's estimates of the project's costs and the cost of purchasing replacement power from the local utility (from application Exhibit H-1), assuming a cost of money and discount rate of 10 percent. The levelized cost of energy from the project is projected to be about 1.7 cents per

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kilowatthour in 1994 dollars, and the levelized cost to purchase alternative energy is projected to be about 8.7 cents per kilowatthour in 1994 dollars. Therefore, the project will have an estimated net economic benefit of about 7 cents per kilowatthour, or about \$18,921,000 annually, based on an average generation of 270,302,000 kilowatthours of generation annually.

PROJECT RETIREMENT

The Commission has issued a Notice of Inquiry (NOI), dated September 15, 1993, requesting comments that address numerous issues involving the decommissioning of licensed hydropower projects. 38/ The NOI states that the Commission is not proposing new regulations at this time, but is inviting comments on whether new regulations may be appropriate. Alternatively, the Commission may consider issuing a statement of policy addressing the decommissioning of licensed hydropower projects, or take other measures. The Rumford Falls Project may be affected by future actions that the Commission takes with respect to issues in the NOI. Therefore, we have included Article 204, which reserves authority to the Commission to require the licensee to conduct studies, make financial provisions, or otherwise make reasonable provisions for decommissioning the project.

By including Article 204, the Commission does not intend to prejudge the outcome of the NOI. We are simply including the article so that we will be in a position to make any lawful and appropriate changes in the terms and conditions of this license, which is being issued during the pendency of the NOI, based on the final outcome of that proceeding.

LICENSE TERM

In 1986, the Electric Consumers Protection Act 39/ modified Section 15 of the FPA to specify that any license issued under Section 15 shall be for a term that the Commission determines to be in the public interest, but not less than 30 years, nor more than 50 years. The Commission's policy is to establish 30-year terms for those projects that propose little or no redevelopment, new construction, new capacity, or enhancement; 40-year terms for those projects that propose moderate redevelopment, new construction, new capacity, or enhancement;

38/ Notice of Inquiry, Project Decommissioning at Relicensing, Docket No. RM93-23-000, September 15, 1993, 58 FR 48,991 (1993).

39/ Pub. L. 99-495, 100 Stat. 1234 (1986).

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and 50-year terms for those projects that propose extensive redevelopment, new construction, new capacity, or enhancement.

The Company does not propose significant changes in the existing project works for the Rumford Falls Project or significant enhancement. Accordingly, the new license will be for a term of 30 years.

SUMMARY OF FINDINGS

Background information, analysis of impacts, support for related license articles, and the basis for the finding of no significant impact on the environment are contained in the EA issued for this project and attached to this order. The license conditions are consistent with the water quality certification. Issuance of this license is not a major Federal action significantly affecting the quality of the human environment.

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 provided in the SDA.

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

The Commission orders:

(A) This license is issued to Rumford Falls Power Company (licensee), for a period of 30 years, effective the first day of the month in which this license is issued, to operate and maintain the Rumford Falls Project. This license is subject to the terms and conditions of the Federal Power Act, which is incorporated by reference as part of this license, and subject to the regulations the Commission issues under the provisions of the FPA.

(B) The project consists of:

(1) All lands, to the extent of the licensee's interests in those lands shown by exhibit G:

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Exhibit G-	FERC No. 2333-	Showing
1	30	General Map
2	31	Middle Dam, Canal & Lower Station
3	32	Upper Dam, Station and Reservoir
4	33	Reservoir
5	34	Reservoir
6	35	Original Purchases

(2) Project works consisting of: two discrete hydropower developments, the Upper Station Development and the Lower Station Development. The total nameplate capacity of the project is 39.35 megawatts (MW), the project's maximum hydraulic capacity is 7,300 cubic feet per second (cfs), and the average annual project generation is about 270,302 megawatthours (MWh).

(a) Upper Station Development:

The Upper Station Development's principal features consist of a dam, a forebay, a gatehouse, four short penstocks, a powerhouse, an impoundment, two overhead transmission lines, and appurtenant facilities. The existing development has a total installed nameplate capacity of 26.55 MW, a maximum hydraulic capacity of 4,500 cfs, and an average annual energy generation of about 170,817 MWh. In detail, the project can be described as follows:

The Upper Station Development consists of: (1) a concrete gravity dam, having a 464-foot-long by 37-foot-high ogee type spillway section, with a crest elevation of 598.74 feet USGS, topped with 2.5-foot-high, pin-supported, wooden flashboards; (2) a forebay about 2,300 feet long by 150 feet wide; (3) a gatehouse with eight headgates (two headgates for each of the four penstocks), trashracks, and other appurtenant equipment; (4) four underground steel-plate penstocks, each about 110 feet long, three of which are 12 feet in diameter, and one 13 feet in diameter; (5) a masonry powerhouse integral with the dam, occupying two adjoining sections of the dam: (a) the Old Station, about 30 feet wide by 120 feet long by 92 feet high, equipped with one horizontal generating unit with a capacity of 4,050 kW, and (b) the New Station, about 60 feet wide by 140 feet long by 76 feet high, equipped with three vertical generating units, two with a capacity of 7,650 kW each, and one with a capacity of 7,200 kW; (6) an impoundment, with a gross storage capacity of 2,900 acre-feet, surface area of about 419 acres, normal maximum headwater elevation of 601.24 feet, and tailwater elevation of 502.74 feet; (7) four overhead 11.5-kilovolt (kV) transmission lines extending from the upper station to the mill, two lines

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being 6,000 feet long, another being 5,400 feet long, and the last 5,200 feet long; and (8) appurtenant facilities.

(b) Lower Station Development:

The Lower Station Development's principal features consist of the Middle Dam, the Middle Canal headgate structure with a waste weir section, the Middle Canal, a gatehouse, two penstocks (each with a surge tank), a powerhouse, an impoundment, a short transmission line, and appurtenant facilities. The existing development has a total nameplate capacity of 12.80 MW, a total maximum hydraulic capacity of 2,800 cfs, and an average annual generation of about 99,485 MWh. In detail, the project can be described as follows:

The Lower Station Development consists of: (1) a rock-filled, wooden-cribbed, and concrete-capped Middle Dam, having a 328.6-foot-long by 20-foot-high gravity spillway section, with a crest elevation at 501.74 feet, topped with 1.0-foot-high pin-supported wooden flashboards; (2) a Middle Canal concrete headgate structure, located adjacent to the dam, about 120 feet long, with 10 steel headgates, and a waste weir section perpendicular to the headgate structure, about 120 feet long, with a crest elevation of 501.6 feet, topped with 10-inch-high flashboards; (3) a Middle Canal, about 2,400 feet long, with width ranging from 75 to 175 feet and depth from 8 to 11 feet; (4) a gatehouse containing two headgates, trashracks, and other appurtenant equipment; (5) two 12-foot-diameter, steel-plate penstocks, each extending about 815 feet to two cylindrical surge tanks, each about 36 feet in diameter by 50.5 feet high, and the penstocks continuing 77 feet to the powerhouse; (6) a masonry powerhouse, equipped with two identical vertical units, each with 6,400 kW capacity; (7) an impoundment, with a gross storage capacity of 141 acre-feet, surface area of about 21 acres, normal maximum headwater elevation of 502.74 feet, and tailwater elevation of 423.24 feet; (8) 600-foot-long, 11.5-kV generator leads, extending from the Lower Station to Substation No. 5; and (9) appurtenant facilities.

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

Exhibit A:

Pages A-1 through A-7 and Figures A-1 and A-2, describing the existing mechanical, electrical and transmission equipment, filed December 30, 1991.

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Exhibit F:

Exhibit F drawings	FERC NO.	Showing
Sheet 1	2333-1	Detail Map, Upper Dam & Upper Station
Sheet 2	2333-2	Sections Through Upper Dam, Power Station & Gatehouse
Sheet 3	2333-3	Elevations of Upper Station & Gatehouse
Sheet 4	2333-4	Detail Map, Lower Station Grounds & Headworks
Sheet-5	2333-5	Section & Profile, Lower Station Development
Sheet-6	2333-6	Elevations of Lower Station & Gatehouse
Sheet-7	2333-7	Detail Map, Middle Dam & Middle Canal Headworks
Sheet-8	2333-8	Sections of Middle Dam, Middle Canal & Headworks

(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) This license is subject to the articles set forth in Form L-3 (October 1975), entitled "Terms and Conditions of License for Constructed Major Project Affecting Navigable Waters of the United States," and the following additional articles:

Article 201. The licensee shall pay the United States an annual charge, effective on the first day of the month in which

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this license is issued, for the purpose of reimbursing the United States for the cost of administration of Part I of the Federal Power Act as determined by the Commission. The authorized installed capacity for that purpose is 52,460 horsepower.

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

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

Article 203. If the licensee's project was directly benefitted by the construction work of another licensee, a permittee, or the United States on a storage reservoir or other headwater improvement during the term of the original license (including extensions of that term by annual licenses), and if those headwater benefits were not previously assessed and reimbursed to the owner of the headwater improvement, the licensee shall reimburse the owner of the headwater improvement for those benefits, at such time as they are assessed. The benefits will be assessed in accordance with Subpart B of the regulations.

Article 204. The Commission reserves authority, in the context of a rulemaking proceeding specific to this license, to require the licensee to conduct studies, make financial

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provisions, or otherwise make reasonable provisions for decommissioning of the project. The terms of this article shall be effective unless the Commission, in Docket No. RM93-23, finds that the Commission lacks statutory authority to require such actions, or otherwise determines that the article should be rescinded.

Article 401. The licensee shall operate the Rumford Falls Project in a run-of-river mode for the protection of water quality and aquatic resources in the Androscoggin River. The licensee shall maintain the upper and middle impoundments within 1 foot of full pond elevation (601.24 feet U.S. Geological Survey Datum (USGS) at the upper impoundment and 502.74 feet USGS at the middle impoundment) and shall at all times act to minimize the fluctuations of the reservoir surface elevations, i.e., maintain a discharge from the project so that, at any point in time, flows immediately downstream from the project tailraces approximate the sum of inflows to the project reservoirs, minus withdrawals.

Run-of-river operation 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 and the U.S. Fish and Wildlife Service, the Maine Department of Environmental Protection, and Maine Department of Inland Fisheries and Wildlife. If the flow is so modified, the licensee shall notify the Commission as soon as possible, but no later than 10 days after each such incident.

Article 402. The licensee shall release a minimum flow of one cubic foot per second (cfs) from the Upper Dam and 21 cfs from the Middle Dam of the Rumford Falls Project, as measured at the base of the dams, or inflow, whichever is less, for the protection of aquatic resources and water quality in the two bypass reaches of the Androscoggin River. This flow 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 and the U.S. Fish and Wildlife Service, the Maine Department of Environmental Protection, and Maine Department of Inland Fisheries and Wildlife. If the flow is so modified, the licensee shall notify the Commission as soon as possible, but no later than 10 days after each such incident.

Article 403. The licensee shall file with the Commission for approval, within 180 days from the date of issuance of the license, a plan to measure and report project flows, water surface elevations, and operation records to monitor compliance with the run-of-river mode of operation and flow releases to the bypass reaches, as stipulated in Articles 401 and 402, respectively. The plan shall include but not be limited to: (1) an implementation schedule; (2) the location, design, and calibration of gaging equipment, if needed; (3) the method of

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data collection; and (4) a provision for providing flow data and water surface elevation data to the U.S. Geological Survey, the U.S. Fish and Wildlife Service, the Maine Department of Environmental Protection, and the Maine Department of Inland Fisheries and Wildlife within 30 days from the date of the agency's request for the data.

The licensee shall prepare the plan after consultation with the U.S. Geological Survey, the U.S. Fish and Wildlife Service, the Maine Department of Environmental Protection, and the Maine Department of Inland Fisheries and Wildlife. The licensee shall include with the plan documentation of consultation and copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations prior to filing the plan with the Commission. 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 monitoring indicate that changes in project structures or operations are necessary to ensure maintenance of run-of-river operation or maintenance of minimum flows, the Commission may direct the licensee to modify project structures or operations.

Article 404. Authority is reserved to the Commission to require the licensee to construct, operate, and maintain, or 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 405. At least 90 days before the start of any land-disturbing or land-clearing activities at the canoe access facility sites referred to in Articles 407 and 408, the licensee shall file with the Commission for approval a plan to control erosion, to control slope instability, and to minimize the quantity of sediment. The plan shall be based on actual site geological, soil, and groundwater conditions and on the facility design, and shall include, at a minimum, the following:

(a) a description of the actual site conditions;

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

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

(d) a specific implementation schedule.

The licensee shall prepare the plan after consultation with the Soil Conservation Service (SCS) and the Maine Department of Environmental Protection (MDEP). The licensee shall include with the plan: documentation of consultation, comments and recommendations on the completed plan after providing the plan to the SCS and the MDEP, and specific descriptions of how the agency's comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the SCS and MDEP to comment and to make recommendations prior to filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on actual geological, soil, and groundwater conditions at the site.

The Commission reserves the right to require changes to the plan. No land-disturbing or land-clearing activities shall begin until the licensee is notified 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 implement the provisions of the "Programmatic Agreement Among the Federal Energy Regulatory Commission, the Advisory Council on Historic Preservation, and the Maine Historic Preservation Commission for the Management of Historic Properties Affected by the Rumford Falls Hydroelectric Project."

Article 407. The licensee shall implement the canoe access facility plan filed September 22, 1992, as pages 5 through 6 and drawing 92-4046. The licensee shall construct the carry-in canoe access facility downstream of the existing project boundary at the Carlton Bridge site. The facility shall include a parking area, a canoe launching area, and access for the disabled. The licensee shall operate and maintain or arrange for the operation and maintenance of the canoe access facility during the term of the license. Within 90 days of completion of construction, the licensee shall file revised exhibits to show the facility as built and to include the facility within the project boundary.

Article 408. The licensee, after consulting with the Town of Rumford, the Maine Department of Conservation, and the Friends of the Androscoggin, and within six months from the issuance date of the license, shall file for Commission approval, and upon approval implement, a plan for a canoe access facility at Rumford Point, Maine. The canoe access facility plan shall include:

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(a) a parking area, a canoe launching area, and access for the disabled;

(b) a detailed drawing showing the type and location of the recreation facilities;

(c) a cost estimate and a schedule for completing the facility within two years of the issuance date of the license;

(d) a description of how the recreation facilities shall be operated and maintained during the term of the license and the entity responsible for the operation and maintenance of such facilities.

The licensee shall include documentation of consultation with the agencies, copies of agency comments on the completed plan, and specific descriptions of how all of the agency comments are accommodated by the plan. The Commission reserves the right to require changes to the plan.

Article 409. (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 10 watercraft at a time and where said facility is intended to serve single-family

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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

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necessary federal and state water quality certification or permits have been obtained; (3) other pipelines that cross project lands or waters but do not discharge into project waters; (4) non-project overhead electric transmission lines that require erection of support structures within the project boundary, for which all necessary federal and state approvals have been obtained; (5) private or public marinas that can accommodate no more than 10 watercraft at a time and are located at least one-half mile 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 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

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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.

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

(F) The motion filed by the Conservation Law Foundation, American Rivers, Appalachian Mountain Club, and the Maine Audubon Society on March 22, 1993, for leave to file reply comments is denied.

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(G) This order is final unless a request for rehearing is filed within 30 days of the date of issuance of this order, pursuant to Section 313 of the Federal Power Act. The filing of a request for rehearing does not operate as a stay of the effective date of this order or of any other date specified in this order, except as specifically ordered by the Commission. The licensee's failure to file a request for rehearing shall constitute acceptance of this order.

By the Commission.

(S E A L)

Lois D. Cashell,
Secretary.

ENVIRONMENTAL ASSESSMENT
FOR HYDROPOWER LICENSE

Rumford Falls Hydroelectric Project

FERC Project No. 2333-005

Maine

Federal Energy Regulatory Commission
Office of Hydropower Licensing
Division of Project Review
825 N. Capitol Street, NE
Washington, D.C. 20426

March 25, 1993

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SUMMARY

On December 30, 1991, Rumford Falls Power Company (RFPC) filed an application for a license for the existing 39.35 megawatt (MW) Rumford Falls Hydroelectric Project No. 2333. On August 24, 1992, and September 22, 1992, RFPC supplemented its application.

The project is located on the Androscoggin River near the Town of Rumford, Oxford County, Maine. RFPC proposes no new capacity nor no new construction with the exception of boating recreation facilities.

The existing constructed project consists of two discrete hydropower developments, the Upper Station Development and the Lower Station Development. The upper station and the lower station developments each have a total installed nameplate capacity of 26.55 MW and 12.8 MW, respectively, totaling 39.35 MW; the project's maximum hydraulic capacity is 7,300 cubic feet per second (cfs); and the average annual project generation is about 270,302 MWh.

The EA attached to this order analyzes the effects of RFPC's existing project on the Androscoggin River and recommends seven measures in order to protect and enhance the environmental resources. These measures are:

1. Operate the Rumford Falls Project in a run-of-river mode for the protection of water quality and aquatic resources in the Androscoggin River.
2. Release a minimum flow of 1 cubic foot per second (cfs) from the Upper dam and 21 cfs from the Middle dam of the Rumford Falls Project, for the protection of aquatic resources and water quality in the two bypassed reaches of the Androscoggin River.
3. File, and upon approval implement, a plan to measure and report project flows, water surface elevations, and operation records to monitor compliance with the run-of-river mode of operation and flow releases to the bypassed reaches.
4. File, and upon approval implement, a plan to control erosion, slope instability, and to minimize the quantity of sediment.
5. Implement the provisions of the "Programmatic Agreement Among the Federal Energy Regulatory Commission, the Advisory Council on Historic Preservation, and the Maine Historic Preservation Commission for the Management of Historic

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Properties Affected by the Rumford Falls Hydroelectric Project."

6. Implement the canoe access facility plan and construct the carry-in canoe access facility downstream of the project boundary at the Carlton Bridge site.

7. File, and upon approval implement, a plan for a canoe access facility at Rumford Point, Maine.

Based on our independent review and evaluation of the proposed Rumford Falls project, agency recommendations, and the no-action alternative, we have selected issuing a license for the proposed project, with additional staff-recommended enhancement measures, as the preferred option. We recommend this option because: (1) with enhancement measures, the environmental effects of subsequent operation would be minor; (2) the enhancement measures would protect or enhance fish, wildlife, recreation, and cultural resources; and (3) the electricity generated from a renewable resource would be provided, thus reducing the use of existing fossil-fueled, steam-electric generating plants; thereby, conserving nonrenewable energy resources, and reducing atmospheric pollution, and global warming.

No reasonable action alternatives to the project have been identified for assessment. The no-action alternative has been considered and is addressed in the environmental analysis and the comprehensive development sections of this EA.

RFPC completed application for a Section 401 Water Quality Certificate (WQC) on January 2, 1992. RFPC received a WQC from the State of Maine Department of Environmental Protection (MDEP), as required by the Clean Water Act, on December 17, 1992. This WQC, issued by the MDEP within one year of the receipt of the completed WQC application, is considered valid.

The WQC requires that 1) the Rumford Falls Project operate in a run-of-river mode (outflow equals inflow) while maintaining a minimum flow in the river immediately downstream of the tailrace of 1,034 cfs or inflow, whichever is less; 2) except for approved maintenance or emergencies beyond the applicant's control, the water levels in the upper impoundment be maintained within 1.0 foot of full pond elevation of 601.24 feet USGS (top of flashboards), and water levels in the middle dam impoundment be maintained within 1.0 foot of full middle pond elevation of 502.74 feet USGS (top of flashboards); 3) the applicant submit plans for providing and monitoring the water levels in the upper and middle impoundments; and 4) the applicant provide a public carry-in canoe access point below the project with parking for six to twelve vehicles and work jointly with others to seek and support future development of carry-in canoe access.

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Pursuant to Section 10(j) of the Federal Power Act (Act), we make a determination that the recommendations of the Federal and state fish and wildlife agencies are consistent with the purposes and requirements of Part I of the Act and applicable law. Section 10(j) of the Act requires the Commission 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. We have addressed the concerns of the Federal and state fish and wildlife agencies and made recommendations consistent with those of the agencies.

Based on our independent environmental analysis, we conclude in the EA that issuance of a license for the Rumford Falls Project would not constitute a major Federal action significantly affecting the quality of the human environment.

ENVIRONMENTAL ASSESSMENT

FEDERAL ENERGY REGULATORY COMMISSION
OFFICE OF HYDROPOWER LICENSING, DIVISION OF PROJECT REVIEW

Rumford Falls Hydroelectric Project

FERC Project No. 2333-005 Maine

March 25, 1993

I. APPLICATION

On December 30, 1991, Rumford Falls Power Company (RFPC) filed an application for a license for the existing 39.35 megawatt (MW) Rumford Falls Hydroelectric Project No. 2333. On August 24, 1992, and September 22, 1992, RFPC supplemented its application.

The project is located on the Androscoggin River near the Town of Rumford, Oxford County, Maine. (See figure 1.)

II. PURPOSE AND NEED FOR ACTION

A. Purpose

RFPC's existing Rumford Falls hydropower development generates about 270,302 megawatthours (MWh) of electric energy annually. All the power generated is utilized by the Boise Cascade Corporation's pulp and paper mill (Mill), located in the Town of Rumford, Maine. The present power demand for the Mill is approximately two and a half times the maximum output of the project.

B. Need for Power

RFPC has applied for a new license for the Rumford Falls Hydroelectric Project. RFPC is a totally-owned subsidiary of the Boise Cascade Corporation (Boise Cascade).

The present estimated capacity requirement of the Mill is 85 MW. The total installed capacity of the project is 39.35 MW. Therefore, as long as the Mill is operating at its present capacity --and even if substantial peak reduction measures are implemented-- the Mill's demand for electricity will always exceed the supply available from the project.

The Rumford Hydropower Project was licensed by the Federal Energy Regulator Commission (Commission) on May 14, 1965, but its Upper Station has been generating electricity since 1903. Its Lower Station was added in 1954.

The pulp and paper products industry is highly competitive and is an energy-intensive industry. Boise Cascade's competitive

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position depends heavily on the availability of a reliable and adequate source of low-cost electric power. The 90-year and 39-year periods during which the Upper Station and Lower Station have supplied the Mill with low-cost hydropower energy have been an important factor in Boise Cascade's ability to survive and grow. The operating history of the Rumford Falls Hydroelectric Project has established, in adequate fashion, both the short term and long term needs for the electricity generated by the project.

III. PROPOSED PROJECT AND ALTERNATIVES

A. Proposed Project

The existing constructed project consists of two discrete hydropower developments, the Upper Station Development and the Lower Station Development. The upper station and the lower station developments each have a total installed nameplate capacity of 26.55 MW and 12.8 MW, respectively, totaling 39.35 MW; the project's maximum hydraulic capacity is 7,300 cubic feet per second (cfs); and the average annual project generation is about 270,302 MWh.

Upper Station Development:

The Upper Station Development consists of: 1) a concrete gravity dam, having a 464-foot-long by 37-foot-high ogee type spillway section, with a crest elevation of 598.74 feet U.S. Geological Survey datum (USGS), topped with 2.5-foot-high, pin-supported, wooden flashboards; 2) a forebay about 2,300 feet long by 150 feet wide; 3) a gatehouse with eight headgates, (two headgates for each of the four penstocks), trashracks, and other appurtenant equipment; 4) four underground steel-plate penstocks, each about 110 feet long, three of which are 12 feet in diameter, and one 13 feet in diameter; 5) a masonry powerhouse integral with the dam, occupying two adjoining sections of the dam: (a) the Old Station, about 30 feet wide by 120 feet long by 92 feet high, equipped with one horizontal generating unit with capacity of 4,050 kilowatts (kW), and (b) the New Station, about 60 feet wide, by 140 feet long, by 76 feet high, equipped with three vertical generating units--two with capacity of 7,650 kW each, and one with capacity of 7,200 kW; 6) an impoundment, with gross storage capacity of 2,900 acre-feet, surface area of about 419 acres, normal maximum headwater elevation of 601.24 feet, and tailwater elevation of 502.74 feet; 7) four overhead 11.5-kilovolt (kV) transmission lines extending from the upper station to the mill, (a) two lines being 6,000 feet long, (b) another being 5,400 feet long, and the last 5,200 feet long; and (8) appurtenant facilities.

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Lower Station Development:

The Lower Station Development consists of: 1) a rock-filled, wooden-cribbed, and concrete-capped Middle Dam, having a 328.6-foot-long by 20-foot-high gravity spillway section, with a crest elevation at 501.74 feet, topped with 1.0-foot-high pin-supported wooden flashboards; 2) a Middle Canal concrete headgate structure, located adjacent to the dam, about 120 feet long, with 10 steel headgates, and a waste weir section perpendicular to the headgate structure, about 120 feet long, with a crest elevation of 501.6 feet; topped with 10-inch-high flashboards; 3) a Middle Canal, about 2,400 feet long, with width ranging from 75 to 175 feet, and depth from 8 to 11 feet; 4) a gatehouse containing two headgates, trashracks, and other appurtenant equipment; 5) two 12-foot-diameter, steel-plate penstocks, each extending about 815 feet to two cylindrical surge tanks, each about 36 feet in diameter by 50.5 feet high, and the penstocks continuing 77 feet to the powerhouse; 6) a masonry powerhouse, equipped with two identical vertical units each 6,400 kW capacity; 7) an impoundment, with gross storage capacity of 141 acre-feet, surface area of about 21 acres, normal maximum headwater elevation of 502.74 feet and tailwater elevation of 423.24 feet; 8) the 600-foot-long, 11.5-kV generator leads, extending from the Lower Station to Substation No. 5; and 9) appurtenant facilities.

B. Proposed Mitigative Measures

1. Construction: No construction is proposed.

2. Operation: RFPC proposes to: (1) operate the project in a run-of-river mode for the protection of water quality and aquatic habitat; (2) maintain water levels in the upper and middle impoundments within 1.0 foot of full pond elevation; (3) protect historic resources by implementing a programmatic agreement for the management of historic properties; and (4) enhance recreational access by developing two carry-in canoe facilities.

C. No Action Alternative

The no-action alternative is the continued present operation of the project. The project would continue to operate as required by the original project license without change to the current environmental setting. No alterations or enhancements from the existing baseline resources would be made.

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IV. CONSULTATION AND COMPLIANCE

A. Agency Consultation

The following entities commented on the application subsequent to the public notice, which was issued on November 17, 1992. All comments become part of the record and are considered during our analysis of the proposed project.

Commenting agencies and other entities	Date of letter
Department of the Interior	January 21, 1993
Department of the Army, Corps of Engineers	January 6, 1993
Maine Department of Environmental Protection	December 17, 1992

The applicant filed reply comments by letters dated January 28, 1993, and March 1, 1993.

In addition to providing comments, organizations and individuals may petition to intervene and become a party to any subsequent proceedings. The following entities filed a motion to intervene in the proceedings.

Intervenors	Date of motion
Maine State Planning Office	January 7, 1993
Trout Unlimited, et. al. (opposed)	January 15, 1993
Conservation Law Foundation, et. al.	January 14, 1993

The applicant responded to the interventions by letters dated January 28, 1993, and March 1, 1993.

B. Water Quality Certification

RFPC completed application for a Section 401 Water Quality Certificate (WQC) on January 2, 1992. RFPC received a WQC from the State of Maine Department of Environmental Protection (MDEP), as required by the Clean Water Act, on December 17, 1992. This WQC, issued by the MDEP within one year of the receipt of the completed WQC application, is considered valid.

The WQC requires that 1) the Rumford Falls Project operate in a run-of-river mode (outflow equals inflow) while maintaining a minimum flow in the river immediately downstream of the tailrace of 1,034 cfs or inflow, whichever is less; 2) except for approved maintenance or emergencies beyond the applicant's

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control, the water levels in the upper impoundment be maintained within 1.0 foot of full pond elevation of 601.24 feet USGS (top of flashboards), and water levels in the middle dam impoundment be maintained within 1.0 foot of full middle pond elevation of 502.74 feet USGS (top of flashboards); 3) the applicant submit plans for providing and monitoring the water levels in the upper and middle impoundments; and 4) the applicant provide a public carry-in canoe access point below the project with parking for six to twelve vehicles and work jointly with others to seek and support future development of carry-in canoe access.

We agree that the first three conditions in the WQC are needed to protect water quality in the Androscoggin River and, as discussed in Section V.B.2, they should be included in any license issued for the Rumford Falls Project. Condition 4, which requires recreational canoe access, has no effect on water quality and we do not believe it is a valid condition to include in a WQC. However, as discussed in Section V.B.7, we recognize the merits of this request and recommend that it be included in any license issued for Rumford Falls Project.

V. ENVIRONMENTAL ANALYSIS

A. General Description of the Locale

1. Androscoggin River Basin.

The Androscoggin River Basin is located in western Maine and northeastern New Hampshire. From the total drainage area of 3,450 square miles, approximately 2,730 square miles are located in Maine and remaining 720 square miles in New Hampshire. The Androscoggin River Basin is about 110 miles long and 65 miles wide.

The Androscoggin River is formed by junction of the Magalloway and Rapid Rivers at Errol dam which is at the outlet of Umbagog Lake, New Hampshire. From this point the river flows south turning sharply to the east near Gorham, New Hampshire. A short distance upstream from Livermore Falls, Maine, the river turns sharply again to flow south to its outlet in Merrymeeting Bay, eight miles below the head of tidewater at Brunswick, Maine. Between Umbagog Lake and tidewater at Brunswick the river falls a total of 1,245 feet in 161 miles, an average slope of 7.7 feet per mile.

The principal tributaries are the Cupsuptic, Kennebago, Magalloway and Dead Diamond above Umbagog Lake; and the Ellis, Swift, Webb, Dead, Nezinscott and the Little Androscoggin River, all below Umbagog Lake.

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The river corridor has been heavily developed for paper production, and related industries. Upstream, the basin is mainly forested and includes five large storage reservoirs, which have been managed to regulate river flow since the late 1800's. The Androscoggin River's flow and storage is managed under a 1909 agreement for power and manufacturing purposes. Throughout the long history of industrial and urban development, a large portion of the natural areas have been drastically changed by construction of dams and associated hydroelectric and hydromechanical facilities, and for various mill buildings and yards, roadways, railroad beds, bridges, and other industrial, residential, and civil structures. Flatter areas in the basin have been farmed. Historically, water quality was severely degraded in the area due to industrial and municipal waste discharges.

Staff is preparing an environmental impact statement (EIS) for seven projects in the Upper Androscoggin River Basin. The potential for the interaction of water uses to cumulatively affect target resources diminishes with distance between them. This is particularly true for the target resources in the Androscoggin Basin, e.g., water quality and resident salmonids. The seven projects included in the EIS are all located within an 11-mile long reach of the Androscoggin River; the Rumford Falls Project is about 35 miles downstream of the Shelburne Project (the lowest project in the Upper Androscoggin River Basin). Therefore, the Rumford Falls Project is not included in the EIS, and staff has prepared this separate site-specific EA for the project; however, this EA addresses the cumulative effects of the Rumford Falls Project on target resources.

2. Proposed and Existing Hydropower Development.

The Androscoggin River Basin has several hydroelectric projects. We have compiled a list of existing and potential major licenses, minor licenses, and exempted projects in the basin as well as the operating unlicensed projects as of January 13, 1993. Those projects are as follow:

Type	Number	Capacity
Existing:		
Major Licenses	19	255,756 kW
Minor Licenses	4	3,930 kW
Exemptions	10	1,828 kW
Unlicensed	3	2,970 kW
Total:	36	264,484 kW
Pending:		
Minor License Appl.	1	115 kW

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3. Target Resources. A target resource 40/ is an important component of the environment that may be cumulatively affected by the proposed action and in conjunction with other developmental activities within the river basin. We identified two target resource in the Androscoggin River Basin: (1) resident salmonid fish and (2) dissolved oxygen (DO).

The Rumford Falls area of the Androscoggin River currently supports no resident populations of anadromous fish, however, anadromous fish do occur upstream of Rumford Falls, near Berlin New Hampshire. Landlocked Atlantic Salmon, brook trout and brown trout have been stocked by the New Hampshire Fish and Game Department in the Androscoggin River approximately 15 miles upstream of Berlin. We conclude that the Rumford Falls Project's cumulative impact to salmonids in the Androscoggin River Basin would be negligible because only small numbers of fish which migrate downstream from upstream areas could potentially be affected.

DO is an important water quality parameter and a key determinant of a river's waste assimilative capacity. Concern for DO levels in the Androscoggin River is based on the combined effect of existing wastewater treatment facility discharges and the potential loss of aeration due to reservoir stratification and/or reduced spillage at project dams as a result of flow diversions for hydropower production.

Water quality studies conducted by RFPC show that significant increases in DO would not be realized by modifying the operating mode of the project (i.e., providing additional flows over the spillway of the dam). In addition, DO concentrations and associated percent saturations indicate the state standard for Class C waters 41/ is currently met in the project area. The MDEP and U.S. Fish and Wildlife Service (FWS) agree with the conclusions of water quality analyses conducted by RFPC.

- 40/ The Council on Environmental Quality defines cumulative impacts as impacts on the environment that result from the incremental impacts of an action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions. Cumulative impacts can result from individually minor, but collectively significant actions taking place over a period of time (40 CFR, Part 1508.7).
- 41/ Suitable for drinking water supply after treatment, fishing, recreation in and on the water, industrial process and cooling water supply, hydroelectric power generation, navigation, and as habitat for fish and other aquatic life.

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Based on operating the project in a run-of-river mode and maintaining a 1,034 cfs flow, or inflow, downstream of the tailrace of the project, we conclude that the proposed Rumford Falls Project's contribution to adverse cumulative impacts on DO in the river basin would be negligible. DO conditions in the project area are described below in section F.2. The project's impact on DO is discussed in section G. Any effects that the seven upstream EIS projects may have on the Rumford Falls Project will be addressed in the EIS, but any effects are expected to be insignificant because those projects are 35 miles upstream.

B. Proposed Project

We reviewed the proposed project in relation to the environmental resources in the project impact area and conclude that there would be no direct or indirect adverse environmental effects on terrestrial resources, because no change in the run-of-river operation is proposed, no construction affecting terrestrial resources is proposed, and no enhancement measures were recommended by the resource agencies.

1. Geological Resources

To minimize localized soil erosion, sedimentation, and stream turbidity, we recommend that RFPC develop and implement a soil erosion and sedimentation control plan for construction of the proposed canoe access facilities.

Affected Environment: The regional geology near the project consists of mountainous uplands in the northern extension of the Appalachian Mountain system. General elevations of the hills and mountains near the project range from 1,000 to 1,500 feet. The local bedrock geology includes predominant mudstone and sandstone. Surface deposits in the project area include glacial till composed of clay, silt, sand, and stone. The soils surrounding most of the upper dam impoundment are poorly drained to well drained and formed in alluvium. The soils have a loamy surface layer underlain by sandy material, and are subject to occasional flooding.

Many areas along the upper dam impoundment have few trees protecting the shoreline. The impoundment intersects unstable alluvium in some areas, and as a result, wave action, rafted ice, and flood currents cause minor, local erosional undermining of the riverbanks.

Environmental Impacts and Recommendations: RFPC proposes no plans for future development which would affect the geological resources. RFPC's proposal to construct a canoe access facility upstream and downstream of the project boundary could result in increased soil erosion and sedimentation in affected waters.

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Implementing proper safeguards would minimize these potential adverse impacts.

Therefore, we recommend that the Licensee develop and implement a soil erosion and sedimentation control plan in consultation with the Soil Conservation Service (SCS) and MDEP, and file the plan with the Commission for approval before the start of any construction activities. We believe that implementing this plan would minimize localized soil erosion, sedimentation, and stream turbidity.

Unavoidable Adverse Impacts: The shoreline erosion and slumping that currently occurs at the upper dam impoundment, would continue to occur with the proposed operation mode. These adverse impacts are minor in nature, and unavoidable.

2. Water Resources

Affected Environment:

a. Streamflow. Flows at the Rumford Falls Project are controlled by a series of six natural lakes and storage dams located in the headwaters of the Androscoggin River. These storage systems, which are operated by the Union Water Power Company and the Androscoggin Reservoir Company, are used to capture the majority of spring run-off for consistent release throughout the year, and to provide a minimum release of at least 1,550 cfs at Berlin, New Hampshire at all times. As a result of this flow regulation, a minimum release of approximately 1,600 cfs has been maintained at Rumford, Maine, about 97 percent of the time over the last 50 years of record.

The Upper dam, with 2.5-foot-high flashboards, creates a 419-acre impoundment with a water surface elevation of 601.24 feet and depths ranging from 10 to 25 feet. The Middle dam, with 1.0-foot-high flashboards, creates a 21-acre impoundment with a water surface elevation of 502.74 feet.

The following flows for the Rumford Falls Project are based on data collected at the Rumford stream flow gage (USGS stream flow gage No. 01654500) located immediately downstream of the lower station tailrace:

- ù Mean annual flow (based on 1901 to 1981 records): 3,727 cfs
- ù 7-consecutive-day average low flow expected to occur once every 10 years (7Q10): 1,295 cfs
- ù Minimum recorded flow: 625 cfs on March 27, 1911
- ù Maximum recorded flow: 74,000 cfs on March 20, 1936
- ù Aquatic base flow (ABF): 1,034 cfs

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Upper Dam bypassed reach. The Upper Dam bypassed reach consists of exposed bedrock over which water, from leakage and spillage over the dam, flow at a steep gradient. The bypassed reach is 650 feet long, and leakage from the dam provides a base flow of about 1 cfs (as measured during the summer months). The turbine capacity of the Upper Station is 4,500 cfs and spillage over the dam into the reach (resulting from inflows exceeding turbine capacity) occurs about 21 percent of the time or about 76 days per year.

Middle Dam bypassed reach. The Middle Dam bypassed reach includes a long narrow pool, bedrock outcroppings, and steep cascades. The bypassed reach is 2,865 feet long. Leakage from the dam provides a base flow of about 21 cfs (as measured during the summer months). The turbine capacity of the Lower Station is 2,800 cfs and the Boise Cascade Mill uses 100 cfs of the canal flow for process water. Spillage over the dam into the reach (resulting from inflows exceeding turbine capacity plus the mill flow) occurs approximately 45 percent of the time or about 165 days per year.

b. Water Quality. Historically water quality has been severely degraded in the project area due to municipal and industrial waste discharges. The installation of wastewater treatment facilities in the mid-1970's, however, has contributed to improved water quality. Municipal and industrial discharges (pulp and paper mills) immediately upstream and downstream of the project include the following:

- ù James River's Burgess and Cascade Mills (industrial, upstream)
- ù City of Berlin (domestic, upstream)
- ù Town of Gorham (domestic, upstream)
- ù Boise Cascade Corporation (industrial, downstream)
- ù Rumford Mexico Sewage District (domestic, downstream)
- ù International Paper (industrial, downstream)
- ù Town of Livermore Falls (domestic, downstream)

The MDEP designates the Androscoggin River in the area of the proposed project as Class C. For Class C waters DO concentrations should be 5.0 milligrams per liter (mg/l) or 60 percent of saturation, whichever is greater. Class C waters should be suitable for a drinking water supply after treatment, fishing, recreation, and industrial use. Upstream of the Rumford Falls Project, well outside the project boundary, the Androscoggin River is rated Class B, requiring DO concentrations of 7.0 mg/l or 75 percent saturation.

RFPC reviewed existing water quality data collected upstream and downstream of the Rumford Falls Project. The Department of Interior (Interior) and the MDEP agree with RFPC's findings that

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DO and percent saturations in the Rumford Falls impoundments and tailraces consistently meet Class C requirements. In addition, the MDEP indicated, with the exception of a few samples in July and August, water quality in the project area also meets the more stringent Class B state standards.

Environmental impacts and recommendations:

RFPC proposes to: (a) operate the Rumford Falls Project in a run-of-river mode such that a minimum flow of 1,034 cfs is maintained downstream of the tailrace of the project; and (b) maintain constant water surface elevations in the upper and middle headponds (within operational limitations). RFPC proposes no changes in flows over the upper and middle dams because water quality, fishery, and aesthetics management objectives are being met under the current project operation. Interior, the FWS, the Maine Department of Inland Fisheries and Wildlife (MDIFW), and the MDEP agree with RFPC's operation proposal. The MDEP included these conditions in the WQC issued for Rumford Falls.

a. Run-of-river operation. The WQC issued for the Rumford Falls Project requires that the project be operated run-of-river. Operating in a run-of-river mode would protect aquatic habitat, and fisheries by minimizing fluctuations of water surface levels both upstream and downstream of the project. Run-of-river would reduce the potential for resuspension of contaminated bottom sediments by minimizing fluctuations which can resuspend particulate matter; contaminated bottom sediments would remain in their present locations and continue to be "locked-up" in the impoundment sediments. Run-of-river operation would also assure that hydropower projects and industrial and municipal water facilities located immediately upstream and downstream are not affected by operation of Rumford Falls. Therefore, we recommend that the Licensee be required to operate the project in this manner.

b. Reservoir Fluctuations. The WQC issued for the Rumford Falls Project requires that impoundment levels be maintained within 1 foot of full pond elevations, 601.24 feet in the upper impoundment and 502.74 feet at the middle impoundment. Under the run-of-river operation, daily water surface elevations in the project reservoirs would be stable, within operational limitations. High spring flows, the small storage capacity of the reservoirs, and operation limitations occasionally cause short-term impoundment fluctuations as the project turbines are adjusted to meet changes in river flows. Flow records for 1986 to 1988 (36 months) show that fluctuations were less than 0.5 feet for 30 months, about 0.5 feet for 3 months, and between 0.66 feet and 0.93 feet for 3 months (primarily from naturally occurring high flows).

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These fluctuations are short in duration and do not significantly affect flows upstream or downstream of the project. The FWS and MDIFW agree with RFPC that these fluctuations have no significant adverse impact on the fisheries and aquatic resources.

We agree with the agencies that the present reservoir fluctuations have no adverse impact on flows or aquatic resources in the project area. Therefore, we recommend that the Licensee be required to maintain the upper impoundment at 601.24 feet USGS and the lower impoundment at 502.74 feet USGS and take every precaution to minimize fluctuations and to assure the impoundments are maintained within 1 foot of full pond elevation at all times.

c. Flow monitoring. The FWS and MDEP require a flow monitoring plan to monitor: compliance with provisions for run-of-river operation, impoundment levels, flows in the bypassed reaches, and the minimum flow required immediately downstream of the project tailrace. We agree that a plan, which outlines procedures for monitoring the above conditions, is necessary. Therefore, we recommend the Licensee file with the Commission, for approval, a stream flow monitoring plan. This plan should be developed in consultation with the FWS, MDEP, MDIFW, and USGS, and should indicate methods of data collection, describe the location, design, and calibration of monitoring equipment if needed, and include provisions for providing available operation, flow, and water surface elevation data to the consulted agencies within 30 days of the agencies' request.

d. Minimum flows in the upper and middle bypassed reaches. Currently, flows in the upper and middle bypassed reaches are provided by spillage at the dam during high flow periods, and leakage. Leakage in the upper reach is approximately 1 cfs and leakage in the lower reach is approximately 21 cfs. RFPC conducted studies to identify the status of fisheries habitat in the bypassed reaches and water quality in the project area. RFPC also evaluated the need for additional spill flows to provide for water quality, aquatic habitat, and aesthetic resources. Water quality is discussed below. Aquatic habitat and aesthetics are discussed in Sections V.B.3. and V.B.5., respectively.

RFPC conducted a water quality study in consultation with the MDEP. The study "Characterization of Existing Dissolved Oxygen Regime and Assessment of Appropriateness of Reaeration at the Rumford Falls Hydro Project" used both historical and newly collected water quality data. The study shows that Class C DO criteria are currently maintained within the Rumford Falls Project boundary. Therefore, spill flows are not needed at the upper and middle dam to meet the state standard.

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RFPC's study also shows that periodically, during the summer critical temperature and flow periods, DO does not meet the minimum DO criteria about 40 miles downstream of Rumford Falls at Gulf Island Pond. Spill flows at Rumford Falls, however, would have little effect on DO levels 40 miles downstream of Rumford Falls. This conclusion is supported by MDEP's observation that because of relatively high DO levels above the project, only a small increase in DO (less than 1 mg/l) could be realized downstream of Rumford Falls, even with substantial spillage (50% of inflow).

In a Motion to Intervene, dated January 14, 1993, American Rivers, the Appalachian Mountain Club, the Conservation Law Foundation, and the Maine Audubon Society (CLF) requests that RFPC 1) take mitigation measures that help restore lost oxygen content in waters downstream of the project and the Boise Cascade's paper mill discharge located downstream of the project; 2) provide mitigation that brings the project into compliance with Maine's water quality standards to restore designated and beneficial uses; and 3) study the effects of mercury, dioxin and other pollutants in the project waters and take remedial action, if necessary.

On January 15, 1993, Trout Unlimited, Maine Council of Trout Unlimited, Atlantic Salmon Federation, and the Maine Council of Atlantic Salmon Federation (TU) jointly filed a timely motion to intervene in opposition to this proceeding. TU states in its intervention that the project waters are foul and that the water quality is very poor due to hydropower operations and other reasons, a system wide assessment of impacts on the Androscoggin River is warranted and the preparation of an EIS is necessary, and the Commission should hold an adjudicatory hearing. Staff is preparing an EIS for seven projects in the Upper Androscoggin River Basin. The potential for the interaction of water uses to cumulatively affect target resources diminishes with distance between them. This is particularly true for the target resources in the Androscoggin Basin, e.g., water quality and resident salmonids. The seven projects included in the EIS are all located within an 11-mile long reach of the Androscoggin River; the Rumford Falls Project is about 35 miles downstream of the Shelburne Project (the lowest project in the Upper Androscoggin River Basin). Therefore, the Rumford Falls Project is not included in the EIS, and staff has prepared this separate site-specific EA for the project; however, this EA addresses the cumulative effects of the Rumford Falls Project on target resources.

CLF stated that no DO data from downstream of both the Rumford Falls Project and Boise Cascade's paper mill discharge appears in the application. In fact, the application shows that RFPC sampled DO at station 16, the lower foot bridge, which is

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located about 200 feet downstream of the Boise Cascade mill outfall. For four collection dates in August and September, 1988 the lowest DO ranged from 7.9 mg/l to 8.9 mg/l, saturation ranged from 89 percent to 93 percent, and the DO deficit ranged from 0.6 mg/l to 1.0 mg/l. Thus, DO was well above the state standard and the potential for improvement was low.

CLF's and TU suggest that Rumford Falls is not in compliance with Maine's water quality standards. In fact, the FWS and the MDEP, in their WQC issued December 17, 1992, conclude otherwise.

CLF's request that RFPC study mercury and dioxin and take remedial action is not warranted. As discussed in Section A, operating the project run-of-river, as proposed by RFPC, is an effective way to minimize disruption of sediments in the project area.

We disagree with CLF's and TU's recommendations concerning water quality because we believe they are based on outdated information and are not supported by the most recent information available. The MDEP and FWS agree with the results of RFPC's water quality study and conclude that no additional flows would be needed at the upper and middle dams. We reviewed the water quality studies conducted and agree that DO is near saturation upstream of the Rumford Project and only small increases in DO could be achieved from spillage at the dam. Water quality consistently meets and exceeds the management requirements in the project area. We conclude that current project operation would maintain water quality in the project area consistent with Maine's water quality management objectives for this reach of the Androscoggin River. Therefore, we see no need for additional flow releases from the upper and lower dams.

Unavoidable Adverse Impacts: No significant impacts to water resources would occur. Only minor losses in DO concentrations would occur as a result of project operation.

3. Fishery Resources

Affected Environment: The fishery in the project area consists of warmwater and coolwater fish communities. Fish collected in the Androscoggin River include chain pickerel, golden shiner, fallfish, white sucker, brown bullhead, pumpkinseed, yellow perch, common shiner, longnose dace, and occasional trout species. Fallfish, common shiner, white sucker, and yellow perch are the predominant species in the upper impoundment of Rumford Falls.

Between 1986 and 1989 approximately 20,000 4- to 6-inch brook trout and 12,000 4- to 6-inch brown trout were stocked in the Androscoggin River, between Bethel and Livermore Falls, by

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the MDIFW. The MDIFW discontinued stocking brown trout and brook trout in 1991, primarily due to high levels of dioxin contamination, making fish consumption questionable from a health perspective, and a 1987 creel survey which showed little fishing activity.

Environmental Impacts and Recommendations:

a. Instream flows in the bypassed reach:

RFPC studied aquatic habitat and flows in the upper and middle bypassed reaches. The study "Field Investigations at the Bypassed Reaches of the Rumford Falls Project" assessed the flow characteristics, quality of aquatic habitat, and management objectives for the bypassed reaches. RFPC's study shows that the steep gradient, substrate, and lack of safe access limit the fishery management opportunities in these bypassed reaches. Therefore, spill flows for fisheries at the upper and middle dam are not being proposed by RFPC.

The MDIFW and FWS agree with the results of RFPC's fishery habitat study. The agencies conclude that, under the present fisheries management programs, the present leakage (estimated at 1 cfs in the upper reach and 21 cfs in the middle reach) and occasional spillage at the two dams are adequate; no additional flows are needed at the upper dam and middle dam for the purpose of providing additional fishery habitat in the bypassed reaches. The FWS notes, however, that long-range plans, which call for the restoration of Atlantic salmon in the Androscoggin River up to Rumford Falls, may require that flows in the middle reach be addressed in the distant future.

We reviewed the aquatic habitat studies and fishery management goals and conclude that no additional minimum flow releases are needed at the upper and middle dams for enhancement purposes. The existing flow conditions in the bypassed reaches, which are currently maintained by leakage and spillage in excess of project capacity, provide adequate habitat to support the agencies' current fishery management objectives. Therefore, we recommend that the Licensee continue to provide flows in the bypassed reaches equivalent to present leakage; 1 cfs in the upper reach and 21 cfs in the middle reach. In addition, all flows in excess of project capacity, should be released in the upper and middle bypassed reaches of the Androscoggin River.

b. Fish Passage and Fish Protection: The MDEP, Atlantic Sea Run Salmon Commission (ASRSC), and Interior do not currently require facilities specifically designed to pass fish upstream or downstream at Rumford Falls. Interior indicates that the passage of fish at Rumford Falls dam is not currently a management objective for the Androscoggin River, therefore, Interior does

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not recommend upstream or downstream fish bypass facilities at this time.

Should management objectives for the Androscoggin River change, fish passage facilities may be needed in the future. Therefore, Interior requests that Section 18 reservation of authority be placed in any license issued for the Rumford Falls Project. Section 18 of the Act provides the Secretary of Interior the authority to prescribe fishways. 42/ Although fish passage facilities may not be recommended by Interior at the time of project licensing, as is the case for the Rumford Falls Project, the Commission should include license articles which reserve Interior's prescription authority. 43/ We recognize that future fish passage needs and management objectives cannot always be predicted at the time of license issuance. Under these circumstances, and upon receiving a specific request from Interior, it is appropriate for the Commission to reserve Interior's authority to prescribe fishways.

TU states in its intervention that the project has significant effects on resident fish and wildlife. We disagree; considering the limited fishery management objectives and the discontinued stocking of trout in the project area, any continuing impact to the fishery is not expected to be significant.

Unavoidable Adverse Impacts: Entrainment and impingement of resident fish would continue at existing levels under the proposed operations. At this time the agencies do not require additional measures to reduce entrainment. Trashracks have been used at hydropower plants to deter fish from entering intakes. The upper development at Rumford is equipped with 3-inch open spaced coarse trashracks and 2.5-inch open spaced fine trashracks. The lower development has about 2.6-inch open spaced trashracks. While these spacings would prevent entrainment of larger fish that would have the greatest risk of turbine injury or mortality, some project-related fish mortality, particularly for smaller fish, would continue. In consideration of the limited fishery management objectives for the project area and recently discontinued stocking of trout in the project area, the impact to the fishery is not deemed to be significant.

42/ Section 18 of the Federal Power Act provides: "The Commission shall require construction, maintenance, and operation by a licensee at its own expense ... such fishways as may be prescribed by the Secretary of Commerce or the Secretary of Interior as appropriate."

43/ Lynchburg Hydro Associates, 39 FERC • 61,079 (1987).

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4. Threatened and Endangered Species

Affected Environment: The project is within the range of the bald eagle (*Haliaeetus leucocephalus*) and the peregrine falcon (*Falco peregrinus anatum*), which are both Federally listed as endangered. The FWS states that, no Federally listed or proposed threatened and endangered species under the jurisdiction of FWS are known to occur in the project area, with the exception of occasional, transient, endangered bald eagles and peregrine falcons and further consultation with FWS under Section 7 of the Endangered Species Act is not required (letter from Gordon E. Beckett, Field Supervisor, New England Field Office, U.S. Fish and Wildlife Service, Concord, New Hampshire, June 16, 1992).

Environmental Impacts and Recommendations: We conclude that continued project operation is not likely to adversely affect any Federally listed or proposed threatened and endangered species.

Unavoidable Adverse Impacts: None.

5. Aesthetic Resources

The natural cascades within the bypassed reaches are the prominent aesthetic resources at the project. We believe that increasing the frequency of spillage in the bypassed reaches would not result in any appreciable aesthetic benefits, and requiring minimum flows is not recommended.

Affected Environment: The project facilities and the middle dam impoundment are situated in a relatively developed river setting, and have been part of the Rumford, Maine, environment for nearly 100 years. The upper dam impoundment is bordered by forested wetlands and farmlands which offer scenic views from the nearby roads.

Flows and aquatic habitat in the upper and middle bypassed reaches are discussed in detail in section V.B.3. The 650-foot-long bypassed reach below the upper dam consists of exposed bedrock over which water, from spillage and leakage, flows at a steep gradient. The 2,865-foot-long bypassed reach below the middle dam includes a long narrow pool, bedrock outcroppings, and steep cascades. The natural cascades within the bypassed reaches are the prominent aesthetic resources at the project, and offer scenic views below the middle dam and limited views below the upper dam. Views of the cascades within the upper bypassed reach are obstructed because of the upper dam station and forebay wall along Route 2. Views of the cascades within the middle dam bypassed reach are offered at the Memorial Bridge, looking both upstream and downstream.

Environmental Impacts and Recommendations:

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In 1989, RFPC conducted a field investigation to evaluate the appropriate flow requirements needed to protect physical and biological quality of the bypassed reaches. RFPC concluded that additional flows are not warranted in the bypassed reaches of the Androscoggin River below the upper station and middle dam. The project would continue to operate in a run-of-river mode with no appreciable water storage. The FWS and MDIFW agree with RFPC's proposal for no minimum flows to the two bypassed reaches.

CLF, in a Motion to Intervene, dated January 14, 1993, requests that RFPC provide mitigation that helps restore the lost aesthetics of dewatering the bypassed reaches. We believe CLF's recommendation is based on pre-project conditions, rather than the existing conditions at the proposed project. The views of the upper dam bypassed reach are obstructed, and the infrequent spillage has no significant effect on the visual resources. The industrialized setting of the cascades in the middle dam bypassed reach reduces the necessity to enhance the scenic views offered from the Memorial Bridge. In a typical year, the proposed spillage over the middle dam amounts to 165 days, and leakage provides sufficient flows over the cascades during the remaining days. Therefore, we believe that the existing flows in the bypassed reaches are adequate to maintain the scenic views of the natural cascades.

In addition, we reviewed photograph and videotaped documentation of the bypassed reaches with flows of 20, 30, and 40 cfs at the Middle Dam and 10, 20, and 40 cfs at the Upper Dam. We conclude that increasing the frequency of spillage in the bypassed reaches would not result in any appreciable aesthetic benefits, and requiring minimum flows is not recommended.

6. Cultural Resources

Affected Environment: In the summer of 1988, RFPC conducted an archeological study of the upper dam impoundment shoreline. The study was designed to identify archeological sites meriting a determination of eligibility for listing on the National Register of Historic Places. This was followed by a 1989 study designed to determine eligibility. These studies revealed that the following eight prehistoric sites are eligible (i.e., they are "historic properties"):

- ù Town of Rumford (ME 49-20)
- ù Rumford Falls I (ME 49-24)
- ù Rumford Falls II (ME 49-25)
- ù Rumford Falls III (ME 49-26)
- ù Rumford Falls IV (ME 49-27)
- ù Rumford Falls V (ME 49-28)
- ù Smith I (ME 49-9)
- ù Smith II (ME 49-10)

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No evaluation of the eligibility of the project facilities was conducted in the course of these studies. However, late in the application review, the Maine Historic Preservation Commission (MHPC) recommended a formal evaluation of the project facilities to determine their eligibility (personal communication, Kirk Mohny, Maine Historic Preservation Commission, Augusta, Maine, December 14, 1992).

Environmental Impacts and Recommendations: RFPC proposes an archaeological mitigation plan for six of the eight eligible sites. Due to landowner opposition, the plan contained no provision for mitigating effects at sites Smith I and Smith II.

The Commission, the MHPC, and the Council, executed a Programmatic Agreement (Agreement) stipulating an eligibility evaluation for the project facilities, contingency measures for handling historic properties discovered during the license term, and implementation of the archeological mitigation plan.

The only land-disturbing activity proposed is the development of a downstream canoe access point at the Carlton Bridge site. By letter dated July 17, 1992, the MHPC determined that no properties at the proposed canoe access site are of any historic, architectural, or archaeological significance.

Relicensing the Rumford Falls Project would afford protection to six of the eligible archaeological sites near the upper dam impoundment and to any historical properties in the project boundaries later determined eligible. There is still the possibility that undiscovered properties exist in the project area, and project development or operation could affect such properties. In addition to this possibility, any project-related construction or ground-disturbance undertaken in the future, that we have not already considered, could affect historic properties in currently unforeseen ways. In both instances, the Agreement would mandate that the Licensee consult further with the MHPC to protect historic properties.

TU states in its intervention that the project adversely affects cultural and archeological resources. TU did not make specific comments as to what cultural and archeological resources are adversely affected. For the reasons listed above we disagree that the project would adversely affect cultural and archeological resources.

Unavoidable Adverse Impacts: None.

7. Recreation and Other Land and Water Uses

To enhance the recreational opportunities, RFPC proposes to develop canoe access facilities above and below the project. We

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believe these facilities would satisfy the identified recreational needs in the project area.

Affected Environment: Boating and fishing are the primary recreational activities at the project site. A recreational use study conducted by RFPC in 1992 revealed that recreational use in the project area is limited and comprised of local residents. Most of the recreational use occurs on the upper dam impoundment. The existing public recreational facilities along this impoundment include the Logan Brook access, an unimproved boat launch located along the south shore off South Rumford Road; and a trailered boat launch located along the north shore off U.S. Route 2.

In 1991, RFPC helped in developing a canoe access facility in Gilead, Maine, 25 miles upstream of the project boundary. The boat launch at the upper dam impoundment provides a termination point for canoe trips along this segment of the river.

Fishing access to the middle dam impoundment is provided near the Rumford information booth. Boating is uncommon on this impoundment because of its size. Access to the tailrace areas and bypassed reaches is limited to shoreline fishing along the western shoreline at the lower station tailrace.

RFPC maintains a buffer zone above the upper dam impoundment that extends about 1 mile along both shorelines. The buffer zone is 10 to 800 feet wide, and is accessible to the public from either U.S. Route 2 or Maine Route 120. Most of the remaining land adjacent to the shoreline and within the project boundary is owned by private individuals and the Town of Rumford. In addition, the state of Maine has a mandatory shoreline zoning ordinance that regulates a 250 foot buffer zone. 44/

Land in the general vicinity of the project facilities is considered urban, and use is primarily industrial and commercial. Along the upper dam impoundment the land is rural, and primarily used for agriculture.

Environmental Impacts and Recommendations: RFPC proposes to develop a canoe access facility downstream of the project boundary at the Carlton Bridge, and would continue maintaining the existing recreational areas at the project. RFPC also proposes to work with the Town of Rumford, the Maine Department of Conservation (MDOC), and the Friends of the Androscoggin, in supporting the future development of a carry-in canoe access point at Rumford Point, Maine, 10 miles upstream of the upper

44/ Title 38 of the Maine Revised Statutes Annotated, Section 435-446, 1992.

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dam. RFPC's proposal to enhance canoeing opportunities is consistent with the State Comprehensive Outdoor Recreation Plan (Maine Department of Conservation, 1988). The plan identifies the need for additional canoe access in the project area on the western portion of the Androscoggin River.

During pre-filing consultations the MDIFW and the FWS requested RFPC to investigate the need for additional public access for fishing in the tailrace areas. In response, RFPC recommended no additional access in these areas because of safety concerns. Also, RFPC's study of the bypassed reach concluded that because of the minimal fishery potential, additional fishing access would be unwarranted. (see section V.B.3.). Agencies agree.

CLF's Motion to Intervene, dated January 14, 1993, recommends that RFPC provide a buffer zone around the entire project area, and mitigation that helps restore lost recreational access to the bypassed reaches. We believe that further access to the bypassed reaches is not warranted because of safety concerns related to the steep and rocky slopes along both banks and the poor fishing opportunities resulting from discontinuation of trout stocking (see section V.B.3.). We also believe that Maine's Mandatory Shoreland Zoning Act adequately protects public access and any undeveloped lands in the project area.

TU states in its intervention that the project has significant effects on recreation. For the reasons cited above we believe that the project has minimal impact on recreational fishing. RFPC would enhance recreational boating by developing a canoe access facility downstream of the project boundary at the Carlton Bridge, and by supporting the future development of a carry-in canoe access point at Rumford Point, Maine. RFPC would also continue to maintain the existing recreational areas at the project.

The proposed development of a downstream canoe access facility would enhance the recreational opportunities along the Androscoggin River. Therefore, we recommend that, if a license is issued for the Rumford Falls Project, the Licensee should construct the canoe access facility as proposed, which includes a parking area, a canoe launching area, and access for the disabled. The Licensee should also assist the Town of Rumford, the MDOC, and the Friends of the Androscoggin with developing an additional canoe access facility at Rumford Point. We believe these facilities, in addition to the canoe access facility developed in 1991 at Gilead, Maine, would satisfy the identified recreational needs in the project area.

Unavoidable Adverse Impacts: None

C. Licensing Alternatives

There are two alternatives to the proposed action. These are: (1) take no action and allow the project to continue to operate as it has in the past; and (2) issuance of a new license with the various mitigation or enhancement options evaluated in this environmental assessment.

Under the no-action alternative, the project would continue to operate as it has in the past as discussed in Section III.D.

Option two would continue to offset the consumption of non-renewable primary energy resources, would help reduce atmospheric pollution, and would protect or enhance fish, wildlife, recreation, and cultural resources. This option would result in RFPC's continued production of an estimated 270.302 gigawatt-hours of hydroelectric generation annually. Absent this generation, replacement energy would be purchased from Central Maine Power Company; the replacement energy would be generated by oil-fueled facilities.

The 270.302 gigawatt-hours of replacement energy would require the combustion of approximately 458,270 barrels of oil. The combustion

Table 1. Pollutants resulting from generating 270,302 MWh of electricity at a steam-electric plant annually by burning 458,270 barrels of oil.

	Tons of this quantity of	Fuel	Tons of Sulfur Dioxide	Tons of Nitrous Oxide	Tons
Carbon Monoxide	Carbon oil would produce approximately 907 tons of the oxides of sulfur, approximately 707 tons of the oxides of nitrogen, approximately 48 tons of carbon monoxide and approximately 240,593 tons of carbon dioxide.	907	907	707	

State-of-the-art pollution control technology is capable of removing approximately 95 percent of the oxides of sulfur and 60 percent of the oxides of nitrogen from the uncontrolled flue gases. These reductions in the above quantities of un-controlled atmospheric pollutants would cost approximately \$593,850 per year.

VI. COMPREHENSIVE DEVELOPMENT AND RECOMMENDED ALTERNATIVE

Sections 4(e) and 10(a)(1) of the Act, require the Commission to give equal consideration to all uses of the

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waterway on which a project is located. When the Commission reviews a project, the recreational, fish and wildlife resources, and other nondevelopmental values of the involved waterway are considered equally with power and other developmental values. In determining whether, and under what conditions, a hydropower license should be issued, the Commission must weigh the various economic and environmental tradeoffs involved in the decision.

A. Recommended Alternative

Based on our independent review and evaluation of the proposed Rumford Falls project, agency recommendations, and the no-action alternative, we have selected issuing a license for the proposed project, with additional staff-recommended enhancement measures, as the preferred option. We recommend this option because: (1) with enhancement measures, the environmental effects of subsequent operation would be minor; (2) the enhancement measures would protect or enhance fish, wildlife, recreation, and cultural resources; and (3) the electricity generated from a renewable resource would be provided, thus reducing the use of existing fossil-fueled, steam-electric generating plants; thereby, conserving nonrenewable energy resources, and reducing atmospheric pollution, and global warming.

The proposed project would provide a number of benefits. An estimated 270,302 MWh of relatively low-cost electricity would continue to be generated annually from a clean, domestic, reliable, and renewable energy resource for use by Boise Cascade Corporation's pulp and paper mill. 45/

The total project's cost accrues from operation and maintenance of the entire hydropower complex. This cost is negligible when compared to the value of the power. The beneficial effects (in addition to the air quality benefits) on the environment associated with the licensing of the Rumford Falls Project would result from the required environmental enhancement measures. These measures include:

- (a) operate the project in a run-of-river mode;
- (b) release a minimum flow of 1 cfs from the Upper dam and 21 cfs from the Middle dam of the Rumford Falls Project, as

45/ The electricity potentially generated by the proposed project is equivalent to the energy that would be produced by burning 458,270 barrels of oil annually in a steam-electric power plant. Table 1 (page 21) shows pollutants that would be produced by oil-fired, steam-electric power plants, generating the amount of energy equivalent to that which would be generated by the project.

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measured at the base of the dams, or inflow, whichever is less, for the protection of aquatic resources and water quality in the two bypassed reaches of the Androscoggin River;

(c) a plan to measure and report project flows, water surface elevations, and operation records to monitor compliance with the run-of-river mode of operation and flow releases to the bypassed reaches;

(d) a plan to control erosion, to control slope instability, and to minimize the quantity of sediment;

(e) implement the provisions of the "Programmatic Agreement Among the Federal Energy Regulatory Commission, the Advisory Council on Historic Preservation, and the Maine Historic Preservation Commission for the Management of Historic Properties Affected by the Rumford Falls Hydroelectric Project;"

(f) implement the canoe access facility plan filed September 22, 1992; and

(g) prepare and implement a plan for a canoe access facility at Rumford Point, Maine.

B. Developmental and nondevelopmental uses of the waterway

RFPC proposes no new construction or improvements at the Rumford Falls Hydroelectric Project. Hence, the levelized project costs are only the operation and maintenance costs and administrative and general expenses. These costs are small compared to the value of the power in the region.

The Rumford plant generates on average about 270,302 MWh annually. Neither the resource agencies nor the Commission Staff has proposed any mitigation or enhancement measures which would significantly affect the project's generation or cost.

The minimum flow release of 1,034 cfs in the river immediately downstream of the tailrace, as recommended by the resource agencies, would not adversely effect the power generation because it would be released through the power plants.

We conclude that the project is economical, even with the recommended enhancement measures.

Section 10(a)(2) of the Act requires the Commission to consider the extent to which a project is consistent with Federal or state comprehensive plans for improving, developing, or conserving a waterway or waterways affected by the project.

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Under Section 10(a)(2), Federal and state agencies filed a total of eight comprehensive plans for Maine and three plans for the United States that address various resources in Maine. Of these, we identified and reviewed two plans relevant to this project. 46/ No conflicts were found.

Based on a review of the agency and public comments filed in this proceeding, and on the staff's independent analysis pursuant to Sections 4(e), 10(a)(1), 10(a)(2) of the Act, we conclude that issuing a license for the Rumford Falls Project, with the required enhancement measures and other special license conditions, would permit the best comprehensive development of the Androscoggin River.

VII. CONSISTENCY WITH FISH AND WILDLIFE RECOMMENDATIONS

Pursuant to Section 10(j) of the Act, we make a determination that the recommendations of the Federal and state fish and wildlife agencies are consistent with the purposes and requirements of Part I of the Act and applicable law. Section 10(j) of the Act requires the Commission 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. We have addressed the concerns of the Federal and state fish and wildlife agencies and made recommendations consistent with those of the agencies.

VIII. FINDING OF NO SIGNIFICANT IMPACT

The project is constructed and operating. Consequently, there would be no construction related impacts. Continued project operation would result in minor adverse impacts that are largely mitigated and offset by project benefits.

The project would not affect federally listed or proposed threatened and endangered species.

On the basis of our independent environmental analysis, issuance of a license for the Rumford Falls project would not constitute a major federal action significantly affecting the quality of the human environment.

46/ Maine rivers study-final report, Maine Department of Conservation, May 1982; and State of Maine comprehensive rivers management plan, Maine State Planning Office, December 1992.

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Pursuant to Section 10(j) of the Act, this environmental assessment addresses the concerns of the federal and state fish and wildlife agencies and makes recommendations consistent with those of these agencies.

IX. LITERATURE CITED

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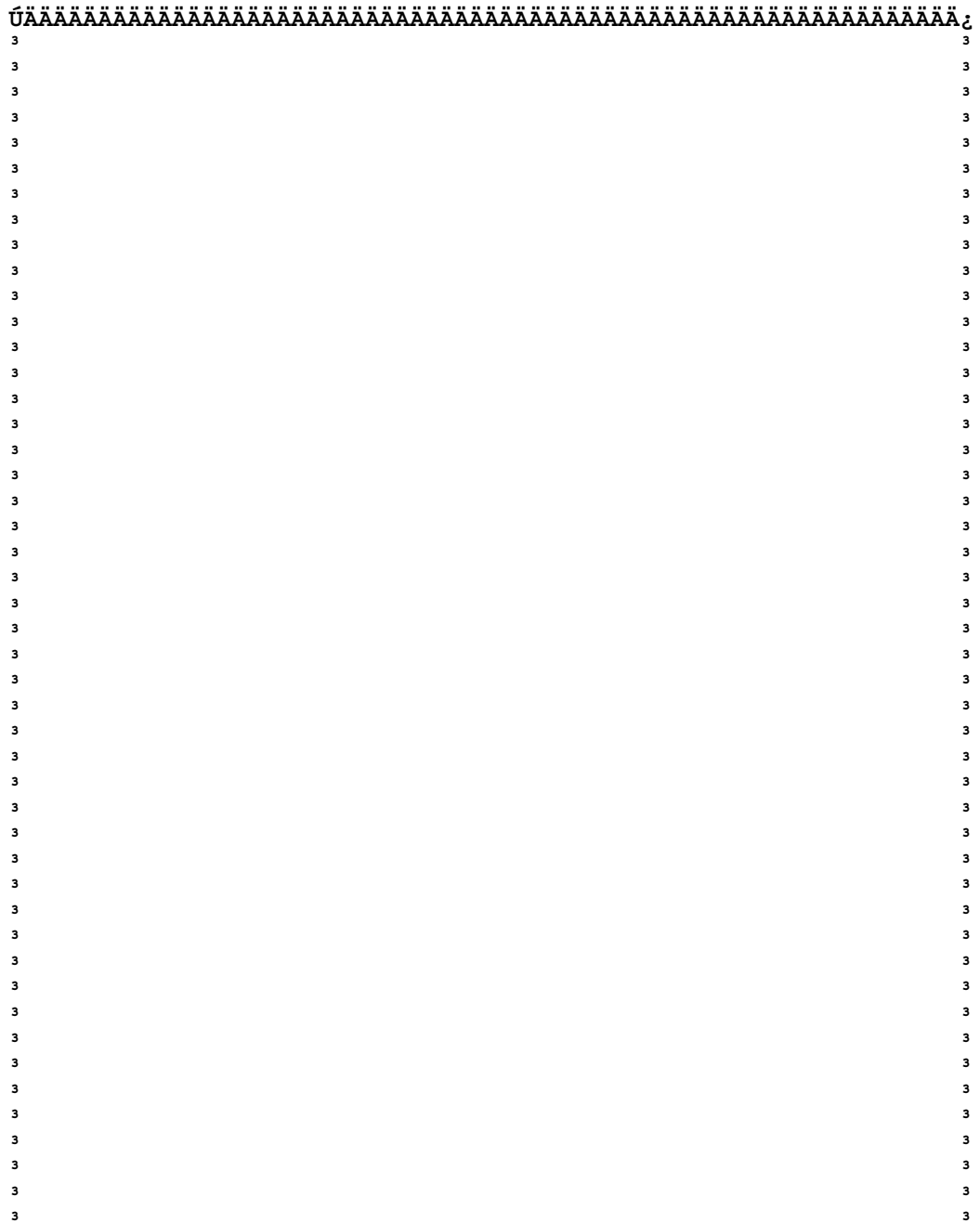


Figure 1. Location of the Rumford Falls Hydroelectric Project,
FERC No. 2333, Maine SAFETY AND DESIGN ASSESSMENT

Document Content(s)

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