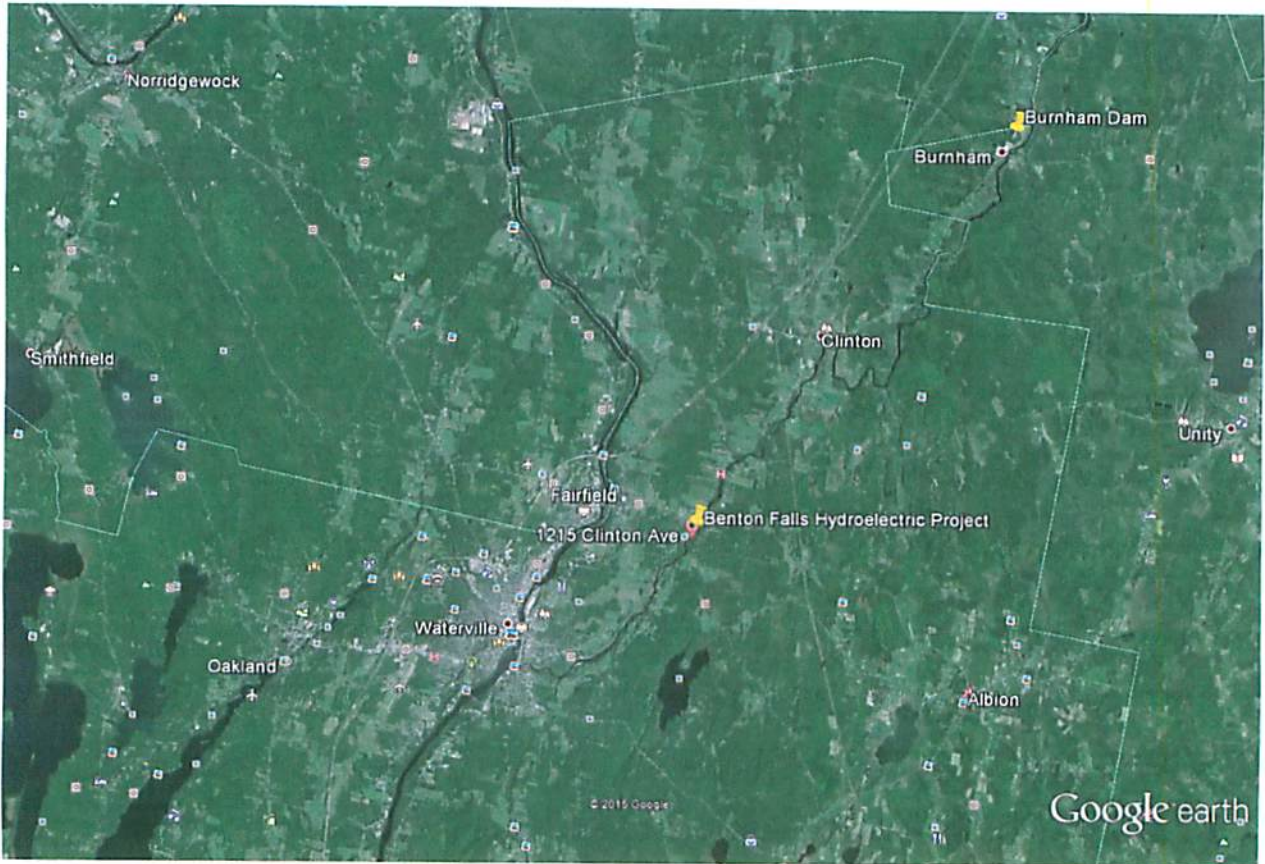


## **APPENDIX 1**

### **Upstream Dam**

## APPENDIX 1

### Upstream Dam



## **APPENDIX 2**

### **Ownership/Regulatory Status**

## Appendix 2

### Benton Falls Hydroelectric Project

#### Ownership/Regulatory Status

On July 14, 1981 an application for license was filed with the Federal Energy Regulatory Commission (FERC) by Everett Whitman under Part I of the Federal Power Act to construct, operate and maintain the Benton Falls Project (“the BF Project”)(FERC No. 5073). The BF Project is located at a former dam site on the Sebasticook River, near the town of Benton, Kennebec County, Maine. The BF Project received its FERC license effective March 8, 1984 for a period of 50 years. (See Appendix 2-1) The license was amended May 3<sup>rd</sup>, 1988 to require a run-of-river mode of operation. (See Appendix 2-2)

On March 2, 2005, Everett Whitman assigned all rights, title and interest, in the BF Project to Benton Falls Associates, L.P. a New York limited partnership. On September 7, 2006, Essex Hydro Associates, L.L.C. and Concord Hydro Associates purchased 100% of the partnership interests in Benton Falls Associates, L.P. Essex Hydro Associates, L.L.C. has had operating responsibility of the BF Project since that time.

## APPENDIX 2-1

FERC License Issued March 8, 1984

5400

[1 62,201]

Everett E. Whitman, Project No. 5073-000

Order Issuing License (Major)

(Issued March 8, 1984)

Lawrence R. Anderson, Director, Office of Electric Power Regulation.

Everett E. Whitman (Whitman) filed on July 14, 1981, an application for license under Part I of the Federal Power Act to construct, operate and maintain the Benton Falls Project No. 5073.<sup>1</sup> The project would be located at a former dam site on the Sebasticook River, near the town of Benton, Kennebec County, Maine and would affect the interests of interstate or foreign commerce.

Notice of the application has been published and comments have been received from interested Federal, state and local agencies. No protests or motions to intervene have been received, and none of the agencies objected to issuance of the license.

The proposed project would consist of a new 27-foot high, 500-foot-long concrete dam with a 300-foot long uncontrolled spillway topped by 4-foot high flashboards, a new 83-acre reservoir with a usable storage capacity of 310 acre feet and 4 feet of drawdown, a new powerhouse containing two turbine-generators with a total rated capacity of 3,400 kW and a 350-foot-long tailrace channel. The new dam would be located at the site of the dam destroyed by flooding in 1936. In addition Whitman proposes to construct a canoe portage along the east bank of the river and will make available up to 1.6 acres of land for eventual fishing access or boat launching.

The site of the project is owned by Whitman. The project would generate up to 12,509,000 kWh annually saving the equivalent of 20,500 barrels of oil or 5,800 tons coal. Energy produced at the project would be sold to Central Maine Power Company.

#### Water Quality

The Maine Department of Environmental Protection (DEP), the U.S. Environmental Protection Agency (EPA) and the U.S. Department of the Interior (Interior) expressed concern that the proposed impoundment would be eutrophic and that the water quality problems associated with eutrophic reservoirs (i.e., low DO and algal blooms) would adversely impact the water quality of the Sebasticook River. The DEP, by conditioning the 401 water quality certificate issued September 29, 1983, required Whitman to draw down the project reservoir to natural river elevations from July 1 to September 15 in an attempt to preclude the formation of algal blooms. The DEP and EPA also recommended that water quality studies be conducted during project operation to assess project impacts on the water quality of the impoundment and the river downstream of the project dam, and, if necessary, determine appropriate mitigative measures.

401 WQC

1 62,200

Federal Energy Guidelines  
035-48

Whitman agreed to draw down the project reservoir in accordance with the schedule outlined by the DEP. In addition, Whitman proposed to install mechanical aeration devices in an attempt to ensure that the DO concentration of the discharge waters are maintained at acceptable levels.

It is concluded that impounding the waters of the Sebasticook River would decrease DO concentrations below preproject levels, by eliminating the reaeration that is presently characteristic of the free flowing river. Additionally, the project reservoir could be eutrophic and the decomposition of organic materials in the eutrophic reservoir would act to further reduce the DO levels. The proposal to draw down the impoundment to the natural river elevations during the summer low flow months would minimize project impacts on water quality by restoring the aeration effect of the river and minimizing formation of algal blooms in the reservoir. A water quality study should, however, be conducted to determine the effectiveness of the proposed drawdown in protecting water quality, and to determine if the presence of the proposed reservoir adversely impacts water quality during the remainder of the year when the reservoir would be full (September 16 to June 30). Article 26 requires the Licensee to draw down the impoundment in accordance with guidelines set forth by the DEP. Article 27 requires the Licensee to conduct a water quality study in cooperation with relevant resource agencies to assess the impacts of project operation on the water quality of the Sebasticook River and, if necessary, determine measures necessary to minimize adverse impacts.

#### Minimum Flow

The DEP, EPA, and Interior stated that insufficient information exists to accurately assess the impacts of the Applicant's proposed minimum flow release of 100 cubic feet per second (cfs) on the fisheries and water quality of the river downstream of the project. The agencies recommended that studies be conducted to determine the instream flow necessary to protect the fishery resources and water quality of the Sebasticook River during the proposed peak power generating period (September 15 through April 30). The DEP and Interior recommended interim minimum flow releases from the dam of 100 and 440 cfs for the protection of the fishery and water quality respectively, until the aforementioned studies are completed.

Additional information should be obtained to determine instream flows necessary to protect the aquatic resources of the Sebasticook River downstream of the project

dam. Article 29 requires the Licensee to conduct studies in cooperation with relevant resource agencies to determine an appropriate instream minimum flow. In addition, a release of an interim minimum flow of 100 cfs during the peak power generating period would minimize impacts to aquatic resources. Article 28 requires the release of an interim minimum flow of 100 cfs. The run-of-river mode of operation, proposed to be implemented during the remainder of the year (May 1 through September 14) would preclude the need to establish an instream flow.

#### Fish Passage

The DEP, National Marine Fisheries Service, and Interior stated that an anadromous fishery (i.e., alewives and American shad) may be established in the river in the future and recommended the license be conditioned to provide for construction of fish-passage facilities when such facilities are deemed necessary by the fish and wildlife agencies. Article 15 would provide for future construction and maintenance of fish and wildlife facilities, including fish passage facilities, should they become necessary.

#### Cultural Resources

The proposed project area was surveyed in June of 1981. Six archeological sites were discovered within the project boundaries. Four of these sites may be potentially eligible for the National Register of Historic Places. No further consultation has occurred between Whitman and the State Historic Preservation Officer (SHPO) after July 9, 1981, when the SHPO confirmed that the consultant retained by Whitman had complied with the necessary requirements for the preparation of a permit application.

Based on the summary information presented in the Phase I section of archeological investigations within the project area, four archeological sites (MSM #53-24, MSM #53-25, MSM #53-26, and MSM #53-28) may be eligible for inclusion in the National Register. Survey activities and subsequent data evaluation are necessary. It is concluded that additional investigations should be conducted to: (1) establish the significance of the potentially eligible sites; and (2) prepare a cultural resources management plan which would assess any impacts to the sites and present measures to avoid or mitigate these impacts.

The cultural resources management plan should consist of: (1) the results of Phase II investigation of sites MSM #53-24, MSM #53-25, MSM #53-26, and MSM #53-28;

401 Article 26

Minimum Flow

Minimum Flow  
Article 28  
Run-of-river

Fish  
Passage  
Article 15



(2) documentation to determine the eligibility of these sites for the National Register; (3) a discussion of project impacts to any sites; (4) specific proposals to avoid or mitigate impacts to any sites determined eligible for the National Register; and; (5) a time table for any data recovery work that may be necessary. The plan should be prepared in cooperation with the SHPO and adhere, as appropriate, to the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation and the Advisory Council on Historic Preservation's Handbook on the Treatment of Archeological Properties. Article 30 requires the completion of cultural resources survey evaluation in addition to the preparation of a cultural resources management plan.

#### Recreational Resources

The U.S. Department of the Interior indicated that the proposed recreational development plan is in agreement with the Maine State Comprehensive Outdoor Recreation Plan goals and objectives and was formulated in consultation with the Town of Benton and the Maine Bureau of Parks and Recreation. Interior concluded that the plan was adequate for meeting anticipated recreational needs and indicated no objection to its approval.

The State of Maine Department of Environmental Protection indicated no objection to Whitman's plans for recreational development at the project. The State did indicate concern about public safety in the project tailrace area and recommended that Whitman formulate appropriate plans for control of access to this area. Section 12.42 of the Commission's Dam Safety Regulations requires that a Licensee implement reasonable and necessary measures to warn the public of fluctuations in flow from the project or otherwise to protect the public in the use of project lands and waters.

The proposed project reservoir would be drawn down to the natural river elevation during the peak summer recreational season each year, resulting in adverse aesthetic and recreational impacts, including some short-term odor from the decomposition of vegetation on the exposed banks. This problem would be of short duration, and following dehydration of the banks, recreational access would not be impaired.

#### Evaluation of Design, Construction and Performance

Based on an inspection of the project site by staff of the New York Regional Office, the proposed structure is classified low hazard.

The project design drawings are preliminary in nature. Staff's stability analysis of the dam shows that potential overturning forces applied to the dam result in tension at the heel of the dam. Current engineering practice requires that structures be designed so that the concrete/rock foundation that interfaces be in compression under flood and ice conditions (the site of the Benton Falls Dam would not be subject to large earthquake forces). Article 31 requires the dam and powerhouse to be designed so that the base of the dam is in compression under flood and ice loads.

The dam may be constructed as a roller compacted concrete (RCC) gravity structure. RCC is defined as a no-slump concrete that can be hauled in dump trucks, spread with a bulldozer or grader, and compacted with a vibratory roller. RCC, when fully cured, hardens into a material with physical properties similar to conventional concrete.

RCC has some properties which need to be closely evaluated to assure a safe and durable structure. RCC durability is known to be a problem under freeze-thaw action. The problem is directly related to the amount of silt in the aggregate and the fact that RCC is not air entrained. High flows over the dam also affect the durability of RCC because the cured surface has a coarse texture and is subject to greater scouring action than a smoother conventional concrete surface.

Other factors in constructing an RCC dam which need to be closely evaluated are the availability of suitable aggregate, mix ratios, construction techniques and quality control.

Article 36 requires one or more independent engineering consultant(s) experienced in RCC dams be retained by the Licensee to approve the design specifications and construction of the dam if Licensee chooses to utilize RCC. The project will be safe and adequate upon compliance with the terms and conditions of the license.

#### Hydroelectric Power and Resource Utilization Evaluation

The proposed project would be operated as an intermediate type peaking plant. The powerhouse will contain two adjustable blade, fixed vane propeller units with a total rated hydraulic capacity of 1765 cfs under a gross head of 29.5 feet. The project will utilize all of the available head and about 79% of the streamflow.

The Benton Falls Project is not in conflict with any existing or planned development in the basin. The proposed development will make good use of the flow and fall of the

Cultural Resources Mgmt  
Plan

article 30

Recreational Resources

USDOI

MDP

Project  
Construction



Sebasticook River, and will be best adapted to the comprehensive development of the basin upon compliance with the terms and conditions of the license.

#### *Economic Feasibility*

Staff's economic feasibility analysis of the Benton Falls Project shows that the project is economically feasible to develop based on the sale of project power at the avoided cost in the State of Maine adjusted for escalation. The analysis included appropriate reductions in the annual energy output of the project for the water quality mitigation measures required by Articles 26 and 28.

#### *Other Environmental Impacts*

The proposed project would be located at the site of a former hydroelectric project. The project would be located in a steeply sloped river valley and would result in the additional flooding of 27 acres of land to form the 83-acre project reservoir. Construction of the project would result in increases in noise levels, engine exhaust emissions, dust from construction activities and sedimentation and erosion from disturbance of river bed and land surfaces. License articles requiring water quality mitigative measures, minimum flows and an archeological/cultural resources management plan will ensure protection of the environmental resources of the project area.

On the basis of the record, including agency comments and the Commission staff's independent analysis, it is concluded that issuance of this license would not constitute a major Federal action significantly affecting the human environment.

#### *It is ordered that:*

(A) This license is issued to Everett E. Whitman (Licensee), under Part I of the Federal Power Act (Act), for a period of 50 years, effective the first day of the month in which this order is issued, for the construction, operation and maintenance of the Benton Falls Project No. 5073 located on the Sebasticook River in Kennebec County, Maine.

This license is subject to the terms and conditions of the Act, which are incorporated by reference as part of this license, and subject to the regulations the Commission issues under the provisions of the Act.

(B) The Benton Falls Project No. 5073 consists of:

(1) All lands, to the extent of the Licensee's interest 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:

Exhibit	FERC No.	Showing
J	5073-1	General Map
K Sheet 1	5073-2	Detailed Map
K Sheet 2	5073-3	Detailed Map
K Sheet 3	5073-4	Property Map

(2) Project works consisting of: (1) a 500-foot long, 27-foot high concrete gravity dam with a 300-foot long integral uncontrolled spillway topped by 4-foot high flashboards; (2) an 83-acre reservoir with a usable storage capacity of 310 acre feet at 4 feet of drawdown from a normal maximum water surface elevation of 85 feet m.s.l.; (3) a powerhouse located near the west dam abutment, constructed integrally with the dam, containing two turbine generators with a total rated capacity of 3.4 MW; (4) a 350-foot-long tailrace channel; (5) the 4.16-kV generator leads, 4.16/12-kV step-up transformers and a 170-foot-long, 12-kV transmission line; and (6) appurtenant facilities.

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

Exhibit L	FERC No.	Showing
Sheet 1	5073-5	Plan, Section of Dam and Tailrace
Sheet 2	5073-6	Powerhouse Plan and Sections

(3) All of the structures, fixtures, equipment, or facilities used or useful in the operation or maintenance of the project that are 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.

(4) Exhibit M—consisting of two typed pages entitled "General Description of the Mechanical and Electrical Equipment and the Transmission Line."

(5) Exhibit R—consisting of three typed pages and a drawing (FERC No. 5073-7) entitled "Aesthetic and Recreational Renderings."

(C) Exhibits K, M and R are approved and made a part of the license and Exhibit L is approved only to the extent that it shows the preliminary design of the project.

(D) This license is also subject to Articles 1 through 23 set forth in Form L-11 (revised

October, 1975) entitled "Terms and Conditions of License for Unconstructed Major Project Affecting the Interest of Interstate or Foreign Commerce," attached to [reported at 54 FPC 1864] and made a part of this license. The license is also subject to the following additional articles:

**Article 24.** The Licensee shall pay the United States the following annual charge, effective the first day of the month in which this license is issued:

(a) 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 4,530 horsepower.

**Article 25.** The Licensee shall prepare a study analyzing the impact of restoration of the Benton Falls Dam on upstream flood risks. The study shall be undertaken in coordination with and must be acceptable to the Federal Emergency Management Agency (FEMA) and the City of Benton, Maine pursuant to the requirements of the National Flood Insurance Program. A letter of acceptance of the study by FEMA shall be filed with the Commission within 2 years from the date of issuance of this license.

**Article 26.** Licensee shall annually draw down the Benton Falls Reservoir to the pre-project river surface elevation by July 1 and begin refilling the reservoir no sooner than September 15 of each year for the purpose of protecting the water quality of the Sebasticook River. This drawdown schedule may be modified if required by operating emergencies beyond the control of the Licensee, for maintenance and inspection activities and for the water quality and flow studies required by Articles 27 and 29 and for short periods for fishery management and water quality purposes upon mutual agreement between the Licensee and the Maine Department of Environmental Protection and the Maine Department of Inland Fisheries and Wildlife.

**Article 27.** Licensee shall, after consultation with the Maine Department of Environmental Protection, and Maine Department of Inland Fisheries and Wildlife develop a study plan to assess the impact of project operation on the water quality of the Sebasticook River. Within 3 months from the date of issuance of this license, the Licensee shall file a description of the study plan with the Commission, for approval along with comments from the above agencies on the adequacy of the study. The Commission reserves the right to require modification of the plan.

Within 6 months from the date of completion of the study, the results of the study shall be submitted to the Commission. Further, if the results of the study indicate that changes in project structures or operations are necessary to maintain the State of Maine water quality standards, Licensee shall also file for Commission approval within 6 months from the date of completion of the study, a schedule for implementing the specific changes in project structures or operations. At the same time, copies of the schedule shall be served upon the agencies consulted.

**Article 28.** The Licensee shall discharge an interim continuous minimum flow of 100 cubic feet per second from the Benton Falls Project or the inflow to the reservoir, whichever is less, for the purpose of protecting fish and wildlife resources and water quality of the Sebasticook River. Interim minimum flows shall be maintained by Licensee until alternative minimum flow requirements are approved by the Commission. This flow may be temporarily modified if required by operating emergencies beyond the control of the Licensee, for maintenance and inspection activities and for the water quality and minimum flow studies required by Articles 27 and 29 respectively, and for short periods for fishery management and water quality purposes upon mutual agreement between the Licensee and the Maine Department of Environmental Protection and the Maine Department of Inland Fisheries and Wildlife. min flow

**Article 29.** Licensee shall, in cooperation with the Maine Department of Environmental Protection and U.S. Fish and Wildlife Service develop a study plan to determine the minimum flow releases from the project dam that are necessary to protect and enhance fish and wildlife resources and water quality of the Sebasticook River. Within 3 months from the date of issuance of this license, the Licensee shall file the plan with the Commission for approval, along with comments from the above agencies on the adequacy of the plan. The Commission reserves the right to require modifications to the plan.

Within 3 months from the date of completion of the study, the Licensee shall file, with copies to the agencies consulted, a report on the results of study and, for Commission approval, recommendations for flow releases from the project dam. Copies of agencies' letters of comment on the adequacy of the recommended minimum flow shall be included in the filing.

**Article 30.** Licensee shall, prior to the commencement of any construction, file a comprehensive cultural resources management plan for Commission review and approval. The

plan shall be prepared in consultation with, and in a manner satisfactory to the Maine State Historic Preservation Officer (SHPO). The plan shall include: (1) the results of a Phase II survey of archeological sites MSM #53-24, MSM #53-25, MSM #53-26, and MSM #53-28; (2) documentation (on National Register forms) sufficient to enable Determinations of Eligibility for sites MSM #53-24, MSM #53-25, MSM #53-26, and MSM #53-28 (as appropriate) by the Keeper of the National Register; (3) a list of project impacts on these eligible sites; (4) specific proposals to avoid or mitigate impacts upon any eligible sites; and (5) a time table for commencement and completion of Phase II survey work; filing of a management plan; and any data recovery. The plan must be filed with the Commission 60 days after acceptance of the license by the Licensee. Any data recovery proposed as part of the management plan shall be approved by the SHPO, filed with and approved by the Commission, and carried out prior to the commencement of any construction activity which would disturb such archeological sites within the project area. All survey and data recovery work shall be carried out in a manner consistent with the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation, and the Advisory Council on Historic Preservation's Handbook on the Treatment of Archeological Properties. Licensee shall make available funds in a reasonable amount for survey and data recovery as required. If any previously unrecorded archeological or historical sites are discovered during the course of construction or development of any project works or other facilities at the project, construction activity shall be halted, a qualified archeologist shall be consulted to determine the significance of the site, and Licensee shall consult with the SHPO to develop a mitigation plan for the protection of significant archeological and historical resources. If Licensee and the SHPO cannot agree on the amount of money to be expended on the archeological or historical work related to the project, the Commission reserves the right to require Licensee to conduct, at its own expense, any such work found necessary.

**Article 31.** The Licensee shall submit at least 90 days prior to the start of project construction in accordance with the Commission's rules and regulations revised Exhibit L drawings and a supporting design report showing the final design of major project works. The project shall be designed so that the base of the dam and powerhouse will be in compression for normal pool plus ice and for the 100 year flood loading conditions. Construction of any major project structure shall not begin until the Director, Office of

Electric Power Regulation has approved the Exhibit L drawings.

**Article 32.** The Licensee shall commence construction of the project within two years from the effective date of the license and shall thereafter in good faith and with due diligence prosecute such construction and shall complete construction of such project works within five years from the effective date of the license.

**Article 33.** The Licensee shall within 90 days of completion of construction, file for approval of the Director, Office of Electric Power Regulation revised Exhibits K, L and M to show and describe project as-built.

**Article 34.** The Licensee shall review and approve the design of contractor-designed cofferdams and deep excavations prior to the start of construction and shall ensure that construction of cofferdams and deep excavations are consistent with the approved design. At least 30 days prior to start of construction of the cofferdam the Licensee shall file with the Commission's Regional Engineer and Director, Office of Electric Power Regulation, one copy of the approved cofferdam construction drawings and specifications and a copy of the letter(s) of approval.

**Article 35.** The Licensee shall file with the Commission's Regional Engineer and the Director, Office of Electric Power Regulation one copy each of the final 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 in the plans and specifications to assure a safe and adequate project.

**Article 36.** If the roller compacted concrete method of dam construction is selected, the Licensee shall retain the services of one or more qualified, independent, engineering consultant(s) to review and approve the design, specifications and construction of the roller compacted concrete dam. The name(s) and qualifications of the consultant(s) shall be submitted to the Director, Office of Electric Power Regulation for approval. Among other things, the consultant(s) shall assess the durability of RCC, considering site specific freeze-thaw action, thermal stresses, cracking potential, and hydraulic flow conditions; the suitability of aggregate, the adequacy of mix proportions; the suitability of construction techniques; and the adequacy of quality control and the concrete strength in place. The consultant(s) approval of the proposed dam design shall be submitted prior to or simultaneously with the submission of the



corresponding Exhibit L and final design report specified in Article 31. Upon completion of construction the Licensee shall forward the consultant(s) final evaluation of the safety and adequacy of the dam.

**Article 37.** (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 that can accommodate no more than 10 watercraft at a time where said facility is intended to serve single-family type dwellings; and (3) embankments, bulkheads, retaining walls, or similar structures for erosion control to protect the existing shoreline. To the extent feasible and desirable to protect and enhance the project's scenic, recreational, and other environmental values, the Licensee shall require multiple use and occupancy of facilities for access to project lands or waters. The Licensee shall also ensure, to the satisfaction of the Commission's authorized representative, that the 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 titles 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 38. Pursuant to Section 10(d) of the Act, during 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 10-year constant maturity series) computed on the monthly average for the year in question plus four percentage points (400 basis points).

(F) The Licensee's failure to file a petition appealing this order to the Commission shall constitute acceptance of this license. In

acknowledgment of acceptance of this order and its terms and conditions, it shall be signed by the Licensee and returned to the Commission within 60 days from the date this order is issued.

— Footnotes —

<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 (1983). 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, (1983). 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 of any other date specified in this order, except as specifically directed by the Commission.

11 02, 1984  
Everett E. Whitman, Project No. 5073-001

Order Amending License (Major)

(Issued July 30, 1984)

Quentin A. Edson, Director, Office of Hydropower Licensing.

On June 1, 1984, Everett E. Whitman, Licensee for the proposed Benton Falls Project No. 5073, filed a request for extensions of time to submit plans of study regarding water quality and minimum flow, required under Articles 27 and 29 of the license. <sup>1</sup> The major license was issued on March 8, 1984. <sup>2</sup>

Article 27 of the license required the Licensee to conduct a water quality study in cooperation with relevant resource agencies to assess the impacts of project operation on the water quality of the river. A study plan was required to be filed within three months of the issuance of the license. Article 29 required the submission of a similar plan of study to determine the minimum flow releases, by the same date.

The Licensee has requested a 60-day extension of time in which to file the aforementioned studies.

The Licensee states that: (1) he has experienced difficulty in retaining local experts to assist him in dealing with the unique problems of the Sebasticook River; (2) the record spring rainfall has hindered progress; and that (3) he has been preoccupied with finalizing the power sales contract with Central Maine Power Company, an issue which

is now pending before the Maine Public Utility Commission.

The consultant has now been retained and has assured the Licensee that the plans of study can be submitted within the extended period. Since the requested extension of time is minimal and it is likely that the plans will be submitted within the period, it is determined that it is reasonable and in the public interest to grant the extension of time.

*It is ordered that:*

(A) The request to extend the due dates for environmental plans under Articles 27 and 29 of the license is granted.

(B) Articles 27 and 29 of the Order Issuing Major License for Project No. 5073, issued March 8, 1984, are revised as follows:

*Article 27:* Licensee shall, after consultation with the Maine Department of Environmental Protection, and Maine Department of Inland Fisheries and Wildlife develop a study plan to assess the impact of project operation on the water quality of the Sebasticook River. Within 5 months from the date of issuance of this license, the Licensee shall file a description of the study plan with



the Commission, for approval along with comments from the above agencies on the adequacy of the study. The Commission reserves the right to require modification of the plan.

Within 6 months from the date of completion of the study, the results of the study shall be submitted to the Commission. Further, if the results of the study indicate that changes in project structures or operations are necessary to maintain the State of Maine water quality standards, Licensee shall also file for Commission approval within 6 months from the date of completion of the study, a schedule for implementing the specific changes in project structures or operations. At the same time, copies of the schedule shall be served upon the agencies consulted.

**Article 29.** Licensee shall, in cooperation with the Maine Department of Environmental Protection and U.S. Fish and Wildlife Service develop a study plan to determine the minimum flow releases from the project dam that are necessary to protect and enhance fish and wildlife resources and water quality of the Sebasticook River. Within 5 months from the date of issuance of this license, the Licensee shall file the plan with the Commission for

approval, along with comments from the above agencies on the adequacy of the plan. The Commission reserves the right to require modification to the plan.

Within 3 months from the date of completion of the study, the Licensee shall file, with copies to the agencies consulted, a report on the results of the study and, for Commission approval, recommendations for flow releases from the project dam. Copies of agencies' letters of comment on the adequacy of the recommended minimum flow shall be included in the filing.

— Footnotes —

<sup>1</sup> Authority to act on this matter is delegated to the Director, Office of Hydropower Licensing, under § 375.313 of the Commission's regulations, 18 C.F.R. § 375.313 (1984). 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 (1983). 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 of any other date specified in this order, except as specifically directed by the Commission.

<sup>2</sup> See 26 FERC ¶ 62,201.

**APPENDIX 2-2**

**FERC License Amendment Order Issued May 3, 1988**

## Benton Falls Hydro Associates, Project No. 5073-010

## Order Amending License Requiring the Project to Be Operated in a Run-of-River Mode

(Footnote Continued)

with October 5, 1987, as the due date for motions to intervene.

<sup>1</sup> Application amended for clarification purposes.

<sup>2</sup> Application amended to change notice request from 10 days' notice to 5 days' notice due to additional clarifications required, mailing delays, and other time constraints.

¶ 62,122

Federal Energy Guidelines

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Office Director Orders

63,183

(Issued May 3, 1988)

## J. Mark Robinson, Dir., Division of Project Compliance and Administration.

On May 8, 1987, Benton Falls Associates (licensee) filed a request to amend Article 29 of the license for the Benton Falls Project, as modified by the Order Approving Minimum Flow Releases dated February 11, 1987 [38 FERC ¶ 62,141]. The licensee requests that the requirement to release a minimum flow of 350 cubic feet per second and to file a plan to determine the maximum rate of change in river flow (ramping rate), be modified to require a run-of-river mode of operation. The licensee states that operating the project in a run-of-river mode is preferred from a economical and environmental standpoint. Further, any temporary modification to this mode of operation would be done in accordance with criteria established by the resource agencies.

Operating the project in an instantaneous run-of-river mode, where discharge from the project approximates inflow to the project reservoir, would preclude the need for a minimum flow requirement. Further, operating the project in an instantaneous run-of-river mode would minimize the fluctuations of the water level elevations above the project dam and below the project tailrace. Therefore, the need to develop a ramping rate for the project is unnecessary. In addition, operating the project in an instantaneous run-of-river mode would protect fish and wildlife resources of the Sebasticook River. The license should be amended to require the project to be operated in an instantaneous run-of-river mode. To ensure the project is operated in an instantaneous run-of-river mode, the licensee must develop a plan to monitor inflow to the project reservoir as well as outflow from the project.

*The Director orders:*

(A) Article 29 of the license for the Benton Falls Hydroelectric Project, as modified by the

Order Approving Minimum Flow Releases, issued February 11, 1987, is superseded by the following:

Article 29. The licensee shall operate the Benton Falls Hydroelectric Project in an instantaneous run-of-river mode for the protection of fish and wildlife resources of the Sebasticook River. In operating the project, the licensee shall at all times minimize the fluctuations of the reservoir surface elevation by maintaining sufficient discharge from the project so that the flow, as measured immediately downstream from the project tailrace, approximates the instantaneous sum of inflow to the project reservoir. Instantaneous run-of-river operation may be modified if required by operating emergencies beyond the control of the licensee and for short periods of time upon mutual agreement between the licensee and the Maine Department of Environmental Protection.

(B) Ordering Paragraph (B) of the Order Approving Minimum Flow Release, issued February 11, 1987, requiring ramping rate plan, is superseded by the following:

The licensee, after consultation with the Maine Department of Environmental Protection (DEP), shall develop a plan to monitor inflow to and outflow from the Benton Falls project. The plan must be filed with the Commission for approval within 3 months from the date of issuance of this order. Included in this filing must be comments from the DEP on the plan or a letter dated no later than 45 days from the date of this order requesting agency comments on the plan.

(C) This order is issued under the authority delegated to the Director and is final, unless appealed to the Commission under Rule 1902 within 30 days from the date of this order.

## **APPENDIX 3**

### **Authorities/Agencies Contacted**

## Appendix 3

### Benton Falls Hydroelectric Project Agency Contacts

Maine Department of Inland Fisheries and Wildlife  
Environmental Coordinator: Steve Timpano; 207-287-5258  
[Steve.Timpano@maine.gov](mailto:Steve.Timpano@maine.gov)

National Marine Fisheries Service;  
Sean McDermott; 978 -281-9113  
[sean.mcdermott@noaa.gov](mailto:sean.mcdermott@noaa.gov)

Maine Department of Conservation:  
Amy Hudnor; 207-287-2163  
[amy.hudnor@maine.gov](mailto:amy.hudnor@maine.gov)

Maine Department of Inland Fisheries and Wildlife:  
Roland Martin, Commissioner; 207-287-8000  
[Roland.martin@maine.gov](mailto:Roland.martin@maine.gov)

U.S. Fish and Wildlife Service:  
Steve Sheppard; 207-866-3344 x-116  
[Steven\\_sheppard@fws.gov](mailto:Steven_sheppard@fws.gov)

National Park Service, Rivers and Special Studies Branch:  
Kevin Mendik; 617- 223-5299  
[Kevin\\_mendik@nps.gov](mailto:Kevin_mendik@nps.gov)

Federal Energy Regulatory Commission  
Kimberly D. Bose, Secretary; 202-502-8400  
[kimberly.bose@ferc.gov](mailto:kimberly.bose@ferc.gov)

Federal Energy Regulatory Commission – New York Regional Office  
Gerald Cross, Regional Engineer; 212-273-5930  
[Gerald.cross@ferc.gov](mailto:Gerald.cross@ferc.gov)

Maine Historic Preservation Commission (SHPO)  
Dr. Arthur Spiess, Senior Archaeologist; (207) 287-2132  
[arthur.spiess@maine.gov](mailto:arthur.spiess@maine.gov)

Maine Department of Marine Resources  
Gail Wippelhauser; 207-624-6349  
[Gail.Wippelhauser@maine.gov](mailto:Gail.Wippelhauser@maine.gov)

Maine Department of Environmental Protection  
Kathy Howatt; 207-446-2642  
[Kathy.Howatt@maine.gov](mailto:Kathy.Howatt@maine.gov)

## **APPENDIX 4**

### **Project Location and Operations**

## Appendix 4

### Benton Falls Hydroelectric Project

#### Project Location and Operations

The Benton Falls Hydroelectric facility (“the facility”) is located at the site of a former hydroelectric project on the Sebasticook River, in the town of Benton, Kennebec County, Maine. Project works consists of: (1) a 500-foot long, 27-foot high concrete gravity dam with a 300-foot long integral uncontrolled spillway topped by 4-foot high flashboards; (2) a powerhouse located near the west dam abutment, constructed integrally with the dam, containing two turbine generators with a total rated capacity of 4.468MW; (3) a 350-foot long tailrace channel; (4) the 4.16-kV generator leads, 4.16/12-kV step-up transformers and a 170-foot long, 12-kV transmission line; and (5) a fish lift which contains a 600-gallon hopper and a minimum cycle time of approximately seven minutes, and (6) appurtenant facilities.

The project is located in a steeply sloped river valley and results in the additional flooding of 27 acres of land to form the 83-acre project reservoir. The facility is operated as a run of river plant in accordance with its FERC license requirement.

Per Article 28 of the license, the project is required to discharge a continuous minimum flow of 100 cfs from the Benton Falls Project of the inflow to the reservoir, whichever is less, for the purpose of protecting fish and wildlife resources and water quality of the Sebasticook River.

Construction of the Benton Falls project was completed in 1984. The powerhouse contains two turbine generators with a total rated hydraulic capacity of 2115 cfs under a gross head of 29.5 feet. The project utilizes all of the available head and about 79% of the streamflow.