



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

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Water Quality Certification
Byron Weston Hydroelectric Project
FERC License No. 13583
BRPWW11

Applicant: Crane & Company

INTRODUCTION

In February 2011, the Crane & Company, (Project Owner), submitted to the Federal Energy Regulatory Commission (FERC) an application for an Exemption from Licensing for the Byron Weston Hydroelectric Project (Project No. 13583), a Minor Project of less than 1.5 MW Capacity located at an existing dam on the East Branch of the Housatonic River in the Housatonic River watershed in Dalton, MA. The Project Owner submitted an application for Water Quality Certification (Certification) to the Massachusetts Department of Environmental Protection (MassDEP) on April 22, 2011. Public notice of the Certification application was made in the Berkshire Eagle on May 18, 2011 according to 314 CMR 9.05(3). All information necessary to issue this Certification, including final terms and conditions from the MA Division of Fisheries and Wildlife, has been submitted to the MassDEP.

PROJECT DESCRIPTION

Crane and Company proposes to reconstruct the Byron Weston No. 2 Hydroelectric Project, which had originally begun operation in the 1880's, when the project was converted from hydromechanical to hydroelectrical generation. Byron Weston Dam No. 2, constructed in 1887, is located adjacent to the Defiance Mill. There is a single 6 foot diameter penstock that branches into two smaller penstocks that conveyed flows to dual turbines. The turbines remain in place but are inoperable. The footings for the generators remain atop the turbines but the generators have been removed. Crane proposes to install a new double regulated Kaplan turbine with an installed capacity of 250 kW operating at flows from 20 cfs to 170 cfs. Water exiting the turbines flow

through an arched discharge portal immediately downstream of the Byron Weston Dam No. 2 thus there is no bypassed reach of river.

The proposed Byron Weston Hydroelectric Project will include: (1) an existing 200 foot long, 23 foot high stone and masonry gravity dam;(2) a 6 foot diameter penstock; (3) a proposed 250 kW turbine/generator, switchgears, and other power generating equipment, located within the Defiance Mill; and (4) appurtenant facilities. The Project will be connected to an interstate grid. It will not occupy any tribal or federal lands.

IMPACTED RESOURCES

The Byron Weston Hydroelectric Project is located within the Housatonic River watershed, Segment MA21-02 on the East Branch of the Housatonic River in Dalton, Massachusetts. 314 CMR 4.06 of the Massachusetts Surface Water Quality Standards (Standards) classifies this segment as a Class B, Warm Water Fishery.

The normal pool surface area for the impoundment is approximately 0.94 acres with a corresponding storage volume of approximately 3.1 acre-feet. Maximum depth of the impoundment is 18.5 feet. This dam is a run-of-river structure approximately 90 feet long and has a hydraulic height of approximately 23 feet. The East Branch of the Housatonic River has a drainage area of about 53.1 square miles at the Byron Weston No. 2 Dam.

The Byron Weston Dam No. 2 is located approximately 700 feet downstream of the Byron Weston Dam No. 1 and 1.1 miles upstream of the Upper Pioneer Pond Dam.

APPLICABLE LAW

The Massachusetts Clean Waters Act (State Act), G.L. c.21, §§ 26-53, delegates responsibility for enhancing the quality and value of water resources within the Commonwealth to MassDEP. The State Act directs MassDEP to take all action necessary or appropriate to secure to the Commonwealth the benefits of the Federal Clean Water Act, 33 U.S.C. §§1251-1387 (Federal Act). The main objectives of the Federal Act are to restore and maintain the chemical, physical and biological integrity of the nation's waters. To meet these objectives, MassDEP adopted the Massachusetts Surface Water Quality Standards, 314 CMR 4.00. The Standards classify each body of water within the Commonwealth; designate the most sensitive uses to be enhanced, maintained and protected for each class; prescribe minimum water quality criteria required to sustain the designated uses; and contain regulations necessary to achieve the designated uses and maintain existing water quality including, where appropriate, the prohibition of discharges into waters of the Commonwealth.

314 CMR 4.06 (5), Figure 2 and Table 2 classify the East Branch of the Housatonic River as a Class B water for its entire length. All Class B waters are designated as habitat for fish, other aquatic life, and wildlife, including for their reproduction, migration, growth and other critical functions, and for primary and secondary contact recreation (314 CMR 4.05(3)(b)). Class B waters shall also be suitable for irrigation and other agricultural uses, and for compatible industrial cooling and process uses. Class B waters must also consistently exhibit good aesthetic

quality (314 CMR 4.05(3)(b)). The minimum criteria applicable to Class B waters are listed within 314 CMR 4.05(3)(b). Additional minimum criteria applicable to all surface waters are listed within 314 CMR 4.05(5). The Antidegradation provisions of 314 CMR 4.04 at a minimum require protection of all existing and designated uses of water bodies, and maintenance of the level of water quality needed to protect those uses.

CERTIFICATION PROVISIONS

1. MassDEP APPROVES the application of Crane Company and CERTIFIES that there is reasonable assurance that the Byron Weston Hydroelectric Project, as described above and subject to the conditions below, can be constructed and operated in compliance with the applicable provisions of §303 of the Federal Act, 33 U.S.C. § 1313.
2. This Water Quality Certification shall become a condition on the FERC License issued to the Project Owner.
3. This Certification shall become effective on the date that the license issued for the Project by FERC becomes effective.
4. The state and federal resource agencies referred to in this Certification include the MassDEP, the Massachusetts Department of Fisheries and Wildlife (MADFW), and the U.S. Department of the Interior, Fish and Wildlife Service (USFWS).
5. The Project shall be operated by the Project Owner in accordance with the conditions contained in this Certification and the information included in the FERC license application. Any modifications made to the FERC application during the licensing process that would have a significant or material effect on the conclusions or conditions contained in this Certification, as determined by MassDEP, must be submitted to MassDEP for prior review and approval.
6. The Project shall be operated to maintain the existing and designated uses of the East Branch of the Housatonic River as outlined in the Standards at 314 CMR 4.00, and to maintain an integrated and diverse biological community within the East Branch of the Housatonic River.
7. The Project Owner shall obtain and comply with all applicable federal, state and local licenses, permits, authorizations, conditions, agreements and orders required for the construction and operation of the project in accordance with the terms of this Certification.
8. All activities shall be conducted in compliance with the Massachusetts Wetlands Protection Act, including the Rivers Protection Act, G.L. Chapter 131, Section 40, and the implementing regulations at 310 CMR 10.00. A Water Quality Certification shall be obtained from MassDEP prior to initiating any activity that will cause a discharge subject to §404 of the federal Act, 33 U.S.C., §1344. The Project Owner shall comply with all applicable provisions of the Public Waterfront Act, G.L. c. 91, and the implementing regulations at 310 CMR 9.00.
9. Prior to beginning any construction on the Project, the Project Owner shall submit a plan to monitor and control erosion during construction activities to keep impacted waters free from turbidity in concentrations that are aesthetically objectionable or would impair any designated use(s) of such waters. The Project Owner shall implement the plan as approved by MassDEP.

10. All construction, maintenance and repair activities, including disposal of debris and removal of sediments in impounded areas, shall be conducted in a manner so as not to impair water quality, and pursuant to and in compliance with any required approvals.

11. MassDEP may request, at any time during which this Certification is in effect, that FERC reopen the license to make modifications MassDEP deems necessary to maintain compliance with the Standards at 314 CMR 4.00, or other appropriate requirements of state law.

12. MassDEP reserves the right to add and alter the terms and conditions of this Certification when authorized by law, and as it deems appropriate to carry out its responsibilities during the life of the Project with respect to water quality and the protection of the existing and designated uses of the waters of the Commonwealth.

13. The Project Owner shall operate the project in a run-of-river mode such that inflow to the project equals outflow from the project on an instantaneous basis and fluctuations of the head pond water level are minimized. This operating regime may be temporarily modified by approved maintenance activities, agreement between the Project Owner and appropriate state and/or federal resource agencies, or by extreme hydrologic conditions or emergency electrical system conditions, as these terms are defined below.

14. "Extreme Hydrologic Conditions" signifies the occurrence of events beyond the Project Owner's control including without limitation, abnormal precipitation, extreme runoff, flood conditions, ice conditions or other hydrologic conditions which render the operational restrictions and requirements contained within this Certification impossible to achieve, or are inconsistent with the safe operation of the Project.

15. "Emergency Electrical System Conditions" signifies operating emergencies beyond the Project Owner's control which require changes in flow regimes to eliminate such emergencies including without limitation, equipment failure or other abnormal temporary operating condition, generating unit operation or third-party mandated interruptions under power supply emergencies, and orders from local, state or federal law enforcement or public safety authorities.

16. The Project Owner shall implement a refill procedure whereby, during impoundment refilling after drawdowns for maintenance or emergency purposes, 90% of inflow is passed downstream and the headpond is refilled on the remaining 10% of inflow to the Project. The refill procedure may be modified on a case-by-case basis with the prior approval of both the USFWS and the MADFW.

17. The Project Owner, within three months of the date of issuance of an exemption from licensing, prepare and file for approval with the MADFW and USFWS, a plan for maintaining and monitoring run-of-river operation at the Project. The plan shall include a description of the mechanisms and structures that will be used, the level of manual and automatic operation, the methods to be used for recording data on run-of-river operation, an implementation schedule, and a plan for maintaining the data for inspection by the USFWS, MassDEP, the FERC, and MADFW.

18. The Project Owner shall conduct a post-operation water quality monitoring survey. The survey protocol shall be identical to the pre-operation survey, and shall be developed in consultation with, and require approval by the MassDEP and the USFWS. The study shall be initiated the first low-flow season after Project start-up. Results of the post-operation survey shall be compared to the pre-operation data. If results indicate that, in the opinion of the MADFW, USFWS and MassDEP, the Project is not causing depletion of dissolved oxygen no further study will be required. If results indicate that, in the opinion of the MADFW, USFWS and MassDEP, the Project is causing depletion of dissolved oxygen further study will be required and mitigation measures may be required (e.g. releasing flow over dam for aeration) as determined by the MADFW, USFWS and MassDEP.

19. The Project Owner shall install trashracks that meet the following criteria: (1) have an approach velocity ≤ 2.0 fps (as measured six inches in front of the racks); (2) have clear spacing of one inch or less; and (3) extend full depth. The trashracks shall be installed and operational concurrent with Project start-up. The racks shall be required to be kept free of debris and maintained to design specifications.

20. The Project Owner shall be responsible for constructing, operating, maintaining and evaluating upstream and downstream fish passage facilities at this Project when notified by the USFWS and/or the MADFW that such fishways are needed. All plans and schedules associated with the design, construction, operation, maintenance and evaluation of any prescribed fishways shall be developed by the Project Owner in consultation with, and require approval by, the MADFW and the USFWS.

21. The Project Owner shall notify the MADFW and the USFWS in writing when the Project commences operation. Such notice shall be sent within 30 days of start-up. The Project Owner shall furnish the MADFW and USFWS with a set of as-built drawings concurrent with filing said plans with the FERC.

22. The Project Owner shall allow any employee, agent, consultant, contractor or authorized representative of MassDEP, MADFW or USFWS to enter the facilities in order to assess compliance with the terms and conditions of this Certification including, but not limited to, entry for the purposes of: (i) investigating, sampling, inspecting, or photocopying documents or other writings, conditions, equipment, practices or property; (ii) interviewing facility personnel and contractors; (iii) making records of field activities; and (iv) observing any activities undertaken at the facilities under any of the provisions of this Certification.

23. If any event occurs which delays or will delay the Project Owner's performance of work beyond a deadline established by or pursuant to this Certification, which event was beyond the reasonable control and without the fault of the Project Owner or any person or entity subject to the Project Owner's control, and which event could not have been prevented or avoided by the exercise of due care, foresight, or due diligence on the part of the Project Owner (a "force majeure event"), then the time for performance shall be extended for an appropriate period of time, as determined by MassDEP in its sole discretion. The Project Owner shall bear the burden of demonstrating that a force majeure event has occurred or will occur, and that the delay was

beyond the reasonable control and without the fault of the Project Owner. Such an extension of time must be in writing to have effect.

24. Submissions under this Certification shall be sent to:

MassDEP: Massachusetts Department of Environmental Protection
Division of Watershed Management
Central Regional Office
627 Main Street
Worcester, MA 01608
(508) 767-2854; FAX (508) 791-4131

Massachusetts Department of Environmental Protection
Bureau of Resource Protection
Western Regional Office
436 Dwight Street
Springfield, MA 01103
(413) 755-2138; FAX (413) 784-1149

MADFW: Massachusetts Division of Fisheries and Wildlife
Field Headquarters
Assistant Director of Fisheries
1 Rabbit Hill Road
Westborough, MA 01581
(508) 389-6331; FAX (508) 389-7890

USFWS: United States Fish and Wildlife Service
New England Field Office
Attention: Supervisor
70 Commercial Street, Suite 300
Concord, NH 03301-5087
(603) 223-2541; FAX (603) 223-0104

Signed on this 23 day of September, 2011.



Robert J. McCollum, Program Chief
Wetlands and Waterways
MassDEP Western Regional Office