

APPENDIX 1  
Location of Upstream and Downstream Dams



APPENDIX 2  
Ownership/Regulatory Status

## Appendix 2

### Ownership/Regulatory Status

The Penacook Lower Falls hydroelectric project (the PLF project”) presently is owned and operated by Briar Hydro Associates (“BrHA”), a New Hampshire limited partnership. The history of development, ownership and operation of the PLF project is described below.

On November 17, 1982 the Federal Energy Regulatory Commission (“FERC”) issued a license to New Hampshire Hydro Associates (“NHHA”) authorizing the construction operation and maintenance of the Penacook Lower Falls Project (FERC 3342) (“the PLF project”). The project works were to consist of the Penacook Lower Falls dam, a reservoir with an 8.4-acre surface area with a maximum surface elevation of 278 feet m.s.l (see Appendix 2-1) and a concrete powerhouse containing a single generating unit with an installed capacity of 4,110 kw. The issuance of the November 17, 1982 license, in effect, caused NHHA to relinquish an exemption on the project that previously had been granted by the FERC. That exemption request had been based upon a project design that did not prove to be financially feasible. All effective agency comments and approvals were made in connection with the NHHA license application.

The New Hampshire Water Resources Board (“NHWRB”) filed a petition to intervene in the NHHA proceeding in connection with the NHWRB’s effort to develop the Sewalls Falls Dam project (FERC 3040), a proposed project located immediately downstream of the PLF project on the Merrimack River. The NHWRB contended that the PLF project might negatively impact the Sewalls Falls project. However, any issues related to the Sewalls Falls project were rendered moot when the Sewalls Falls dam was partially washed away in 1984 and development efforts for that project were abandoned. As is noted in Appendix 6 of this application (Fish Passage and Protection), the Fish restoration program for the Merrimac River watershed was subsequently modified to reflect the fact that the Sewalls Falls project was not reconstructed.

Construction of the PLF project was completed in 1983 when first power was generated. The project has operated successfully since initial power was generated in 1983. On June 14, 2002 the FERC authorized the transfer of the PLF license to Briar Hydro Associates (“BrHA”). (see Appendix 2-2).

APPENDIX 2-1  
Order Issuing License  
Superceding Exemption Order of September 10, 1981  
Dated November 17, 1982

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UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

New Hampshire Hydro Associates )

Project No. 3342-002

ORDER ISSUING LICENSE (MAJOR)  
SUPERCEDING EXEMPTION ORDER OF SEPTEMBER 10, 1981

NOVEMBER 17, 1982

New Hampshire Hydro Associates (NHHA or Applicant) has filed an application for a license under Part I of the Federal Power Act (Act) to construct, operate, and maintain the Penacook Lower Falls Project No. 3342. <sup>1/</sup> By filing the license application, NHHA has implicitly manifested its intent to relinquish its exemption from licensing obtained by order of September 10, 1981. The project would be located in Merrimack County, New Hampshire on the Contoocook River. The Project affects interstate commerce.

Notice of the application has been published, and comments have been received from interested Federal, State, and local agencies. New Hampshire Water Resources Board filed a Petition to Intervene and was granted intervention. The significant concerns of the intervenor and the commenting agencies are discussed below.

Intervention

New Hampshire Water Resources Board (the Board) filed a petition to intervene on August 24, 1982 but did not protest the issuance of a license in this matter. The Board was issued a preliminary permit on October 22, 1981, on a water power project known as the Sewalls Falls Dam, Project No. 3040, which is owned by the Board and located downstream of Project No. 3342-000, on the Merrimack River, City of Concord, New Hampshire. The Board contends that the tailwater of Project No. 3342-002 may impose operating restraints on Project No. 3040. The Board further contends that the turbine flow capacity of Project No. 3342-002 may alter the historical water flow downstream of Project No. 3342-002 and adversely affect the operation of Project No. 3040.

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<sup>1/</sup> Authority to act on this matter is delegated to the Director, Office of Electric Power Regulation, under §375.308 of the Commission's regulations, 18 C.F.R. §375.308 (1982), FERC Statutes and Regulations §30,238. This order may be appealed, to the Commission by any party within 30 days of its issuance pursuant to Rule 1902, 18 C.F.R. 385.1902, FERC Statutes and Regulations §29,052, 47 Fed. Reg. 19014 (1982). Filing an appeal and final Commission action on that appeal are prerequisites for filing an application for rehearing as provided in Section 313(a) of the Act. Filing an appeal does not operate as a stay of the effective date of this order or any other date specified in this order, except as specifically directed by the Commission.

Staff has studied the river flows, examined the proposed operational scheme, and determined that Project No. 3342-002 will not significantly affect Project No. 3040 because the Applicant proposes to operate the project in a run-of-river mode. Further, according to Article 10, the Licensee of Project No. 3342-002 is required to coordinate the operation of the project, electrically and hydraulically, with other projects or power systems on the river.

#### Description of Project:

The Penacook Lower Falls Hydroelectric Project consists of the Penacook Lower Falls Dam; a reservoir with an 8.4 acre surface area and a usable storage capacity of 54 acre-feet; a concrete powerhouse containing a single generating unit with an installed capacity of 4,110 kW; and appurtenant facilities. A more detailed project description is contained in Ordering Paragraph (B). The Penacook Lower Falls Hydroelectric Project would be operated as a run-of-the-river project with an average annual generation of 15.4 GWh. 2/

#### Safety and Adequacy

All project structures, machinery, and appurtenant facilities were analyzed and inspected by the Commission's staff for safety and adequacy. Staff finds the project works to be safe against sliding and overturning under various normal and extreme loading conditions, and that the project spillway capacity is adequate and sufficient to pass the probable maximum flood. It is concluded that the project, under the conditions of this license, is safe and adequate.

#### Economic Feasibility

The project would operate run-of-the-river under 28 feet of head and would generate an estimated 15,400,000 kWh annually. Power generated by the project will be sold to a member utility of the New England Power Pool. A Staff analysis indicates the project is economically feasible.

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2/ Operation of this project would utilize a renewable resource that would save the equivalent of approximately 25,300 barrels of oil or 7,100 tons of coal per year.

### Water Use and Quality

Pollution in the Contoocook River, originating from numerous tanneries and sewage treatment facilities, has been a problem for a number of years. Substantial progress in cleaning up the lower Contoocook has been made in recent years. Water quality at the project site is presently designated Class C (acceptable for recreational boating, fishing, and industrial water supply with or without treatment) but generally meets the standards for Class B (acceptable for swimming and other recreation, fish habitat, and after adequate treatment, for use as water supplies). The New Hampshire Water Supply and Pollution Control Commission issued a water quality certification for the project on April 7, 1981.

The U.S. Department of the Interior (Interior) requested that Applicant provide an instantaneous minimum flow of 338 cfs below the project, and that whenever inflows to the project area fall below 338 cfs, outflows should be no less than inflows. Article 33 requires the proposed minimum flow requested by Interior.

### Fish, Wildlife, and Botanical Resources

The Contoocook River in the vicinity of the proposed project supports a warm water fishery. Common fishes are yellow perch, pumpkin seed, white sucker, and smallmouth bass. Based on consultation with the U.S. Fish and Wildlife Service, no Federally-listed endangered or threatened species occur in the project area. However, the Technical Committee for Anadromous Fishery Management of the Merrimack River (CAFMMR) has designated the Contoocook River for restoration as an American shad spawning river. Considerable prime shad spawning habitat exists upstream of the project on the Contoocook River. Interior requested that the Applicant provide suitable fish passage facilities for anadromous fish within 1 year following the completion of a fishway at the Sewalls Falls Dam located on the Merrimack River, immediately downstream from the project.

Applicant proposes to design and construct fish facilities at the Penacook Lower Falls Dam that would accommodate both upstream and downstream migrant fish, with final design approval by appropriate State and Federal agencies. Applicant proposes to construct footings for such facilities during construction of the hydroelectric facilities. Article 32 directs the Licensee to provide fish passage facilities at the Penacook Lower Falls within 3 years after completion of fish passage facilities at the downstream Sewalls Falls Dam (FERC No. 3040), and to file functional design drawings with the Commission within 6 months following completion of fish passage facilities at the Sewalls Falls Dam. A 3-year period would allow for preliminary and final design, and construction of fish passage facilities at Penacook Lower Falls Dam.

Applicant's Exhibit E, Section III, Report on Fish, Wildlife and Botanical Resources, page 29, filed on February 22, 1982, complies with the Commission's regulations and is being approved herein.

#### Historical and Archeological Resources

There are no known historical or archeological sites in the Penacook Lower Falls Project area, based on consultation with the New Hampshire State Historic Preservation Officer (letter dated April 2, 1981). Article 35 covers any contingent matters.

#### Recreational Resources

There are no existing recreational facilities within the project area. However, Interior requested that Applicant provide angler access to the Contoocook River across project lands, and such access should include a boat-launching ramp and small parking area below the dam. Applicant has indicated in Section VII of the Exhibit E, Report on Recreational Resources, that a boat-launching ramp and a small parking area would be constructed.

Staff concludes that the Applicant's recreational use plan will adequately provide for angler access needs at the project. Applicant's Exhibit E, Section VII, Report on Recreational Resources, filed on February 22, 1982, consisting of two pages of text and one figure entitled "Boat Ramp" (FERC No. 3342-7), will be approved.

#### Wild and Scenic River Values

The project is located at the lower end of a 9-mile section on the Contoocook River (Town of Contoocook to Penacook) which is included in the Nationwide Rivers Inventory. The inventory prepared by the National Park Service is an evaluation and identification of rivers and river segments that meet the minimum criteria for further study and/or potential inclusion into the National Wild and Scenic Rivers System.

Interior expressed concern about possible effects of project development on a potential National Wild and Scenic River. Interior's concern is about maintenance of the unique natural qualities of the river corridor and surrounding area during project development. Interior recommends that Applicant be encouraged to use mitigative techniques such as vegetative screening, siting, and architectural design to lessen the visual and audible impacts of the project's construction on identified natural values.

Article 34 of this license requires the Licensee to continue consultation with appropriate agencies in the interest of identifying and alleviating any potential impact of the project upon the river's natural resources.

### Environmental Impacts

Construction of the proposed project facilities would require the removal of about 3 acres of existing vegetation around the perimeter of the reservoir. Most of this loss is comprised of disturbed land covered with early successional herbs and shrubs. There would be a net loss in wildlife and wildlife habitat around the reservoir, but these losses are not considered to be significant. A net gain in wetted perimeter of the reservoir would occur during operation, which would benefit some wildlife species such as shore birds.

Construction of the proposed facilities would result in minor short-term impacts relating to increases in suspended solids, traffic, noise, dust, and exhaust emissions. These impacts would end with completion of construction.

Operation of the project would cause the dewatering of a 300-foot-long section of river between the proposed dam and the tailrace. This would have only a minor adverse impact on aquatic resources because the substrate in this section is mostly solid rock.

Inclusion of fish passage facilities and a boat launch would benefit the fishery and recreational opportunities in the area, respectively. The 338 cfs minimum flow would allow for the maintenance of a viable fishery below the project tailrace.

On the basis of the record, and staff's independent analysis, it is concluded that issuance of a license for the project will not constitute a major Federal action significantly affecting the quality of the human environment.

### Other Aspects of Comprehensive Development

Based on a review of the Commission's Planning Status Report and Water Resources Appraisals for Hydropower Licensing, Merrimack River Basin New Hampshire and Massachusetts, it is concluded that the Penacook Lower Falls Hydroelectric Project is not in conflict with any planned or potential development in the basin. The project would make good use of the flow and fall of the Contoocook River, and subject to the conditions of this license, will be best adapted to the comprehensive development of the basin under present and foreseeable conditions.

### License Term

The proposed Penacook Lower Falls Hydroelectric Project, using a restored dam, reservoir, and appurtenant works and including construction work to erect spillways, a forebay, and powerhouse and to install a generating unit and electrical facilities, is

considered to be a licensing action similar to the relicensing of a project where a moderate amount of reconstruction is proposed. Consistent with the Commission policy expressed in its Order Issuing License for FERC Project No. 2301, this license will be issued for a term of forty years, effective the first day of the month in which the license is issued. 3/

It is ordered that:

(A) This license is issued to New Hampshire Hydro Associates (Licensee) of Boston, Massachusetts, under Part I of the Federal Power Act (Act), for a period of forty years effective the first day of the month in which this order is issued, for the construction, operation, and maintenance of the Penacook Lower Falls Project No. 3342, located on the Contoocook River near Concord and Boscawen in Merrimack County, New Hampshire. This license supercedes the exemption order of September 10, 1981, for Project No. 3342. The project affects the interests of interstate commerce. This license is subject to the terms and conditions of the Act, which is incorporated by reference as part of this license, and subject to the regulations the Commission issues under the provisions of the Act.

(B) The Penacook Lower Falls Project No. 3342 consists of:

(i) All lands, to the extent of the Licensee's interests in those lands, constituting the project area and enclosed by the project boundary. The project area and boundary are shown and described by certain exhibits that form part of the application for license and that are designated and described as:

<u>Exhibit</u>	<u>FERC No. 3342-</u>	<u>Title</u>
G-1	5	Project Boundary Map

(ii) Project works consisting of: (1) the Penacook Lower Falls Dam; (2) a reservoir with an 8.4-acre surface area, and a usable storage capacity of 54 acre-feet; (3) a concrete diversion spillway with three 9.5 feet wide by 10.0 feet high timber gates and seven timber stoplog gates; (4) a concrete gravity auxiliary spillway, 316 feet long and a main concrete spillway, gated, and 106 feet long; (5) a forebay, 70 feet long; (6) a concrete powerhouse containing a single generating unit with an

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3/ The Montana Power Company, 56 FPC 2008 (1976).

installed capacity of 4,110 kW; (7) a tailrace excavated in rock, 700 feet long; (8) transmission equipment and electrical facilities consisting of: (a) generator leads; (b) one 4.16/34.5 kV, 7.5 MVA step-up transformer; (c) 200 feet of 34.5-kV line and facilities necessary to connect the project to Concord Electric Company's system; and (9) appurtenant facilities.

The location, nature, and character of these project works are generally shown and described by the exhibit cited above and more specifically shown and described by certain other exhibits that also form a part of the application for license and that are designated and described as:

<u>Exhibit</u>	<u>FERC No. 3342-</u>	<u>Title</u>
F-1	1	Powerhouse & Equipment
F-2	2	Powerhouse & Equipment
F-3	3	Auxiliary Spillway
F-4	4	Spillway
F-5	5	Diversion Structure

Exhibit A

Section 1, paragraphs (i, ii), filed on February 22, 1982.

Exhibit E

Page 29 of Exhibit E, Report on Fish, Wildlife, and Botanical Resources (Section III) filed on February 22, 1982. Exhibit E, Report on Recreation Resources (Section VII), filed on February 22, 1982 consisting of two pages of text and one figure entitled "Boat Ramp", FERC No. 3342-7.

(iii) All of the structures, fixtures, equipment, or facilities used or useful in the operation or maintenance of the project and located within the project boundary, all portable property that may be employed in connection with the project, located within or outside the project boundary, as approved by the Commission, and all riparian or other rights that are necessary or appropriate in the operation or maintenance of the project.

(C) Those portions of Exhibit A, E, F and G designated in ordering paragraph (B) above, are approved and made a part of the license.

(D) This license is also subject to the terms and conditions set forth in Form L-11 (revised October, 1975), entitled "Terms and Conditions of License for Unconstructed Major Project Affecting the Interests of Interstate or Foreign Commerce," Articles 1 through 23, except Article 20, attached to and made a part of this license. The license is also subject to the following additional articles:

Article 24. The Licensee shall clear and keep clear to an adequate width lands along open conduits and shall dispose of all temporary structures, unused timber, brush, refuse, or other material unnecessary for the purposes of the project which results from the clearing of lands or from the maintenance or alteration of the project works. In addition, all trees along the periphery of project reservoirs which may die during operations of the project shall be removed. All clearing of the lands and disposal of the unnecessary material shall be done with due diligence and to the satisfaction of the authorized representative of the Commission and in accordance with appropriate Federal, State, and local statutes and regulations.

Article 25. The Licensee shall pay the United States the following annual charges, effective the first day of the month in which this license is issued:

For the purpose of reimbursing the United States for the cost of administration of Part I of the Act, a reasonable amount as determined in accordance with the provisions of the Commission's regulations in effect from time to time. The authorized installed capacity for that purpose is 5,480 horsepower.

Article 26. Pursuant to Section 10(d) of the Act, after the first 20 years of operation of the project under license, 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. One half of the project surplus earnings, if any, accumulated after the first 20 years of operation under the license, in excess of the specified rate of return per annum on the net investment, shall be set aside in a project amortization reserve account at the end of each fiscal year. To the extent that there is a deficiency of project earnings below the specified rate of return per annum for any fiscal year after the first 20 years of operation under the license, the amount of that deficiency shall be deducted from the amount of any surplus earnings subsequently

accumulated, until absorbed. One-half of the remaining surplus earnings, if any, cumulatively computed, shall be set aside in the project amortization reserve account. The amounts established in the project amortization reserve account shall be maintained until further order of the Commission.

The annual specified reasonable rate of return shall be the sum of the annual weighted costs of long-term debt, preferred stock, and common equity, as defined below. The annual weighted cost for each component of the reasonable rate of return is the product of its capital ratio and cost rate. The annual capital ratio for each component of the rate of return shall be calculated based on 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 rates for long-term debt and preferred stock shall be their respective weighted average costs 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 year in question plus four percentage points (400 basis points).

Article 27. (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 other 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 uses 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, cancelling the permission to use and occupy the project lands and waters and requiring the removal of any non-complying structures and facilities.

(b) The types 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; 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 uses and occupancies for which it grants permission are maintained in good repair and comply with applicable State and local health and safety requirements. Before granting permission for construction of bulkheads or retaining walls, the Licensee shall: (1) inspect the site of the proposed construction, (2) consider whether the planting of vegetation or the use of riprap would be adequate to control erosion at the site, and (3) determine that the proposed construction is needed and would not change the basic contour of the reservoir shoreline. To implement this paragraph (b), the Licensee may, among other things, establish a program for issuing permits for the specified types of use and occupancy of project lands and waters, which may be subject to the payment of a reasonable fee to cover the Licensee's costs of administering the permit program. The Commission reserves the right to require the Licensee to file a description of its standards, guidelines, and procedures for implementing this paragraph (b) and to require modification of those standards, guidelines, or procedures.

(c) The Licensee may convey easements or rights-of-way across, or leases of, project lands for: (1) replacement, expansion, realignment, or maintenance of bridges and roads for which all necessary State and Federal approvals have been obtained; (2) storm drains and water mains; (3) sewers that do not discharge into project waters; (4) minor access roads; (5) telephone, gas, and electric utility distribution lines; (6) non-project overhead electric transmission lines that do not require erection of support structures within the project boundary; (7) submarine, overhead, or underground major telephone distribution cables or major electric distribution lines (69-kV or less); and (8) water intake or pumping facilities that do not extract more than one million gallons per day from a project reservoir. No later than January 31 of each year, the Licensee shall file three copies of a report briefly describing for each conveyance made under this paragraph (c) during the prior calendar year, the type of interest conveyed, the location of the lands subject to the conveyance, and the nature of the use for which the interest was conveyed.

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

- (1) construction of new bridges or roads for which all necessary State and Federal approvals have been obtained;
- (2) sewer or effluent lines that discharge into project waters, for which all necessary Federal and State water quality certificates 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 file a letter to the Director, Office of Electric Power Regulation, 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 paragraphs (c) or (d) of this article:

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

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

not have recreational value.

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

(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.

Article 28. The Licensee shall commence the construction of the project within 1 year of the date of issuance of the license, and shall complete construction within 2 years from the start of construction.

Article 29. The Licensee shall review and approve the design and construction procedures for contractor designed cofferdams and deep excavations prior to the start of construction. The Licensee shall file with the Commission's Regional Engineer and Director, Office of Electric Power Regulation, one copy of the approved construction drawings and specifications, and a copy of the letter of approval.

Article 30. The Licensee shall file with the Commission's Regional Engineer and the Director, Office of Electric Power Regulation, one copy each of the contract drawings and specifications for pertinent features of the project such as water retention structures, powerhouse and water conveyance structures, at least 60 days prior to start of construction. The Director, Office of Electric Power Regulation may require changes to the plans and specifications to ensure a safe and adequate project.

Article 31. The Licensee shall within 90 days of completion of construction, file in accordance with the Commission's Rules and Regulations revised Exhibit F drawings showing the project as-built.

Article 32. Licensee shall provide fish passage facilities at the Penacook Lower Falls Dam within 3 years after completion of fish passage facilities at the downstream Sewalls Falls Dam (FERC No. 3040). Within 6 months following completion of the proposed fish passage facilities at Sewalls Falls Dam, Licensee shall file for Commission approval functional design drawings of the proposed fish passage facilities at the Penacook Lower Falls Project Dam, Prepared in consultation with the U.S. Fish and Wildlife Service and the New Hampshire Fish and Game Department. Further, Licensee shall file with the Commission within 6 months after construction of the Penacook Lower Falls fish passage facilities, as-built drawings.

Article 33. Licensee shall discharge from the Penacook Lower Falls Project, a continuous minimum flow of 338 cubic feet per second or the inflow to the reservoir, whichever is less, for the purpose of protecting and enhancing aquatic resources in the Contoocook River. These flows may be temporarily modified if required by operating emergencies beyond the control of the Licensee, and for short periods for fishery management purposes upon mutual agreement between the Licensee and the New Hampshire Fish and Game Department.

Article 34. Licensee shall, during development and operation of the project, continue to consult and cooperate with the National Park Service of the U.S. Department of the Interior, New Hampshire Department of Resources and Economic Development, and other appropriate environmental agencies for the protection and development of the natural, scenic, and aesthetic resources and values of the project area.

Article 35. Prior to commencement of any construction or development of any project works or other facilities at the project, the Licensee shall consult and cooperate with the State Historic Preservation Officer (SHPO) to determine the need for,

and extent of, any archeological or historic resource surveys and any mitigative measures that may be necessary. The Licensee shall provide funds in a reasonable amount for such activity. If any previously unrecorded archeological or historic sites are discovered during the course of construction, construction activity in the vicinity shall be halted, a qualified archeologist shall be consulted to determine the significance of the sites, and the Licensee shall consult with the SEPO to develop a mitigation plan for the protection of significant archeological or historic resources. If the Licensee and the SEPO cannot agree on the amount of money to be expended on archeological or historic work related to the project, the Commission reserves the right to require the Licensee to conduct, at its own expense, any such work found necessary.

(E) Failure of the Licensee to file an application for rehearing shall constitute acceptance of this license. In acknowledgment of acceptance of this license, the license shall be signed for the Licensee and returned to the Commission within 60 days from the date of issuance of this order.

  
Lawrence R. Anderson  
Director, Office of Electric  
Power Regulation

IN TESTIMONY of its acknowledgment of acceptance of all of the terms and conditions of this Order, New Hampshire Hydro Associates this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, has caused its corporate name to be signed hereto by \_\_\_\_\_, its \_\_\_\_\_ President, and its corporate seal to be affixed hereto and attested by \_\_\_\_\_ its \_\_\_\_\_ Secretary, pursuant to a resolution of its Board of Directors duly adopted on the \_\_\_\_\_ day of \_\_\_\_\_ 19\_\_\_\_, a certified copy of the record of which is attached hereto.

By \_\_\_\_\_  
President

Attest:

\_\_\_\_\_  
Secretary

(Executed in quadruplicate)

APPENDIX 2-2  
Order Approving Transfer of License  
Dated June 14, 2002

99 FERC ¶ 62, 192  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

New Hampshire Hydro Associates  
Briar Hydro Associates

Project No. 3342-013

ORDER APPROVING TRANSFER OF LICENSE

(Issued June 14, 2002)

By application filed May 8, 2002, as supplemented May 23 and June 12, 2002, New Hampshire Hydro Associates (NHHA or transferor) and Briar Hydro Associates (Briar or transferee) jointly request Commission approval for a transfer of the license for the Penacook Lower Falls Project No. 3342<sup>1</sup> from NHHA to Briar. The project is located on the Contoocook River, in Merrimack County, New Hampshire. The application will be granted, as described below.

Briar is the licensee for two other licensed hydroelectric projects (Rolfe Canal Project No. 3240<sup>2</sup> and Penacook Upper Falls Project No. 6689<sup>3</sup>) located immediately upstream of the Penacook Lower Falls Project. NHHA and Briar are both limited partnerships that have as a general partner Essex Hydro Associates, L.L.C. The purpose of the transfer is to restructure the current ownership and to consolidate and simplify the ownership and operation of the three projects.

Public notice of the transfer application was issued. No comments, protests, or motions to intervene were filed.

CONCLUSIONS

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<sup>1</sup>21 FERC ¶ 62,282 (1982).

<sup>2</sup>29 FERC ¶ 62,229 (1984).

<sup>3</sup>The license was issued to Penacook Hydro Associates at 29 FERC ¶ 62,230 (1984) and transfer of the license to Briar was approved at 62 FERC ¶ 62,003 (1993).

NHHA has generally complied with the terms and conditions of the license and agrees to pay annual charges that may accrue until the transfer is complete.

Briar is a licensee of the Commission, and has established a satisfactory compliance record. Briar is qualified to hold the license and to operate the property under the license, and has agreed to accept all of the terms and conditions of the license and to be bound by the license as if it were the original licensee.

Transfer of the license for this project is consistent with the Commission's regulations and is in the public interest.

The Director orders:

(A) Transfer of the license for the Penacook Lower Falls Project No. 3342 from New Hampshire Hydro Associates to Briar Hydro Associates is approved.

(B) New Hampshire Hydro Associates shall pay all annual charges that accrue up to the effective date of the transfer.

(C) Approval of the transfer is contingent upon: (1) transfer of title of the properties under license and delivery of all license instruments to Briar Hydro Associates, which shall be subject to the terms and conditions of the license as though it were the original licensee; and (2) Briar Hydro Associates acknowledging acceptance of this order and its terms and conditions by signing and returning the attached acceptance sheet. Within 60 days from the date of this order, Briar Hydro Associates shall submit certified copies of all instruments of conveyance and the signed acceptance sheet.

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

J. Mark Robinson  
Director  
Office of Energy Projects

Project No. 3342-013

IN TESTIMONY of its acknowledgment of acceptance of all of the terms and conditions of this order, Briar Hydro Associates, this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, has caused its corporate name to be signed hereto by \_\_\_\_\_, its President, and its corporate seal to be affixed hereto and attested by \_\_\_\_\_, its Secretary, pursuant to a resolution of its Board of Directors duly adopted on the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, a certified copy of the record of which is attached hereto.

By \_\_\_\_\_

Attest:

\_\_\_\_\_

Secretary

(Executed in quadruplicate)

APPENDIX 2-3  
New Hampshire Water Resources Board Order No. 26.07HB

FILE NUMBER 1011 WMS  
RAISE BOND TO 280 MSL  
COPY CONC FILE AFTER  
CIRC TO (JMH) RAN  
B 1451P0156

ORDER NO. 26.07HB  
RE-CONSTRUCTION OF A DAM  
FOR THE PURPOSE OF WORKING A MILL  
(RSA 482:16)

RECEIVED  
AUG 13 1983  
NEW HAMPSHIRE  
WATER RESOURCES BOARD

NEW HAMPSHIRE WATER RESOURCES BOARD  
37 PLEASANT STREET  
CONCORD, NEW HAMPSHIRE 03301

At a meeting of the New Hampshire Water Resources Board (the Board) held on July 28, 1983, the Board voted affirmatively as follows:

WHEREAS, New Hampshire Hydro Associates (Associates) has filed with the Board on May 6, 1983, an application for approval for the reconstruction of a dam across the Contoocook River in the Town of Boscawen, Merrimack County, New Hampshire; and

WHEREAS, the Board has considered the application and finds that based on the preliminary plans as submitted by the Applicant that the dam, if properly maintained, would not be a menace to public safety; and

WHEREAS, in accordance with RSA 482:20 notice was given; and

WHEREAS, in accordance with RSA 482:21 a public hearing has been held for the purpose of determining if said project will be of public use and benefit; and

WHEREAS, the Board finds that the tax benefits to the city and state, and energy production considerations are in the public interest; and

WHEREAS, the Board finds that there will be no adverse impacts upon scenic or recreational values; and

WHEREAS, the Board finds that there will be no major adverse impacts upon fish and wildlife; and

WHEREAS, the Board finds that there will be no adverse effect upon navigation; and

B 1451P0156

WHEREAS, the Board finds that there will be no adverse effect upon bathing and other public uses; now therefore

The Board finds that said project is of public use and benefit.

IT IS ORDERED that the request be and is approved and said reconstruction is hereby registered and authorized subject to the following terms and conditions:

1. The dam shall only be reconstructed (the addition of 1 1/2 feet high flashboards) after submission and approval of the complete set of "final plans and specifications" and shall be operated and maintained in compliance with the provisions of the Revised Statute Annotated Chapter 482.
2. The elevation of the "operating pool" shall be as stated on the Statement of Intent application and other material submitted; that being 280 MSL.
3. The Applicant shall receive the appropriate permits, if required, from the Federal Energy Regulatory Commission, and any of their requirements that are inconsistent with this Board Order will be subject to the Board's review and approval.
4. The Applicant shall cut any trees growing in the proposed impoundment area.
5. The Applicant shall be required to pass the prevailing river flow either through the turbine and/or gates of this facility continuously with a minimum discharge of inflow equalling outflow.
6. Registration of the dam by the Board does not relieve the owner from meeting the requirements of public safety or other provisions of the law.
7. Registration of the dam by the Board does not convey a property right nor authorize any injury to property or invasion of other rights.
8. The proposed dam reconstruction shall be completed within a period of two years after issuance of this Order unless otherwise extended.

B 1451P0158 --

9. The Applicant shall have the responsibility to coordinate this project with that of the New Hampshire Public Works & Highways bridge project in the same area.

NEW HAMPSHIRE WATER RESOURCES BOARD

By *Delbert F. Downing*  
Delbert F. Downing, Chairperson

Date *August 9, 1983*

DFD/GLK/mdw

cc: Town of Boscawen, City of Concord  
N.H. Public Works & Highways, Bridge Section  
File 26.07/51.08

MERRIMACK COUNTY RECORDS  
Recorded Aug. 12, 8-00A.M. 1983

B 1451P0158

APPENDIX 3  
Listing of Authorities/Agencies Contacted

## Appendix 3

### Listing of Authorities/Agencies Contacted

	Email	Telephone No.
John Warner US Fish and Wildlife Service	john_warner@fws.gov	603-223-2541 Ext. 15
Ted Walsh NH Department of Environmental Services	Ted.Walsh@des.nh.gov	603-271-2083
Carol Henderson NH Fish and Game	Carol.Henderson@wildlife.nh.gov	603-271-3511
Sara Cairns NH Department of Resources and Economic Development	Sara.Cairns@dred.state.nh.us	603-271-2215 Ext. 9302
Melissa Coppola NH Natural Heritage Bureau	Melissa.Coppola@dred.nh.gov	603-271-2215 Ext. 323
Jeff Murphy National Marine Fisheries Service	jeff.murphy@noaa.gov	207-866-7379
Kevin Mendik National Park Service	kevin_mendik@nps.gov	617-223-5299

APPENDIX 4  
Project Location and Operations

## Appendix 4

### Project Location and Operations

The Penacook Lower Falls Hydroelectric Project (“the project”) is located on the Contoocook River partially in the Village of Penacook, New Hampshire and partially in the City of Concord, New Hampshire. The Village of Penacook is made up of a small portion of the Town of Boscawen and located at the northern end of the city of Concord. Industrial, residential and undeveloped lands are all found in the project area. Some of the undeveloped land primarily on the south side of the river, close as it is to intensive industrial and commercial use, provides some wildlife habitat. Undeveloped lands include a number of wooded areas some of which are seasonally flooded. The remainder of the area consists of low-density residential and small industrial development. The project area, as outlined in the attached Project Boundary Map, Appendix 4-1, is located in the Merrimack River Basin approximately 1000 feet above the confluence of the Contoocook and the Merrimack Rivers. The approximate latitude and longitude of the project area are 43°17'8.77"NN and 71°35'42.69"W.

The project is operated as a run-of-river facility. The project is required to maintain a continuous minimum flow of 338 cubic feet per second (ABF .5 cfs) or the inflow to the reservoir, whichever is less. Project works consist of: (a) a reservoir with an 8.4-acre surface area, and a useable storage capacity of 54 acre-feet; (b) a concrete diversion spillway with three 9.5 foot by 10.0 foot high timber gates and seven timber stoplog gates; (c) a concrete gravity auxiliary spillway, 316 feet long and a main concrete spillway, gated, and 106 feet long; (d) a forebay, 70 feet long; (e) a concrete powerhouse containing a single generating unit with an installed capacity of 4,110 kW; (f) a tailrace excavated in rock, 700 feet long; (g) transmission equipment and electrical facilities consisting of (1) generator leads; (2) one 4.16/34.5 kV, 7.5 MVA step-up transformer; (3) 200 feet of 34.5-kV line and facilities necessary to connect the project to Concord Electric Company’s system; and (4) appurtenant facilities. A concrete powerhouse is constructed to bedrock on the same alignment as the centerline of the river profile. The overall length of the powerhouse is 97.5 feet and the width perpendicular to the profile is 35 feet. A 55-foot wide rock filled access area connects the north face of the powerhouse to the north river bank. Upstream and downstream sides of the access area are contained by concrete retaining

walls to bedrock. The powerhouse contains one horizontal tube-type 3-meter turbine encased in concrete.

The project is located downstream of the Penacook Upper Falls project. The project utilizes a previously existing impoundment and the plant is unmanned, but operation is monitored on a 24/7 basis.

APPENDIX 4-1  
Exhibit G – Project Boundary Map



APPENDIX 5  
Description of Project Flows

## Appendix 5

### Description of Project flows

#### River Flow History

The Contoocook River rises on the eastern slopes of Mt. Monadnock in southeastern New Hampshire and ends where it enters the Merrimack River less than 1000 feet downstream from the Penacook Lower Falls Hydroelectric Project. The river, about 66 miles long, flows in a generally north-easterly direction through the towns of Jaffrey, Peterborough, Bennington, Antrim, Hillsboro, Henniker, and Contoocook, and has a total drainage area of 766 square miles. Its major tributaries, the Warner and Blackwater Rivers, both enter from the north, only two miles apart, near the village of Contoocook. The watershed, which is primarily forested, contains numerous other small tributaries and many natural lakes. Elevations in the watershed range from 3165 ft MSL at the top of Mt. Monadnock to 243 ft. MSL at the confluence with the Merrimack. The Contoocook drops about 130 feet in its final 20 miles (6.5 ft/mile), thus explaining the location of the village of Penacook and the development of numerous water-powered mills over the past two centuries.

A gauge, located one-half mile upstream from the mouth, was maintained in the Contoocook from 1928 to 1977. The average flow over the 49 years of record was 1255 cfs. The maximum discharge of record, 46,800 cfs (estimated), occurred on March 20, 1936; the minimum, 38 cfs, occurred August 17, 1965. Daily minimum flows of 57 cfs were recorded on October 12, 1964 and August 16, 1965. The 7Q10 for this period is 94 cfs. In accordance with its FERC License (project No. 3342-002) the project is operated as a run of river facility and is responsible for maintaining a continuous minimum flow of 338 cubic feet per second or the inflow to the reservoir, whichever is less, for the protection and enhancement of aquatic resources in the Contoocook River. (see Appendix 2-1)