



Commonwealth of Massachusetts
Executive Office of Environmental Affairs

Department of Environmental Protection

William F. Weld
Governor

Trudy Coxe
Secretary, EOEPA

Thomas B. Powers
Acting Commissioner

December 14, 1994

Ronald G. Chevalier, Vice President
Northeast Utilities Service Company
P.O. Box 270
Hartford, CT 06141-0270

Re: Water Quality Certification
Gardners Falls Hydroelectric Project
FERC Project No. 2334-01

Dear Mr. Chevalier:

The Massachusetts Department of Environmental Protection has finalized the water quality certification for the referenced project for which Northeast Utilities Service Company as agent for Western Massachusetts Electric Company originally applied for on December 16, 1991. The Department feels that compliance with the conditions of this certification will assure compliance with the Massachusetts Surface Water Quality Standards (MSWQS: 314 CMR 4.00).

The Department acknowledges that the conditions of the certification will not be accomplished until the issuance of the final license from the Federal Energy Regulatory Commission (FERC). The Department reserves the right to modify this certification if the final conditions of the FERC license will not lead to compliance with this certification and the MSWQS.

If you have any questions concerning this certification, please contact me (617-292-5653) or Paul Hogan (508-792-7470) at your convenience.

Very truly yours,

 PDH

Andrew Gottlieb
Director

Office of Watershed Management

enclosure (1)
cc: K. Hodge, NUSCO



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401 Water Quality Certification
Applicant: Western Massachusetts Electric Company
(Agent: Northeast Utilities Service Company)
Gardners Falls Hydroelectric Project
BRPWP39

Introduction: The Massachusetts Department of Environmental Protection (MADEP) has reviewed the application for a Water Quality Certification (WQC) for the Gardners Falls Hydroelectric Project (GFHP) submitted by Western Massachusetts Electric Company (WMECO) (through its agent Northeast Utilities Service Company {NUSCO}) and has determined to issue a water quality certification according to conditions outlined below. A chronology of milestones related to the issuance of this certification include:

- * Water Quality Certification application submitted to the Department by WMECO on December 16, 1991
- * an alternative fee and schedule agreement as provided in M.G.L. c.21A s.18 and 310 CMR 4.00 was concluded by MADEP and WMECO on May 13, 1992
- * a draft water quality certification was issued to WMECO on August 27, 1992
- * WMECO withdrew and reapplied for water quality certification in 1992 and 1993; MADEP amended alternative fee agreement
- * The Massachusetts Office of the Attorney General submitted the Commonwealth's recommendations to the Federal Energy Regulatory Commission on October 5, 1994.
- * The Department held a public hearing on the draft certification on October 25, 1994
- * The period for submittal of final comments on the draft certification ended on November 25, 1994.

WMECO filed for a new license for the GFHP with the Federal Energy Regulatory Commission (FERC) to continue to generate hydropower at the WMECO Gardners Falls site in Shelburne, MA. The application (FERC # 2334) was filed on December 20, 1991 with a copies of the application submitted to the Department for review as part of the WQC process. The information contained in the application, subsequent information gathered during the WQC review, and input from numerous entities involved in the license application were used in making the final WQC determination and its conditions. This certification will outline the regulatory jurisdiction of the WQC and the conditions required for the project.

The Department also received an application for a water quality certification from New England Power Company (NEPCO) for the Deerfield River Hydroelectric Project sites located on the Deerfield River. Because the hydrodynamics of the two projects are linked, the Department is reviewing the certification conditions of both projects collectively. The Department is issuing a certification for the NEPCO projects at the same time as for the GFHP.

The Deerfield River is designated under 314 CMR 4.06(3) as a Class B river for its entire length. The river from the Vermont-Massachusetts state line to the confluence with the North River is designated as a cold water fishery while the river from the North River to the confluence with the Connecticut River is designated as a warm water fishery. The Massachusetts Surface Water Quality Standards (314 CMR 4.00) contain minimum criteria for numerous water quality indicators which are required to achieve compliance with the Deerfield River water quality standards designation.

Project Description: WMECO generates hydropower at one site on the Deerfield River in Massachusetts (Gardners Falls Dam: River Mile 16.1 and Powerhouse: River Mile 15.8) which is subject to the FERC application #2334 and this WQC. The power generation augments peak power generation for the WMECO regional electric network. This operation of the Gardners Falls Hydroelectric Project creates a by-pass reach below the Gardners Falls Dam in the Deerfield River that is subject to episodic low and high flow conditions due to the current nature of the hydroelectricity generation. This by-pass reach is defined as the river reach from below the dam to the confluence with the tailrace. Minimum flows must be provided within this by-pass reach in order to maintain a viable biological community as it relates to designated uses as defined in the Massachusetts Surface Water Quality Standards (314 CMR 4.00). These uses include various recreational as well as biological designations of the Deerfield River in concert with the hydroelectric power generation from the Gardners Falls Hydroelectric Project site.

Deerfield River Resource Management: The Massachusetts Division of Fisheries and Wildlife (MADF&W) has developed the Massachusetts Fisheries and Wildlife Management Plan: Deerfield River 1991-2011 (DRFMP). This plan calls for the creation of suitable river flow in the by-pass reach below the Gardners Falls Dam to enhance fisheries. This certification requires that a minimum flow be maintained in the by-pass reach which is deemed acceptable to the goals of the DRFMP. The flow is the result of stream flow needs determined by the Instream Flow Incremental Methodology (IFIM) studies conducted by WMECO and other stream flow analysis such as the Aquatic Base Flow (ABF). Additional information requested as part of the FERC application process by application reviewers was also used to evaluate required stream flows which are part of the conditions of this certification. The MADF&W DRFMP calls for the creation of downstream fish passage facilities at Gardners Falls Dam.

IFIM studies indicated that a flow of 150 cfs would provide substantial habitat for brown trout (adult, juvenile, and fry), juvenile Atlantic Salmon and adult rainbow trout. In addition, maintenance of a relatively steady flow in the by-pass reach will help maintain a viable fishery.

Certification Provisions: In accordance with the provisions of MGL Ch. 21, s.26-53, 314 CMR 4.00, 314 CMR 9.00, and Section 401 of the Federal Clean Water Act (Public Law 92-500 as amended), this Department has determined that the project can be operated to minimize impacts to waters and wetlands and that there is reasonable assurance that the project can be conducted in a manner which will not violate applicable water quality standards, as required by 314 CMR 4.00 and 314 CMR 9.04, and will be in compliance with Sections 301, 302, 303, 306, and 307 of the Federal Clean Water Act. The Department issues this Water Quality Certification for this project subject to the following conditions:

A. The project shall be operated in accordance with the conditions contained in this certification and the provisions included in the FERC application (#2334) and any modifications made thereto, to the extent such application provisions and modifications are consistent with this water quality certification. The operation of the hydrofacility (including high flow, peaking releases) should not interfere with the attainment of the designated uses of the Deerfield River as outlined in the Massachusetts Surface Water Quality Standards (314 CMR 4.00) and the maintenance of an integrated and diverse biological community in the Deerfield River.

B. The release and maintenance of minimum flows at the by-pass reach and at the powerhouse which are consistent with the goals of the DRFMP. The required flow at the site is as follows:

1. Location: Below Gardners Falls Dam
Flow: 150 cubic feet per second (cfs) continuous minimum or inflow from New England Power Company #3 project if such inflow is lower than 150 cfs; minimum flow is comprised of the total flow through the fish passage unit (attraction and transport flows) and flow over the dam
Condition: flow into the by-pass reach should be maintained at 150 cfs during high flow conditions if operationally possible

C. This certification requires the following conditions related to fisheries in the Deerfield River:

1. Location: At Gardners Falls Dam
Requirements:
 - a. construction of a louver system (or other bypass system approved by MADF&W and United States Fish and Wildlife Service {USFWS}) for downstream salmon smolt passage
 - b. facility operational within two construction seasons after issuance of the new FERC license
 - c. flows necessary to operate the facility should be provided during the periods of downstream migration (April 1 to June 15 and September 15 to November 15); these flow periods can be modified by this Department if additional information regarding the period of migration warrants such change
 - d. plans to evaluate the effectiveness of the facility should be submitted by WMECO to MADF&W within one year of the issuance of the FERC license

D. Any construction activities shall be conducted in compliance with the Massachusetts Wetlands Protection Act (MGL c.131, s.40).

E. The applicant shall comply with MGL c.91.

F. All maintenance and repair activities, including disposal of debris and removal of sediments in impounded areas, and construction of fish passage facilities shall be conducted in a manner so as not to impair water quality.

G. Any recreational facilities and/or recreational uses of the project area shall be planned and conducted in such a manner as presented in the FERC application and conducted to protect and maintain water quality of the Deerfield River. The applicant shall enhance access for recreational uses according to the recreation plan submitted as part of the FERC application. Recreational access must comply with applicable state and federal regulations.

H. Any modification of the operation of the project which would affect the conditions of this certification must be approved by this Department.

I. This Department may request, at any time during which this certification is in effect, that the Federal Energy Regulatory Commission reopen the license to make modifications necessary to maintain compliance with the Massachusetts Surface Water Quality Standards.

J. This Department reserves the right to review, and modify if necessary, the conditions of this certification if the State of Vermont Water Quality Certification (or future changes therein) results in non-compliance with this certification.

Compliance: Should any violation of the Massachusetts Surface Water Quality Standards (314 CMR 4.00) or the terms of this certification occur as a result of the proposed activity, this Department will direct that the violation be corrected. Non-compliance on the part of Western Massachusetts Electric Company will be cause for this Department to recommend the revocation of the permit(s) and/or certification issued therefor or to take such other action as is authorized by the General Laws of the Commonwealth. Substantial civil and criminal penalties are authorized under MGL Ch. 21, Section 42 for discharging into Massachusetts waters in violation of an order or permit issued by this Department. This certification does not relieve Western Massachusetts Electric Company of the duty to comply with other applicable Massachusetts statutes and regulations.

Dated: December 14, 1994

Signed: _____

Andrew Gottlieb, Director
Office of Watershed Management
Boston, MA