UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Crane and Company Project No. 13583-001 – MA

NOTICE OF AVAILABILITY OF ENVIRONMENTAL ASSESSMENT

(February 29, 2012)

In accordance with the National Environmental Policy Act of 1969 and the Federal Energy Regulatory Commission's regulations, 18 CFR Part 380 (Order No. 486, 52 FR 47879), the Office of Energy Projects has reviewed the application for exemption from licensing for the Byron Weston Hydroelectric Project, to be located on the East Branch of the Housatonic River, in the Town of Dalton, Berkshire County, Massachusetts, and has prepared an Environmental Assessment (EA). In the EA, Commission staff analyzes the potential environmental effects of the project and concludes that issuing an exemption for the project, with appropriate environmental measures, would not constitute a major federal action significantly affecting the quality of the human environment.

A copy of the EA is on file with the Commission and is available for public inspection. The EA may also be viewed on the Commission's website at http://www.ferc.gov using the "eLibrary" link. Enter the docket number, excluding the last three digits in the docket number field, to access the document. For assistance, contact FERC Online Support at FERCOnlineSupport@ferc.gov or toll-free at 1-866-208-3676, or for TTY, (202) 502-8659.

You may also register online at http://www.ferc.gov/docs-filing/esubscription.asp to be notified via email of new filings and issuances related to this or other pending projects. For assistance, contact FERC Online Support.

For further information, contact Brandon Cherry at (202) 502-8328.

Kimberly D. Bose,
Secretary.

ENVIRONMENTAL ASSESSMENT FOR SMALL HYDROELECTRIC PROJECT EXEMPTION

Byron Weston Hydroelectric Project

FERC Project No. 13583-001

Massachusetts

Federal Energy Regulatory Commission
Office of Energy Projects
Division of Hydropower Licensing
888 First Street, NE
Washington, D.C. 20426

February 2012

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EXECUTIVE SUMMARY

On March 9, 2011, Crane and Company (Crane) filed an application for a small hydro (5 megawatts or less) exemption from licensing to construct, operate, and maintain the proposed 250-kilowatt (kW) Byron Weston Hydroelectric Project on the East Branch of the Housatonic River (East Branch), in the Town of Dalton, Berkshire County, Massachusetts. The project would not occupy any land of the United States.

Proposed Action

The Byron Weston Hydroelectric Project would consist of: (1) the existing 90-foot-long, 30-foot-high stone-masonry Byron Weston Dam No. 2 equipped with a 75-foot-long, 23-foot-high spillway section; (2) an existing 0.94-acre impoundment with a normal water surface elevation of 1,116.7 feet North Atlantic Vertical Datum (NAVD 1988); (3) an existing 20.8-foot-wide, 12-foot-deep intake structure that includes trashracks with 1-inch clear-bar spacing; (4) an existing 8-foot-wide, 8-foot-high headgate; (5) an existing 6.5-foot-long, 6-foot-diameter penstock that conveys flow to an existing 50-foot-long, 9.5-foot-wide, 10-foot-high headrace canal connected to a new 15-foot-long, 4.4-foot-diameter penstock; (6) the existing Byron Weston Defiance Mill building containing one new 250-kW turbine-generating unit; (7) a new draft tube placed within the existing 11.8-foot-wide, 10-foot-high arched tailrace; (8) a new 12-inch-diameter low-level outlet pipe that discharges water into the turbine draft tube and tailrace and is connected to the new 15-foot-long, 4.4-foot-diameter penstock; and (9) a new 100-foot-long, 600-volt transmission line connecting the generating unit to the existing electrical distribution system for the Byron Weston Defiance Mill. The project would bypass approximately 35 feet of the East Branch; however, discharge from the tailrace would backwater up to the base of the dam and maintain a wetted channel in the bypassed reach.

Crane proposes to remove components from the Byron Weston Defiance Mill building that were previously used for hydropower at the site, including sections of the penstock and the two McCormick Hercules wheel turbines. In addition, Crane proposes to: (1) install a new 3/8-inch-thick steel plate extending from the top of the trashracks to the top of the intake opening; (2) install new electrical controls and switchgear; and (3) make structural modifications within the existing footprint of the Byron Weston Defiance Mill building to accommodate the new turbine-generating unit. The proposed project would have an average annual generation of approximately 938 megawatt-hours (MWh).

To protect environmental resources, Crane proposes to: (1) operate the project in a run-of-river mode; (2) conduct post-operation water quality monitoring and, if necessary, implement mitigation measures based on the results; (3) install a temporary cofferdam in

the existing tailrace and use drain lines to transport water from the dewatered cofferdam area to Crane's existing on-site wastewater treatment plant; (4) remove accumulated sediment from the tailrace and transport it to a landfill for disposal; and (5) refurbish one of the McCormick Hercules wheel turbines for an interpretive display that would describe the turbine, its former location, and its historical use.

Public Involvement and Areas of Concern

Before filing its application for exemption from licensing, Crane distributed an initial consultation document on November 19, 2009, and conducted pre-filing meetings on December 2, 2009, and March 18, 2010. Crane invited the agencies and the general public to participate in these meetings.

On October 15, 2010, Crane filed a draft application for exemption from licensing and requested comments from stakeholders. On March 18, 2011, the Commission issued a public notice tendering the final application for exemption from licensing and soliciting additional study requests. On September 1, 2011, the Commission issued a public notice of its intent to waive scoping and stating that the application was ready for environmental analysis and requesting comments, terms and conditions, and recommendations.

The primary issues associated with the exemption from licensing of the Byron Weston Project are project effects on dissolved oxygen (DO) and resident fish in the East Branch.

Alternatives Considered

This Environmental Assessment (EA) analyzes the effects of project operation and recommends conditions for any exemption from licensing that may be issued. In addition to Crane's proposal, we consider two alternatives: (1) the applicant's proposal including the section 30(c) conditions issued by the U.S. Department of the Interior (Interior) and the Massachusetts Division of Fisheries and Wildlife (Massachusetts DFW), the water quality certification conditions issued by the Massachusetts Department of Environmental Protection (Massachusetts DEP), and additional measures recommended by staff; and (2) a no-action alternative – denial of the exemption application.

In addition to Crane's proposed measures, the staff alternative would require Crane to: (1) develop and implement a soil erosion and sediment control plan that describes measures to control erosion, procedures for the removal and disposal of accumulated sediment from the tailrace, and procedures to handle and process wastewater drained from the cofferdam area in the tailrace; (2) consult with the Massachusetts Historical Commission (Massachusetts SHPO) prior to implementing any project modifications,

including maintenance activities, land-clearing or land-disturbing activities, or changes to project operation or facilities, that do not require Commission approval but could affect cultural resources; (3) consult with the Massachusetts SHPO if previously unidentified cultural resources are discovered during the course of constructing, maintaining, or developing project works or other facilities; and (4) develop and implement a plan describing the restoration and relocation of the McCormick Hercules wheel turbine for public display.

Staff Alternative

Geology and Soils Resources – Implementing a soil erosion and sediment control plan would reduce the likelihood of soils and sediment entering the river during project construction and ensure proper handling and treatment of wastewater and sediment removed from the tailrace area.

Aquatic Resources – Operating the project in a run-of-river mode and implementing impoundment refill procedures would protect aquatic habitat and fisheries in the impoundment and in the East Branch downstream of the proposed project. Implementing and run-of-river operation, maintenance, and monitoring plan would ensure that appropriate methods and equipment would be used for run-of-river operation. Water quality monitoring would ensure that any adverse project effects on water quality would be identified and, if needed, appropriate mitigation measures would be taken.

Terrestrial Resources – Operating the project in run-of-river mode, implementing impoundment refill procedures, and isolating construction activities to areas within the existing Byron Weston Defiance Mill building and behind the proposed cofferdams would protect riparian vegetation in the project area. Any adverse effects of project construction on terrestrial resources would be short-term and minor.

Threatened and Endangered Species – No federally listed threatened or endangered species or critical habitat are known to occur in the project area; therefore, construction and operation of the project would have no effect on federally listed species.

Land Use, Recreation, and Aesthetic Resources – The shoreline around the project impoundment is currently inaccessible to the public due to steep terrain and manufacturing facilities abutting the East Branch and there is no history of significant recreational use in the proposed project area; therefore, construction and operation of the project would not affect recreational resources.

Cultural Resources – Constructing and operating the project would not alter the historic character of the existing structures and would not disturb any known cultural

resources. Refurbishing one of the McCormick Hercules wheel turbines and creating an interpretive display about the history of hydropower at the Byron Weston Mills would preserve a piece of the Town of Dalton's history.

Consulting with the Massachusetts SHPO prior to implementing any maintenance activities, land-clearing or land-disturbing activities, or changes to project operation or facilities that do not require Commission approval would ensure protection of cultural resources at the project. Consulting with the Massachusetts SHPO if previously unidentified cultural resources are discovered during the course of constructing, maintaining, or developing project works or other facilities would ensure proper treatment of those resources.

No Action

Under the no-action alternative (denial of the application), the project would not be constructed and would not generate an estimated average annual generation of 938 MWh and environmental resources in the project area would not be affected.

Conclusions

Based on our analysis, we recommend granting an exemption for this project as proposed by Crane, including the section 30(c) conditions provided by Interior and Massachusetts DFW, and the water quality certification conditions provided by Massachusetts DEP, with some additional staff measures. We chose the staff alternative as the preferred alternative because: (1) the project would provide a dependable source of electrical energy for the Crane mill complex; (2) the 250 kW of electric capacity would come from a renewable resource that would not contribute to atmospheric pollution; and (3) the recommended environmental measures would adequately protect and enhance environmental resources affected by the project.

We conclude that granting an exemption from licensing for the project, with the staff-recommended environmental measures, would not be a major federal action significantly affecting the quality of the human environment.

ENVIRONMENTAL ASSESSMENT

Federal Energy Regulatory Commission
Office of Energy Projects
Division of Hydropower Licensing
Washington, D.C.

BYRON WESTON HYDROELECTRIC PROJECT
FERC No. 13583-001, Massachusetts

I. APPLICATION

On March 9, 2011, Crane and Company (Crane) filed an application with the Federal Energy Regulatory Commission (Commission) for a small hydro (5 megawatt [MW] or less) exemption from licensing for the proposed 250-kilowatt (kW) Byron Weston Hydroelectric Project. The project would be located on the East Branch of the Housatonic River (East Branch), in the Town of Dalton, Berkshire County, Massachusetts (figures 1 and 2). The project would not occupy any federal lands.

II. PURPOSE OF ACTION AND NEED FOR POWER

A. Purpose of Action

The Commission must decide whether to grant Crane an exemption from licensing for the project, and what, if any, conditions should be included in any exemption issued. Issuing an exemption from licensing would allow Crane to generate electricity, making electric power from a renewable resource available to the Crane mill complex and local area. In this Environmental Assessment (EA), we assess the effects of constructing and operating the project as proposed by Crane, alternatives to the proposed project, a no-action alternative, and recommend conditions to become a part of any exemption from licensing issued.

B. Need for Power

Under section 213 of the Public Utility Regulatory Policies Act (PURPA), the authority of the Commission to grant an exemption from licensing is not limited by a determination of the need for power. See Briggs Hydroelectric, 32 FERC ¶ 61,399 (1985). See also David Cereghino, 35 FERC ¶ 61,067 (1986).

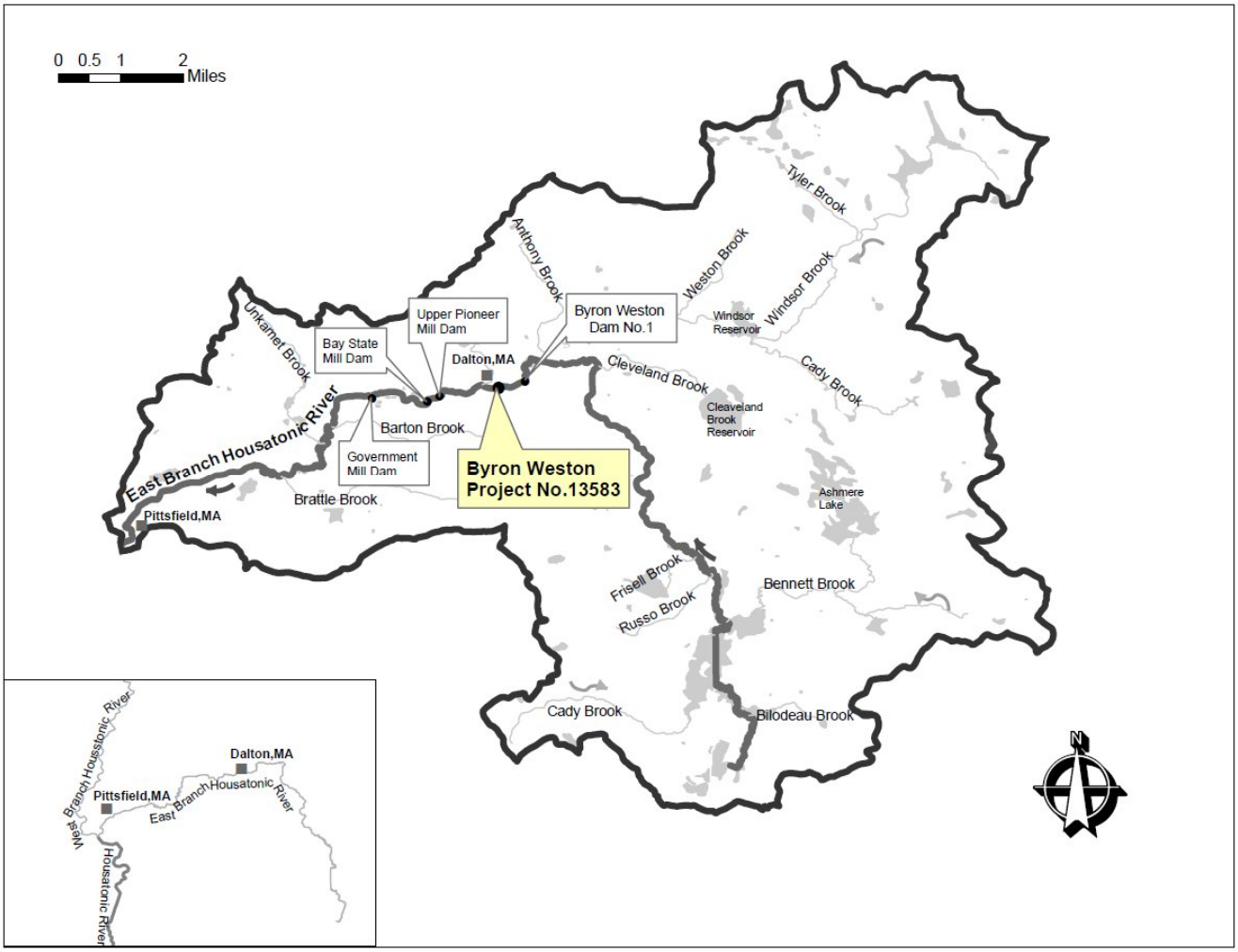

Figure 1. Location of the Byron Weston Project and other non-hydroelectric dams on the East Branch of the Housatonic River (Source: staff)

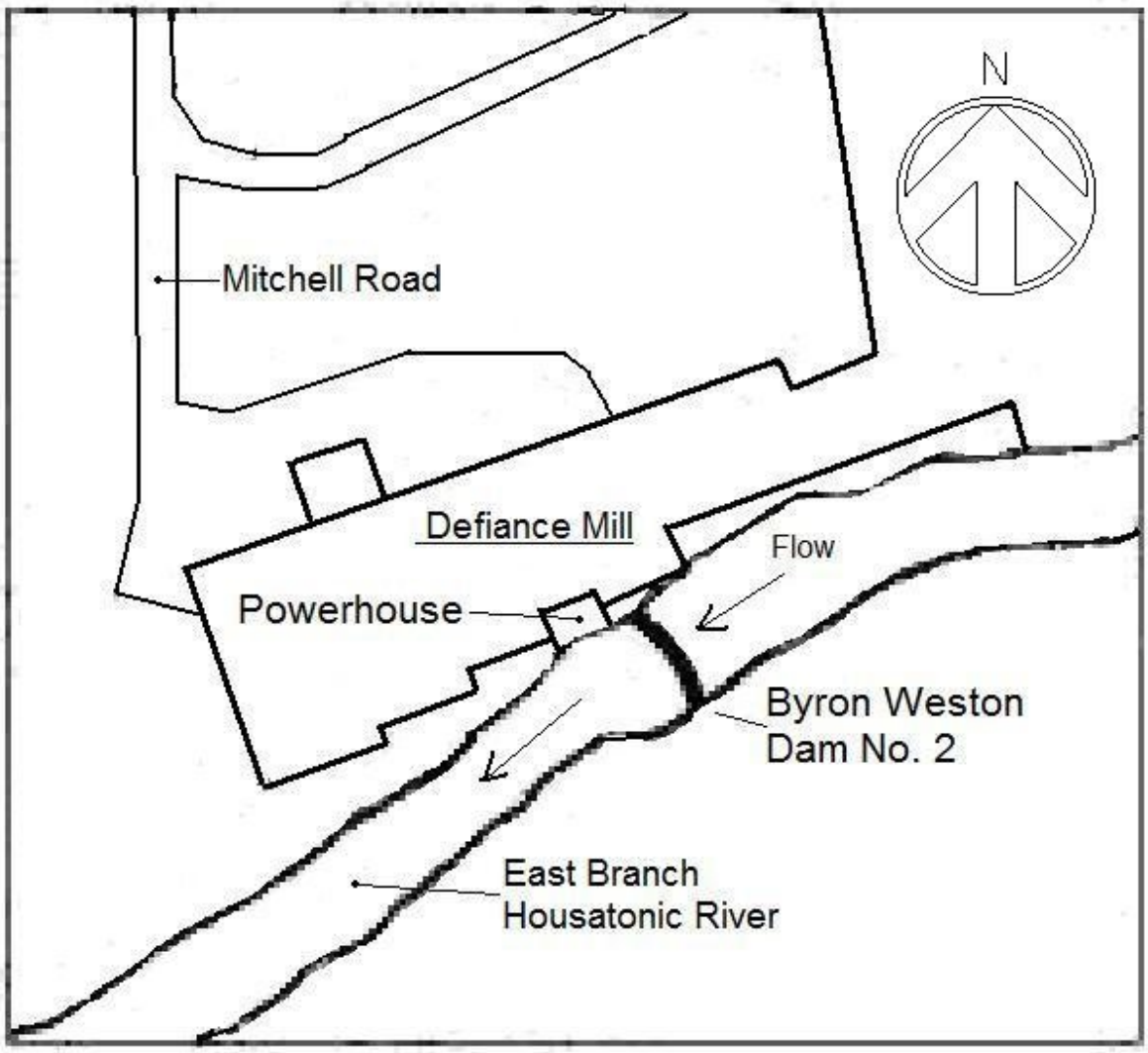

Figure 2. Byron Weston Project Site Plan (Source: Exemption application, as modified by staff)

III. PROPOSED ACTION AND ALTERNATIVES

A. Proposed Action

1. Project Description

The Byron Weston Hydroelectric Project would consist of: (1) the existing 90-foot-long, 30-foot-high stone-masonry Byron Weston Dam No. 2 equipped with a 75-foot-long, 23-foot-high spillway section; (2) an existing 0.94-acre impoundment with a normal water surface elevation of 1,116.7 feet North Atlantic Vertical Datum (NAVD 1988); (3) an existing 20.8-foot-wide, 12-foot-deep intake structure that includes trashracks with 1-inch clear-bar spacing; (4) an existing 8-foot-wide, 8-foot-high headgate; (5) an existing 6.5-foot-long, 6-foot-diameter penstock that conveys flow to an existing 50-foot-long, 9.5-foot-wide, 10-foot-high headrace canal connected to a new 15-foot-long, 4.4-foot-diameter penstock; (6) the existing Byron Weston Defiance Mill building containing one new 250-kW turbine-generating unit; (7) a new draft tube placed within the existing 11.8-foot-wide, 10-foot-high arched tailrace; (8) a new 12-inch-diameter low-level outlet pipe that discharges water into the turbine draft tube and tailrace and is connected to the new 15-foot-long, 4.4-foot-diameter penstock; and (9) a new 100-foot-long, 600-volt transmission line connecting the generating unit to the existing electrical distribution system for the Byron Weston Defiance Mill. The project would bypass approximately 35 feet of the East Branch; however, discharge from the tailrace would backwater up to the base of the dam and maintain a wetted channel in the bypassed reach.

Crane proposes to remove components from the Byron Weston Defiance Mill building that were previously used for hydropower at the site, including sections of the penstock and the two McCormick Hercules wheel turbines. In addition, Crane proposes to: (1) install a new 3/8-inch-thick steel plate extending from the top of the trashracks to the top of the intake opening; (2) install new electrical controls and switchgear; and (3) make structural modifications within the existing footprint of the Byron Weston Defiance Mill building to accommodate the new turbine-generating unit. The proposed project would have an average annual generation of approximately 938 megawatt-hours (MWh).

2. Proposed Project Operation

Crane proposes to operate the project in a run-of-river mode, where outflow from the project would equal inflow, and water levels in the impoundment would not be drawn down for electric generation. Flow to the turbine would be automatically managed by a controller connected to the turbine wicket gates and a water level sensor located in the impoundment. When the sensor detects a decrease in the impoundment level, the wicket

gates would close to reduce flow to the turbine and stabilize the impoundment level. When the sensor detects an increase in the impoundment level, the wicket gates would open to increase flow to the turbine. At flows less than 20 cubic feet per second (cfs) (the minimum hydraulic capacity of the turbine), the project would not operate and all flow would pass over the spillway. At flows between 20 and 170 cfs (the maximum hydraulic capacity of the turbine), the project would operate and no flow would pass over the spillway. At flows greater than 170 cfs, the project would generate at its maximum capacity and all excess flow would pass over the spillway. No minimum flow release is proposed.

3. Proposed Measures

In addition to operating the project in a run-of-river mode, Crane proposes the following environmental measures.

- Conduct post-operation water quality monitoring and, if necessary, implement mitigation measures based on the results.

- Install a temporary cofferdam in the existing tailrace and use drain lines to transport water from the dewatered cofferdam area to Crane's existing on-site wastewater treatment plant.

- Remove accumulated sediment from the tailrace and transport it to a landfill for disposal.

- Refurbish one of the McCormick Hercules wheel turbines for an interpretive display that would describe the turbine, its former location, and its historical use.

B. Section 30(c) Conditions

Pursuant to section 30(c) of the FPA, 16 U.S.C. § 823a(c), federal and state fish and wildlife agencies have mandatory conditioning authority on exempted projects. The Massachusetts Division of Fish and Wildlife (Massachusetts DFW) and the U.S. Department of the Interior (Interior) filed such conditions on September 2, 2011 and September 29, 2011, respectively (see Appendices A and B). The conditions are summarized below.

- Operate the project in an instantaneous run-of-river mode (Massachusetts DFW and Interior).

- Install trashracks with an approach velocity 2.0 feet per second (fps) or less, 1-inch or less clear-bar spacing, and extend to the full depth of the intake opening (Massachusetts DFW and Interior).

- Conduct water quality monitoring to determine project effects on dissolved oxygen (DO) (Massachusetts DFW and Interior).

- Develop a plan for monitoring and maintaining run-of-river operation (Massachusetts DFW and Interior).

- During impoundment refilling, pass 90 percent of inflow downstream and refill the headpond with the remaining 10 percent of inflow (Massachusetts DFW and Interior).

- Construct, operate, maintain, and evaluate upstream and downstream fish passage facilities when notified by the agencies that such facilities are necessary (Massachusetts DFW and Interior).

- Notify the agencies when the project commences operation, and provide a set of as-built drawings (Massachusetts DFW and Interior).

- Allow the agencies to inspect the project area at any time while the project operates to monitor compliance with agency terms and conditions (Massachusetts DFW and Interior).

- Reserves the right to add to and alter terms and conditions of the exemption to carry out agency responsibilities with respect to fish and wildlife resources (Massachusetts DFW and Interior).

- Include the above terms and conditions in any conveyance (by lease, sale, or otherwise) of the exemptee's interests (Massachusetts DFW and Interior).

Interior also filed a recommendation that Crane permit access, wherever possible, to allow for public use of fish and wildlife resources.

C. Water Quality Certification Conditions

The Massachusetts Department of Environmental Protection (Massachusetts DEP) issued water quality certification conditions for the Byron Weston Hydroelectric Project on September 23, 2011 (see Appendix C).

D. Additional Staff-Recommended Measures

In addition to Crane's proposed measures, the 30(c) conditions filed by Interior and Massachusetts DFW, and the water quality certification conditions filed by Massachusetts DEP, we recommend that Crane: (1) develop and implement a soil erosion and sediment control plan that describes measures to control erosion, procedures for the removal and disposal of accumulated sediment from the tailrace, and procedures to handle and process wastewater drained from the cofferdam area in the tailrace; (2) consult with the Massachusetts Historical Commission (Massachusetts SHPO) prior to implementing any project modifications, including maintenance activities, land-clearing or land-disturbing activities, or changes to project operation or facilities, that do not require Commission approval but could affect cultural resources; (3) consult with the Massachusetts SHPO if previously unidentified cultural resources are discovered during the course of constructing, maintaining, or developing project works or other facilities; and (4) develop and implement a plan describing the restoration and relocation of the McCormick Hercules wheel turbine for public display.

E. No-Action Alternative

Under the no-action alternative (denial of the application), the project would not be constructed and it would not annually generate an estimated average of 938 MWh and environmental resources in the project area would not be affected.

IV. CONSULTATION AND COMPLIANCE

A. Agency Consultation

The Commission's regulations require that applicants consult with appropriate state and federal agencies, tribes, and the public before filing an exemption application. This consultation is required to comply with the Endangered Species Act, the National Historic Preservation Act, and other federal statutes. Pre-filing consultation must be completed and documented in accordance with Commission regulations.

B. Public Outreach and Scoping

As part of their pre-filing consultation, Crane distributed an initial consultation document on November 19, 2009, and conducted pre-filing meetings on December 2, 2009, and March 18, 2010. Crane invited the agencies and the general public to participate in these meetings.

Before preparing this EA, we solicited additional study requests by public notice issued on March 18, 2011. We received comments from the National Park Service (NPS), Massachusetts DFW, and Interior. NPS, Massachusetts DFW, and Interior did not request any additional studies. On September 1, 2011, the Commission issued a public notice of intent to waive scoping. No comments were filed regarding our intent to waive scoping.

C. Interventions

On September 1, 2011, the Commission issued a public notice accepting the application and soliciting motions to intervene, establishing October 3, 2011, as the deadline to file motions to intervene and protests.[1] No motions to intervene were filed.

D. Comments and Recommendations

On September 1, 2011, the Commission issued a public notice stating the application was ready for environmental analysis and requesting final comments, recommendations, and terms and conditions. The filing deadline was October 3, 2011. The following entities filed comments and final terms and conditions:

Commenting Entity	Date Filed
Massachusetts DFW	September 2, 2011
Interior	September 29, 2011

Crane did not file a response to the Massachusetts DFW and Interior comment letters.

E. Compliance

[1] Because the notice period deadline fell on a weekend, Saturday, October 1, 2011, the public notice deadline period did not end until the close of the next Commission business day, Monday, October 3, 2011. 18 C.F.R. 385.2007(a)(2) (2011).

1. Endangered Species Act

Section 7 of the Endangered Species Act requires federal agencies to ensure that their actions are not likely to jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of the critical habitat of such species. In a letter to Crane dated January 3, 2011 (included in the exemption application), Interior's U.S. Fish and Wildlife Service (FWS) stated that there are no federally listed or proposed, threatened or endangered species or critical habitat known to occur within the project area. Thus, staff concludes that issuing an exemption from licensing for the Byron Weston Project would have no effect on threatened or endangered species. Therefore, no further action under the Endangered Species Act is required.

2. Section 106 of the National Historic Preservation Act

Section 106 of the National Historic Preservation Act (NHPA) requires that federal agencies "take into account" how the agency's undertakings could affect historic properties. Historic properties are districts, sites, buildings, structures, traditional cultural properties, and objects significant in American history, architecture, engineering, and culture that are eligible for inclusion in the National Register of Historic Places (National Register).

In a letter to the Massachusetts SHPO issued on October 17, 2011, Commission staff concluded that granting an exemption from licensing for the Byron Weston Hydroelectric Project would have no effect on historic, archaeological, or traditional cultural properties. Pursuant to section 800.4(d)(1) of the Advisory Council on Historic Preservation's regulations, if the SHPO does not object within 30 days of receipt of a finding, then the agency official's responsibilities under section 106 of the NHPA are fulfilled. The Massachusetts SHPO did not respond to the Commission's letter. Therefore, no further action under section 106 of the NHPA is required.

V. ENVIRONMENTAL ANALYSIS

In this section, the general environmental setting in the project area and cumulative effects are described. An analysis of the environmental effects of the proposed action and action alternatives is also included. Sections are organized by resource area (aquatic resources, cultural resources, etc.). Under each resource area, historic and current conditions are first described. The existing condition is the baseline against which the environmental effects of the proposed action and alternatives are compared, including an assessment of the effects of proposed mitigation, protection, and enhancement measures. Staff conclusions and recommended measures are discussed in section VI of the EA.

Unless noted otherwise, the sources of our information are Crane's exemption application (Crane, 2011a) and additional information filed by Crane (Crane, 2011b and 2011c).

A. General Description of the Area

The project would be located on the East Branch in the Town of Dalton at the site of the existing Byron Weston Dam No. 2 constructed in 1887. The Byron Weston Dam No. 2 is directly adjacent to the headquarters and principal paper-manufacturing facilities of Crane. This location is primarily comprised of mill buildings that were originally constructed to harness energy from the East Branch to manufacture paper. The Byron Weston Dam No. 2 was retrofitted with a generator to produce hydroelectric energy in the early 1900s, and electric generation continued at the dam site until sometime after 1942.

The East Branch headwaters begin at the outlet of Muddy Pond near Washington, Massachusetts. The East Branch flows approximately 17 miles, dropping 480 feet in elevation to its confluence with the Housatonic River in Pittsfield, Massachusetts. Land use in the watershed primarily consists of forested areas with some agricultural, industrial, and residential areas.

There are five existing non-hydroelectric dams located on the East Branch within an approximately 2.5-mile reach (see figure 1). From downstream to upstream, the existing dams are the Government Mill Dam, the Bay State Mill Dam, the Upper Pioneer Mill Dam, the Byron Weston Dam No. 2, and the Byron Weston Dam No. 1.

B. Cumulative Effects Analysis

According to the Council on Environmental Quality's regulations for implementing NEPA (40 C.F.R., section 1508.7), an action may cause cumulative impacts on the environment if its impacts overlap in time and/or space with the impacts of other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time, including hydropower and other land and water development activities.

Based on our review of Crane's application for an exemption from licensing and agency and public comments, staff has not identified any resources as potentially being cumulatively affected by constructing and operating the project.

C. Proposed Action and Action Alternatives

Only resources that would be affected, or about which comments have been received, are addressed in detail in this EA and discussed in this section. Commission staff has not identified any substantive socioeconomic issues associated with the proposed action; therefore, we do not assess effects on this resource in this EA. Additionally, because no federally listed threatened or endangered species or critical habitat are known to occur in the project area, Commission staff does not assess environmental effects on this resource.[2]

1. Geology and Soils Resources

Affected Environment

There are two main soil types in the vicinity of the proposed project. Tunbridge-Lyman-Peru soils are shallow to moderately-deep, well-drained loamy soils formed in glacial till derived from schist, gneiss, and granite located on uplands, and Copake-Hero-Hoosic soils are very-deep, moderately-well-drained loamy soils formed in glacial outwash located on outwash plains and terraces.

Environmental Impacts and Recommendations

Crane proposes to install a temporary cofferdam in the existing tailrace to isolate project construction in the tailrace area from the river and allow for sediment removal. Crane proposes to dispose the sediment removed from the tailrace at a landfill pursuant to Massachusetts regulations. Crane also proposes to use drain lines to transport water from the cofferdam area to Crane's existing on-site wastewater treatment plant before returning the water to the East Branch.

Interior and Massachusetts DFW did not recommend any measures to address construction-related erosion or disposal of removed sediment. Massachusetts DEP certification condition 9 would require a plan to monitor and control erosion during construction activities, and certification condition 10 would require disposal of debris and sediment in a manner that would not to impair water quality.

Staff Analysis

[2] January 3, 2011, letter from FWS to Crane included in the exemption application.

Construction of the proposed project could cause erosion, river sedimentation, and disturbance of riverbed material and re-suspension of sediments. The use of cofferdams and implementation of standard erosion control techniques would limit the effects of any construction-related erosion on water quality in the East Branch. Additionally, treatment of water removed from within the cofferdam area before returning the water to river would minimize adverse effects on water quality of the East Branch.

Testing in the tailrace area indicated elevated levels of nickel in the sediments which may influence how and where any removed sediment can be disposed. Crane's proposal indicates it would dispose of any removed sediments pursuant to Massachusetts regulations; however, no additional detail is provided. Additionally, Crane's proposal lacks detail regarding the use of any erosion control measures and the transport and treatment of water removed from the cofferdam area. Development and implementation of a soil erosion and sediment control plan, in consultation with Massachusetts DEP, would ensure that adverse effects on soil and water resources from construction-related erosion, cofferdam dewatering, and tailrace sediment removal and disposal would be minimized during project construction and operation.

2. Aquatic Resources

Affected Environment

Water Quantity

The proposed project would be located on the East Branch and include the existing 90-foot-long, 30-foot-high Byron Weston Dam No. 2 with a 75-foot-long, 23-foot-high spillway section. The dam forms an impoundment, which has a surface area of 0.94 acre, a storage volume of 3.1 acre-feet at an elevation of 1,116.7 feet (NAVD 1988), and a maximum depth of approximately 12 feet. The existing tailrace would discharge water approximately 35 feet downstream of the base of the dam.

The East Branch generally exhibits high flows during spring (March-May) and low flows during summer (July-September). Based on 74 years of flow records at USGS gage no. 01197000 in Coltsville, Massachusetts (as shown on the annual flow duration curve in figure 1, Exhibit E of the exemption application), flows in the East Branch near the project site exceed 20 cfs (the minimum project operating flow) approximately 90 percent of the time and exceed 170 cfs (the maximum project operating flow) approximately 15 percent of the time.[3] The mean annual flow near the project site is approximately 55 cfs,

[3] USGS gage no. 01197000 in Coltsville, Massachusetts is located approximately 2.5 miles downstream of the proposed project.

and the August median flow is approximately 17.6 cfs.

Water Quality

The East Branch water classification at the proposed project site is designated as Class B under Massachusetts DEP standards and provides warmwater fishery habitat.[4] Class B waters have a minimum DO standard of 5 milligrams per liter (mg/l) and a temperature standard not to exceed 83 degrees Fahrenheit (Massachusetts DEP, 2007).

Generally, water quality of the East Branch in the project area is good and meets the DO, temperature, and turbidity standards for Class B waters. Pre-operation DO and temperature sampling was conducted during July through September, 2010, with measurements taken upstream of the impoundment, in the impoundment, in the tailrace, and downstream of the tailrace. The study found daily average DO concentrations of the East Branch between 8.0 mg/l and 8.5 mg/l and daily average temperatures between 66 and degrees Fahrenheit at the four sampling locations.

Fishery Resources

Upstream and downstream of the Byron Weston Dam No. 2, the East Branch is primarily a warmwater fishery that includes pumpkinseed, bluegill, largemouth bass, smallmouth bass, white sucker, chain pickerel, yellow perch, brown bullhead, fallfish, longnose dace, and various shiners and minnows. In addition, brook, brown, and rainbow trout are found in the vicinity of the proposed project.

Presently, there are no diadromous fish in the vicinity of the project, but the Connecticut Department of Energy and Environmental Protection (Connecticut DEEP) has initiated a diadromous fish restoration plan for the Housatonic River Basin in Connecticut (Connecticut DEEP, 2000).[5] The plan calls for restoration of migrating populations of American shad, blueback herring, alewife, gizzard shad, striped bass, white perch, and American eel. The Massachusetts DFW does not presently have plans to restore diadromous fish to the Massachusetts portion of the Housatonic River, but if the planned downstream restoration efforts are successful, American eel would have access to portions of the Housatonic River in Massachusetts that are currently inaccessible.

[4] The section of the East Branch in the project area is classified as warmwater fishery under the Massachusetts Surface Water Quality Standards.

[5] Diadromous fish migrate between rivers and the ocean, spending part of their life cycles in each area.

Environmental Impacts and Recommendations

Mode of Operation

Crane proposes to operate the project in a run-of-river mode, with inflow equaling outflow on an instantaneous basis, resulting in a stable impoundment level. The project would generate electricity using flows from 20 cfs (i.e., the minimum hydraulic capacity of the turbine) to 170 cfs (i.e., the maximum hydraulic capacity of the turbine). When the project is not operating, all flows would be passed over the Byron Weston Dam No. 2 spillway.

Interior and Massachusetts DFW 30(c) condition 1 and Massachusetts DEP certification condition 13 would require Crane to operate the project in an instantaneous run-of-river mode to maintain existing aquatic habitat and water quality downstream of the project.

Staff Analysis

Operating the project in a run-of-river mode would limit project impoundment fluctuations, and would result in no change in the amount, schedule, and duration of flow released to the East Branch. During project operation, flow diverted to the powerhouse would bypass approximately 35 feet of the East Branch. Discharge from the tailrace, however, would backwater up to the base of the dam and maintain a wetted channel in the bypassed reach. Therefore, a minimum flow requirement is not necessary to maintain aquatic habitat in the bypassed reach.

Operating the project in a run-of-river mode would minimize the length of time water is retained in the impoundment to help avoid increasing water temperatures in the upper levels of the impoundment from solar heating. This measure would also limit fluctuating water levels which are known to influence the reproductive success of fishes that spawn in near-shore areas (Sammons and Bettoli, 2000). By operating the project in a run-of-river mode, habitat in the project impoundment and habitat in the East Branch downstream of the project tailrace would essentially be unchanged compared to current conditions, and aquatic organisms, including fish and benthic macroinvertebrates, would be unaffected.

Drawdown Management

Periodically, the project impoundment may need to be drawn down for maintenance or unscheduled emergencies. Interior and Massachusetts DFW 30(c) conditions 5 and Massachusetts DEP certification condition 16 would require the

implementation of a reservoir refill procedure whereby 90 percent of inflow would be passed downstream and 10 percent would be retained in the impoundment as it is refilled.

Staff Analysis

Releasing 90 percent of the project impoundment's inflow during impoundment refilling would ensure that downstream flows are kept at near natural flow levels and the impoundment is refilled in a timely manner. Minimizing the length of time that the impoundment is drawn down and that flows are reduced downstream would help maintain the existing aquatic habitat for fish and other aquatic species. Further, the proposed impoundment refill procedures would ensure that aquatic habitat downstream would quickly be returned to normal conditions with minimal impacts to aquatic resources.

Run-of-River Operation, Maintenance, and Monitoring Plan

Interior and Massachusetts DFW 30(c) conditions 4 and Massachusetts DEP certification condition 17 would require Crane to develop a plan for maintaining and monitoring run-of-river operation that includes a description of the mechanisms and structures that would 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.

Staff Analysis

A run-of-river operation, maintenance, and monitoring plan would help the agencies and Commission verify that the appropriate methods and equipment would be used to ensure that the project is operating in a run-of-river mode.

DO Monitoring

Crane proposes to conduct post-operation water quality monitoring during the first low-flow season after project start-up and compare the data to the pre-operational baseline water quality data collected in the summer of 2010. Crane states that if the results indicate that the project is reducing DO concentrations downstream of the dam, then measures, such as releasing additional flow over the dam, would be considered. Interior and Massachusetts DFW 30(c) conditions 3 and Massachusetts DEP certification condition 18 would also require a post-operation water quality monitoring study within the project area. Interior's 30(c) condition 3 also requires that if environmental and/or operating conditions during the first year of post-operation monitoring are not representative of, or if the data collected indicate that the project is causing depletion of DO, the survey should be repeated the following year. Under the Interior, Massachusetts

DFW, and Massachusetts DEP conditions, if the monitoring results show that the project is causing depletion of DO, mitigation measures, such as releasing additional flow over the dam, may be required. In addition, Interior and Massachusetts DFW 30(c) conditions 9 and Massachusetts DEP certification condition 12 reserve the right to add and alter conditions in the future.

Staff Analysis

During project operation, much of the flow passing downstream from the project impoundment would be diverted into the proposed project's intake and released through the tailrace into the East Branch. Consequently, when the project is operating, flow spilling over the Byron Weston Dam No. 2 would be less than under current conditions. Reducing the flow that spills over the dam by diverting flow through the project works could result in less aeration of East Branch flows downstream of the dam. This could result in lower DO concentrations, especially during warmer months (July through September) when water temperatures are higher and the assimilative capacity of water is lower. Releasing water with low DO concentrations into the East Branch could affect the quality of the aquatic habitat and could affect the survival and reproduction of aquatic organisms, including resident fish. Additionally, these waters could have concentrations below the state Class B standard of 5 mg/l.

To address periods when water quality in the river downstream of the dam may be adversely affected by project operation, Crane proposes, and Interior, Massachusetts DFW, and Massachusetts DEP specify, that Crane conduct post-operation water quality monitoring. If significant adverse changes to water quality (such as decreased DO) result from project operation, then other measures could be implemented, such as reducing flows to the powerhouse and increasing flows over the dam. The proposed monitoring, reporting, and consideration of additional measures in consultation with Interior, Massachusetts DFW, and Massachusetts DEP would ensure that any significant project effect on DO would be addressed.

Trashrack Design

To prevent the entrainment of most resident fish during project operation, Crane proposes to maintain the existing intake structure with trashracks that have an approach velocity that is less than or equal to 2.0 fps, have clear spacing between the bars of 1 inch, and extend to cover the full depth of the intake. Interior and Massachusetts DFW 30(c) conditions 2 and Massachusetts DEP certification condition 19 would require the installation of trashracks that: (1) have an approach velocity that is less than or equal to 2.0 fps; (2) have clear spacing of 1 inch or less; and (3) extend full depth. The agencies conditions also require the trashracks be kept free of debris.

Staff Analysis

Resident riverine fish species reside in the project impoundment and could be entrained at the proposed project's intake and, consequently, injured or killed passing through the proposed project's turbine during operation. Fish could also be impinged on the project's trashracks during project start-up and operation, resulting in injury or death.

Crane's existing trashracks would be adequate to protect resident adult fish from being entrained or impinged. Adult resident fish species, such as yellow perch and largemouth bass, would have sufficient swimming and burst speeds to escape the measured approach velocity of 1.1 fps at the project's trashracks. Likewise, the 1-inch bar spacing of the trashracks would prevent most adult fish in the area, such as yellow perch and smallmouth bass, from passing through the trashracks if they come in contact with the vertical bars. Moreover, some resident fish, especially open-water species such as yellow perch may move downstream with spilled flows and avoid the area near the project's intake.

Ensuring that the trashracks are free of debris, as would be required by the agencies, would also protect resident fish near the intake structure. If debris accumulates on the trashracks, fish could be entangled in the debris or the approach velocity at the trashracks could increase as intake water is constricted to a smaller area, which could increase fish entrainment or impingement. Monitoring and removal of debris would maintain the effectiveness of the proposed trashracks and prevent short-term increases in fish entrainment or impingement.

Upstream and Downstream Fish Passage

Interior and Massachusetts DFW 30(c) conditions 6 and Massachusetts DEP certification condition 20 would require that Crane construct, operate, maintain, and evaluate upstream and downstream fish passage facilities when notified by FWS and/or Massachusetts DFW that such facilities are needed. All plans and schedules associated with the design, construction, and evaluation of any prescribed fishways would be developed in consultation with FWS and Massachusetts DFW.

Staff Analysis

Presently, there are no migratory fish that are able to access the project area. Three dams downstream of the proposed project site on the East Branch (see figure 1) do not have fish passage facilities; therefore, migratory fish from the mainstem of the Housatonic River cannot currently move upstream into the proposed project area.

Connecticut DEEP, however, has an active management program restoring migratory fish species in the lower Housatonic River and migratory fish could gain access to the project site in the future. If this happens, their upstream and downstream movements could be impeded by Byron Weston Dam No. 2 because no dedicated fish passage facilities exist at this dam. During project operation, fish moving downstream would potentially be attracted to the location of flows over the spillways and the flows entering the project intake. Because of the trashracks described above, most fish would be excluded from the project intake and would need another route to pass downstream. Spillway flows may be adequate at times, but providing a dedicated downstream passage route could be more effective, because it may attract fish away from the intake area and potentially reduce entrainment of fish. Therefore, providing downstream passage facilities in the future would increase the survival rate of out-migrating fish.

Likewise, providing upstream passage facilities in the future would allow anadromous fish species, such as American shad, river herring, and American eel, to move upstream past the dam and project facilities. The amount of spawning and rearing habitat upstream of the Byron Weston Dam No. 2 is unknown, but access to additional habitat could enhance the production of migratory species.

3. Terrestrial Resources

Affected Environment

The western edge of the impoundment and the East Branch immediately downstream of the project consist of vertical bedrock escarpments and the foundations and retaining walls of Crane's mill buildings. The eastern shoreline of the impoundment consists of a steep wooded slope and a 30- to 80-foot-wide corridor between the East Branch and a few residential structures, parking areas, and roads in the Town of Dalton. The steep wooded slope continues immediately downstream of Byron Weston Dam No. 2 separating the East Branch from an adjacent residential area.

The industrial and residential development and steep slopes along the East Branch limit the establishment of vegetation and wetlands in the project vicinity. With the Crane mill complex encompassing the western edge of the project area, vegetative cover is primarily located along the eastern edge of the East Branch. Tree species in the project area consist of native red maple, sugar maple, American elm, and non-native Norway maple. Shrub and vine vegetation is dominated by non-native invasive species, including Multiflora rose, Tartarian honeysuckle, Glossy buckthorn, and Asian bittersweet.

Environmental Impacts and Recommendations

Crane proposes to complete all construction activities, including the installation of the proposed transmission line, within the existing Byron Weston Defiance Mill building and install a temporary cofferdam to isolate project construction from the river. Crane also proposes to operate the project in a run-of-river mode. Interior and Massachusetts DFW 30(c) conditions 1 and Massachusetts DEP certification condition 13 require run-of-river operation. In addition, Interior and Massachusetts DFW 30(c) conditions 5 and Massachusetts DEP certification condition 16 require the implementation of a reservoir refill procedure whereby, during impoundment refilling after drawdowns, 90 percent of inflow is passed downstream, and the impoundment is refilled on the remaining 10 percent of inflow to the project.

Staff Analysis

Construction of the project within the existing Byron Weston Defiance Mill building and temporary cofferdams would ensure that no significant land-disturbing activities would occur in the project vicinity. Cofferdam construction would limit re-suspension of river sediments and construction-related erosion to protect riparian vegetation.

Operating the project in a run-of-river mode would result in a relatively stable impoundment and maintain downstream flows in the East Branch. In addition, the impoundment refill procedure that would be required by Interior, Massachusetts DFW, and Massachusetts DEP would ensure continuity of downstream flow after maintenance or emergency events requiring impoundment drawdowns. With run-of-river operation and the implementation of the impoundment refill procedure, any impact on impoundment or downstream riparian vegetation would be short-term and minor.

4. Land Use, Recreation, and Aesthetic Resources

Affected Environment

Land Use and Recreation

Land use in the project area is zoned and primarily used for industrial or residential purposes. Crane's mill buildings, which are used for paper-manufacturing, are located on the river-right[6] side of the project impoundment upstream and downstream of Byron

[6] River-right refers to the right side of the river when the viewer is looking downstream. River-left refers to the left side of the river when the viewer is looking downstream.

Weston Dam No. 2. The land on the river-left side of the impoundment is occupied by three residential buildings and two parking lots. These buildings and parking areas abut Depot Street which runs north and south, parallel to the impoundment.

The shoreline around the project impoundment is owned by Crane and is currently inaccessible to the public due to steep terrain and proximity to adjacent manufacturing facilities. There are no formal recreation facilities in the project area and there is no history of any significant recreational use of the impoundment or immediate downstream areas. The segment of the East Branch in the project area was previously assessed for primary contact and secondary contact recreational-use designations.[7] The primary contact recreational use, such as swimming, is designated as "impaired" due to elevated fecal coliform bacteria counts. The secondary contact recreational use, such as boating or fishing, is designated as "supportive" based on the acceptable bacteria counts and generally-acceptable conditions. Secondary contact recreational use in this segment, however, is identified with an "alert status" due to occasional septic/sewage odors and issues with turbidity.

The Appalachian National Scenic Trial (AT), a 2,181-mile long public footpath managed by the NPS that follows the Appalachian Mountains from Georgia to Maine, passes through the Town of Dalton in the immediate project vicinity. The AT was completed by a network of volunteers in 1937 and has been a popular destination for nature enthusiasts and through-hikers since its inception. The trail passes along Depot Street on river-left of the project impoundment and continues onto Main Street where it crosses the river upstream of the impoundment (figure 3).

[7] Primary contact recreation is defined by the Massachusetts DEP as any recreational or other water use in which there is prolonged and intimate contact with the water with a significant risk of ingestion of water. Secondary contact recreation is defined as any recreational or other water use in which contact with the water is either incidental or accidental (Massachusetts DEP, 2007).

Figure 3. Byron Weston Project boundary and Appalachian Trail aerial image (Source: May 18, 2011, supplemental information response, as modified by staff)

Aesthetics

The East Branch is not designated as a Wild and Scenic River, and the project impoundment is not considered to be scenic in nature. Viewing of the Byron Weston Dam No. 2 is generally limited to individuals inside the mill buildings on river-right. The

view from the river-left side of the dam is largely obstructed by tree cover and limited public access due to private properties.

Environmental Impacts and Recommendations

Land Use and Recreation

The shoreline around the project impoundment is currently inaccessible to the public due to steep terrain and proximity to adjacent manufacturing facilities, and Crane does not propose to allow public access to project lands.

In a letter filed May 5, 2011, NPS stated that the proposed project would result in much less spill at the dam, and impact views of the dam from the AT (letter from Kevin Mendik, NPS-NER Hydro Program Coordinator).[8] NPS stated that Crane's exemption application did not clearly describe the extent of these impacts and NPS requested further information. In a letter filed May 18, 2011, Crane provided additional information describing and clarifying the proposed project boundary and potential impacts to the AT.

Staff Analysis

The proposed project would not affect access or recreational use because there is no history of significant recreational use at the project, nor any interest in establishing public access at the project.

[8] NPS did not specify which dam they referred to in their comments, Byron Weston Dam No. 1 or Byron Weston Dam No. 2 (the project dam). Staff assumes the dam they reference is Byron Weston Dam No. 1.

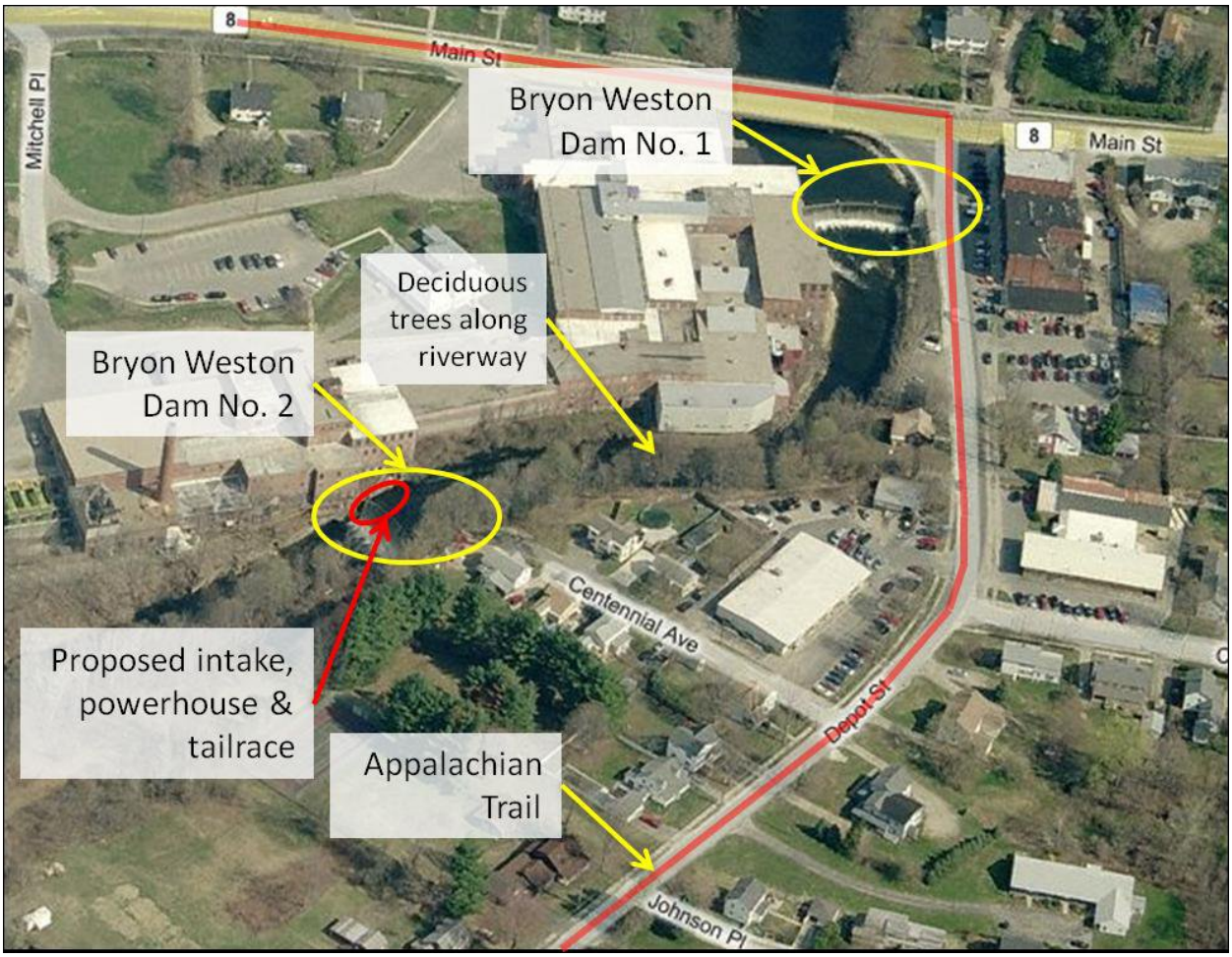

Figure 4. Byron Weston Project features and Appalachian Trail aerial image (Source: May 18, 2011, supplemental information response, as modified by staff)

The AT abuts a portion of the project boundary at the upstream end of the project impoundment on river-left. Downstream, the AT is located about 450 feet east of the Byron Weston Dam No. 2 spillway at the intersection of Centennial Avenue and Depot Street. From this location, the project spillway and the downstream tailrace area are not visible due to the presence of private residences and deciduous trees. The view of the mill building across the river from this location along the AT is also obscured by deciduous trees (figure 4).

While flow would be diverted from the spillway at Byron Weston Dam No. 2, the spillway is not visible from any portion of the AT. The proposed run-of-river operation would maintain current impoundment levels; therefore, there would be no change in the appearance of the impoundment when viewed from the AT. Further, construction activities associated with the proposed project would be limited to areas within the

existing Byron Weston Defiance Mill building and would not be visible from the AT. Therefore, because construction and reduced flows at the spillway could not be seen from the AT and there would be no change to the impoudment, there would be no effects on recreationists using the AT.

Aesthetics

Crane proposes a run-of-river mode of operation and does not propose any changes to the current impoundment level. Further, all significant construction activities would occur within the footprint of the existing Byron Weston Defiance Mill building.

Staff Analysis

Although the proposed project would result in decreased flow over the spillway, the project dam is situated in a location where there are very limited viewpoints for the public to see the face of the dam. As discussed above, construction of the proposed project would occur within the existing Byron Weston Defiance Mill building and would not be visible from outside the building. Because the reduced spillway flows and construction activities would not be generally visible to the public and impoundment elevations would be unchanged, the proposed project would have negligible effects on visual resources in the project area.

5. Cultural Resources

Affected Environment

Area of Potential Effect

The Advisory Council on Historic Preservation defines an area of potential effect (APE) as the geographic area or areas in which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The APE for the Byron Weston Hydroelectric Project includes: (a) lands enclosed by the project boundary; and (b) lands or properties outside the project boundary in which project operations or project-related actions may cause changes in the character or use of historic properties, if any exist.

Historical background

The Byron Weston Defiance Mill was originally constructed by David Carson in 1821. In 1840, Carson sold the mill to Henry Chamberlin who owned and operated the facility until it was purchased in 1863 by Byron Weston. Weston expanded the building

and used the one-vat, one-engine mill to manufacture record and ledger papers. The mill made high-quality paper throughout its operational history (Child, 1885).

Other historic buildings in the project area include the Byron Weston Centennial Mill and the Old Stone Mill. The Byron Weston Centennial Mill is located immediately upstream from the Byron Weston Defiance Mill and was constructed in 1876.[9] The Old Stone Mill is located off of Main Street in the Town of Dalton and was constructed in 1844. A wing of the Old Stone Mill, called the Rag Room, is owned by Crane and houses the Crane Museum of Papermaking, opened in 1930.

Historic Properties

The Byron Weston Defiance Mill is not included in the National Register or on the Massachusetts Historical Commission Inventory of Historic Assets of the Commonwealth. The Byron Weston Centennial Mill is included in the Massachusetts Historical Commission Inventory of Historic Assets of the Commonwealth. The Rag Room of the Old Stone Mill, which houses the Crane Museum of Papermaking, is listed in the National Register.[10]

Environmental Effects and Recommendations

Crane proposes to remove both of the McCormick Hercules wheel turbines from the existing powerhouse within the Byron Weston Defiance Mill building. To preserve historical resources at the project, Crane proposes to refurbish one of the turbines for public display. The display would describe the turbine, its former location, and its historical use. Crane has not yet finalized the proposed location of the refurbished turbine, but one proposed option is the Crane Museum of Papermaking.

In a letter dated December 15, 2009 (included in the exemption application), the Massachusetts SHPO recommended that the Commission consult with the Dalton Historical Commission (Dalton HC) to seek their views on the proposed project. In a letter dated July 20, 2010 (included in the exemption application), the Dalton HC expressed their full support for the proposed project and stated that the project would not only be beneficial for the Town of Dalton, but Berkshire County as a whole.

In a letter issued on May 20, 2011, Commission staff formally invited the participation of the Wampanoag Tribe of Gay Head (Aquinnah), Mashpee Wampanoag Tribal Council, and Stockbridge Munsee Tribe of Mohican Indians in the exemption from

[9] http://mhcmacris.net/Details.aspx?MhcId=DAL.105.

[10] Ref. #83004376, added July 1, 1983.

licensing proceeding for the Byron Weston Hydroelectric Project. No responses were received.

Staff Analysis

The construction and operation of the proposed project would not alter the historic character of the existing structures. No changes are proposed to the existing normal water surface elevation of the impoundment or the existing dam structure. Refurbishing one of the McCormick Hercules wheel turbines and creating an interpretive display about the history of hydropower at the Byron Weston Mills would preserve a piece of the Town of Dalton's history. Developing and implementing a wheel turbine relocation plan would ensure that appropriate measures are taken to preserve the McCormick Hercules wheel turbine and provide a process for selecting a location for a public display.

Staff reviewed the information provided by Crane and concluded that the proposed project would have no effect on historic, archaeological, or traditional cultural properties. In a letter issued on October 17, 2011, Commission staff requested a response from the Massachusetts SHPO if it disagreed with the Commission's determination of no effect. No response was received from the Massachusetts SHPO. Because the Massachusetts SHPO did not object to the Commission's determination of no effect finding within 30 days of the October 17, 2011, letter, no further action under section 106 of the NHPA is needed.[11]

During the term of any exemption, Crane would occasionally need to implement project modifications that would not require Commission approval but could affect cultural resources at the project. These modifications could include activities such as replacement of broken windows, roof or siding repairs, or general landscaping. Including a condition in any exemption that would require Crane to consult with the Massachusetts SHPO prior to conducting any maintenance activities, land-clearing or land-disturbing activities, or changes to project operation or facilities would ensure that cultural resources are not adversely affected.

Ground-disturbing activities associated with construction in the powerhouse and tailrace would not be likely to disturb cultural resources because there are no known historical or archaeological properties at the project listed in the National Register. It is possible, however, that unknown cultural resources could be discovered during the course of constructing or operating the project. Including a condition in any exemption that would require Crane to consult with the Massachusetts SHPO if previously unidentified

[11] Pursuant to section 800.4(d)(1) of the Advisory Council on Historic Preservation's regulations.

cultural resources are encountered would ensure the proper treatment of these resources. In the event of any such discovery, Crane would discontinue all exploratory or construction-related activities until the proper treatment of any potential cultural resources is established.

D. No-Action Alternative

Under the no-action alternative, the project would not be issued an exemption, the project would not generate electricity, and there would be no effects on environmental resources.

VI. RECOMMENDED ALTERNATIVE

Based on our independent review and evaluation of the environmental effects of the proposed action, section 30(c) conditions filed by Interior and Massachusetts DFW, and water quality certification conditions filed by Massachusetts DEP, and a no-action alternative, we recommend the proposed action, including all of the section 30(c) conditions and certification conditions with additional staff-recommended measures as the preferred alternative. Additional measures recommended by staff include developing and implementing a soil erosion and sediment control plan, consulting with the Massachusetts SHPO prior to implementing any project modifications that could affect cultural resources, consulting with the Massachusetts SHPO if previously unidentified cultural resources are discovered during the course of project construction or operation, and developing and implementing a wheel turbine relocation plan.

We recommend this alternative because: (1) issuing an exemption from licensing would allow Crane to construct and operate the project as a beneficial and dependable source of electric energy; (2) the 250 kW of electric capacity would come from a renewable resource that would not contribute to atmospheric pollution; and (3) the recommended environmental measures would protect water quality, aquatic resources, protect exiting historic resources, and protect any unidentified cultural resources.

Crane proposes and we recommend the following environmental measures for any exemption that would be issued for the proposed project:

- Operate the project in a run-of-river-mode.

- Conduct post-operation water quality monitoring and, if necessary, implement mitigation measures based on the results.

- Install a temporary cofferdam in the existing tailrace and use drain lines to

transport water from the dewatered cofferdam area to Crane's existing on-site wastewater treatment plant.

- Remove accumulated sediment from the tailrace and transport it to a landfill for disposal.

- Refurbish one of the McCormick Hercules wheel turbines for an interpretive display that would describe the turbine, its former location, and its historical use.

We discuss our basis for additional recommended measures below.

Soil Erosion and Sediment Control Plan

Massachusetts DEP certification condition 9 would require a plan to monitor and control erosion during construction activities, and certification condition 10 would require disposal of debris and sediment in a manner that would not to impair water quality. Crane proposes to install a temporary cofferdam to allow for sediment removal from the tailrace and disposal at a landfill. Crane also proposes to process the water drained from the cofferdam area before returning the water to the East Branch. Crane's proposal, however, lacks detail regarding the use of erosion control measures during construction, the disposal of removed sediment, and the transport and treatment of water removed from the cofferdam area. Therefore, we recommend that Crane develop a soil erosion and sediment control plan in consultation with Massachusetts DEP.

The soil erosion and sediment control plan would identify all measures that would be taken to minimize erosion and sedimentation during construction, including: procedures for removal and disposal of accumulated sediment removed from the tailrace, procedures to handle and process wastewater drained from the cofferdam area in the tailrace, descriptions and drawings of all erosion control measures, and an implementation schedule. Development and implementation of this plan would ensure that adverse effects on soil and water resources from construction-related erosion, cofferdam dewatering, and tailrace sediment removal and disposal would be minimized during project construction and operation.

Cultural Resources

During the term of any exemption, Crane would occasionally need to implement project modifications that would not require Commission approval but could affect cultural resources at the project. These modifications could include activities such as replacement of broken windows, roof or siding repairs, or general landscaping. To ensure

that cultural resources are not adversely affected from project modifications, we recommend that Crane consult with the Massachusetts SHPO prior to conducting any maintenance activities, land-clearing or land-disturbing activities, or changes to project operation or facilities that could affect cultural resources.

Ground-disturbing activities associated with construction in the powerhouse and tailrace would not be likely to disturb cultural resources because there are no known historical or archaeological properties at the project listed in the National Register. It is possible, however, that unknown cultural resources could be discovered during the course of constructing or operating the project. Therefore, we recommend that Crane consult with the Massachusetts SHPO if previously unidentified cultural resources are encountered to ensure the proper treatment of these resources. In the event of any such discovery, Crane would discontinue all exploratory or construction-related activities until the proper treatment of any potential cultural resources is established.

Wheel Turbine Relocation Plan

Crane proposes to remove both of the McCormick Hercules wheel turbines from the existing powerhouse in the Byron Weston Defiance Mill building. To preserve historical resources at the project, Crane intends to refurbish one of the turbines for public display. Crane has not yet finalized where the turbine would be relocated, but one proposed option is the Crane Museum of Papermaking. To ensure that appropriate measures are taken to preserve the McCormick Hercules wheel turbine and provide a process for selecting a location for the public display, we recommend that Crane develop and implement a wheel turbine relocation plan in consultation with the Dalton HC and the Massachusetts SHPO. The plan would identify how the turbine will be refurbished, procedures involved in the relocation process, and where it will be relocated for public display. The plan would also include methods for photo-documentation of the turbine prior to removal from its existing location and describe the information Crane would incorporate in the turbine's interpretive display.

Unavoidable Adverse Effects

Even with the implementation of a temporary cofferdam and soil erosion and sediment control plan, minor amounts of sediment would enter the East Branch and could result in short-term effects on water quality and resident fish. Even with the trashracks installed, some entrainment of small fish may occur. We would not expect any long-term effects to the fish community from any re-suspension of sediments or entrainment associated with the project.

VII. FINDING OF NO SIGNIFICANT IMPACT

If the Byron Weston Hydroelectric Project is exempted from licensing as proposed with the additional staff-recommended measures, the project would be constructed and operated while protecting water quality, fisheries resources, existing historic resources, and any unidentified cultural resources in the project area.

Based on our independent analysis, issuance of an exemption from licensing for the Byron Weston Hydroelectric Project, as proposed with the additional staff-recommended measures, would not constitute a major federal action significantly affecting the quality of the human environment.

VIII. LITERATURE CITED

Child, H. 1885. *Gazetteer of Berkshire County, Mass., 1725-1885*. Syracuse, New York: Printed at the Journal Office. 1885. 130 pp.

Connecticut Department of Energy and Environmental Protection. 2000. Bureau of Natural Resources, Fisheries Division. Diadromous Fisheries Plan for the Upper Housatonic River Basin.

Crane & Company. 2011a. Final Application for Exemption of a Small Hydroelectric Project from Licensing: Byron Weston Hydroelectric Project. Prepared by GZA GeoEnvironmental, Inc. Filed March 9, 2011.

Crane & Company. 2011b. Response to Deficiency and Additional Information. Prepared by GZA GeoEnvironmental, Inc. Filed June 22, 2011.

Crane & Company. 2011c. Response to Deficiency. Prepared by GZA GeoEnvironmental, Inc. Filed August 17, 2011.

Massachusetts Department of Environmental Protection. 2007. 314 CMR 4.00: Division of Water Pollution Control. Massachusetts Surface Water Quality Standards. http://www.mass.gov/dep/service/regulations/314cmr04.pdf.

Sammons, S.M. and Bettoli, P.W. 2000. Population dynamics of a reservoir sport fish community in response to hydrology. North American Journal of Fisheries Management 20:791-800.

IX. LIST OF PREPARERS

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APPENDIX A

MASSACHUSETTS DIVISION OF FISHERIES & WILDLIFE SECTION 30(c) CONDITIONS OF THE FEDERAL POWER ACT FILED ON SEPTEMBER 2, 2011

1. The Exemptee shall operate the project in an instantaneous run-of-river mode, whereby inflow to the project will equal outflow from the project at all times and water levels above the dam are not drawn down for the purpose of generating power. Run-of-river operation may be temporarily modified if required by operating emergencies beyond the control of the Exemptee, or for short periods upon mutual agreement between the Exemptee, the Massachusetts Division of Fisheries and Wildlife, and the U.S. Fish and Wildlife Service.

2. The Exemptee 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.

3. The Exemptee 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 Massachusetts Department of Environmental Protection, and the U.S. Fish and Wildlife Service. 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 Division, the USFWS, and the MADEP, the project is not causing depletion of dissolved oxygen no further study will be required. If results indicate that, in the opinion of the Division, the USFWS, and the MADEP, the project is causing depletion of dissolved oxygen further study will be required and mitigation measures may be required (e.g., releasing flow over the dam for aeration) as determined by of the Division, the USFWS, and the MADEP.

4. The Exemptee shall, within three (3) months of the date of issuance of an exemption from licensing, prepare and file for approval the Massachusetts Division of Fisheries and Wildlife, and the U.S. Fish and Wildlife Service, 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 U.S. Fish and Wildlife

Service, the Federal Energy Regulatory Commission, and the Massachusetts Division of Fisheries and Wildlife.

5. The Exemptee 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. This refill procedure may be modified on a case-by-case basis with the prior approval of both the U.S. Fish and Wildlife Service and the Massachusetts Division of Fisheries and Wildlife.

6. The Exemptee shall be responsible for constructing, operating, maintaining and evaluating upstream and downstream fish passage facilities at this project when notified by the U.S. Fish and Wildlife Service and/or the Massachusetts Division of Fisheries and Wildlife 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 Exemptee in consultation with, and require approval by, the Massachusetts Division of Fisheries and Wildlife and the U.S. Fish and Wildlife Service.

7. The Exemptee shall notify the Massachusetts Division of Fisheries and Wildlife, and the U.S. Fish and Wildlife Service in writing when the project commences operation. Such notice shall be sent within 30 days of start-up. The Exemptee shall furnish the Massachusetts Division of Fisheries and Wildlife and the U.S. Fish and Wildlife Service with a set of as-built drawings concurrent with filing said plans with the Commission.

8. The Exemptee shall allow the Massachusetts Division of Fisheries and Wildlife and/or the U.S. Fish and Wildlife Service to inspect the project area at any time while the project operates under an exemption from licensing to monitor compliance with their terms and conditions.

9. The Division reserves the right to add to and alter terms and conditions for this exemption as appropriate to carry out its responsibilities with respect to fish and wildlife resources. The Exemptee shall, within thirty (30) days of receipt, file with the Federal Energy Regulatory Commission any additional terms and conditions imposed by the Massachusetts Division of Fisheries and Wildlife and/or the U.S. Fish and Wildlife Service.

10. The Exemptee shall incorporate the aforementioned terms and conditions in any conveyance—by lease, sale or otherwise—of its interests so as to legally assure compliance with said conditions for as long as the project operates under an exemption from licensing.

APPENDIX B

U.S. DEPARTMENT OF THE INTERIOR
SECTION 30(c) CONDITIONS OF THE FEDERAL POWER ACT
FILED ON SEPTEMBER 29, 2011

1. The Exemptee shall operate the project in an instantaneous run-of-river mode, whereby inflow to the project will equal outflow from the project at all times, and water levels above the dam are not drawn down for the purpose of generating power. Run-of-river operation may be temporarily modified if required by operating emergencies beyond the control of the Exemptee, or for short periods upon mutual agreement between the Exemptee, the U.S. Fish and Wildlife Service, and the Massachusetts Division of Fisheries and Wildlife.

2. The Exemptee shall utilize 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.

3. The Exemptee 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 U.S. Fish and Wildlife Service. The post-operation water quality monitoring survey shall be initiated the first low-flow season after project start-up. Results of the post-operation survey will be compared to the pre-operation data. If results indicate that the project is not causing depletion of dissolved oxygen, and the U.S. Fish and Wildlife Service and Massachusetts Department of Environmental Protection deem the data to have been collected during representative low flow conditions and turbine operating levels, no further monitoring will be required. However, if environmental and/or operating conditions during the first year of post-operation monitoring are not representative, or if the data collected indicate that the project is causing depletion of dissolved oxygen, the survey shall be repeated the following year. If survey results indicate that the project is causing depletion of dissolved oxygen, mitigation measures may be required (e.g., releasing flow over the dam for reaeration). Measures specified by the U.S. Fish and Wildlife Service shall be implemented.

4. The Exemptee shall, within three (3) months of the date of issuance of an exemption from licensing, prepare and file for approval by the U.S. Fish and Wildlife Service, 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 U.S. Fish and Wildlife Service, the Federal Energy Regulatory Commission, and the Massachusetts Division of Fisheries and Wildlife.

5. The Exemptee shall implement a refill procedure whereby, during impoundment refilling after drawdowns for maintenance or emergency purposes, 90 percent of inflow is passed downstream and the headpond is refilled on the remaining 10 percent of inflow to the project. This refill procedure may be modified on a case-by-case basis with the prior approval of both the U.S. Fish and Wildlife Service and the Massachusetts Division of Fisheries and Wildlife.

6. The Exemptee shall be responsible for constructing, operating, maintaining and evaluating upstream and downstream fish passage facilities at this project when notified by the U.S. Fish and Wildlife Service and/or the Massachusetts Division of Fisheries and Wildlife 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 Exemptee in consultation with, and require approval by, the U.S. Fish and Wildlife Service.

7. The Exemptee shall notify the U.S. Fish and Wildlife Service in writing when the project commences operation. Such notice shall be sent within 30 days of start-up to Supervisor, New England Field Office, 70 Commercial Street, Suite 300, Concord, New Hampshire 03301. The Exemptee shall furnish the U.S. Fish and Wildlife Service with a set of as-built drawings concurrent with filing said plans with the Federal Energy Regulatory Commission.

8. The Exemptee shall allow the U.S. Fish and Wildlife Service to inspect the project area at any time while the project operates under an exemption from licensing to monitor compliance with their terms and conditions.

9. The U.S. Fish and Wildlife Service reserves the right to add to and alter terms and conditions for this exemption as appropriate to carry out its responsibilities with respect to fish and wildlife resources. The Exemptee shall, within thirty (30) days of receipt, file with the Federal Energy Regulatory Commission any additional terms and conditions imposed by the U.S. Fish and Wildlife Service.

10. The Exemptee shall incorporate the aforementioned terms and conditions in any conveyance—by lease, sale or otherwise—of its interests so as to legally assure compliance with said conditions for as long as the project operates under an exemption from licensing.

These conditions are required with the understanding that the Commission likely will want to retain concurrent approval authority over some or all of the plans and actions described above, and the above conditions should not be read as preventing this.

APPENDIX C

MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION SECTION 401 WATER QUALITY CERTIFICATION CONDITIONS OF THE CLEAN WATER ACT ISSUED SEPTEMBER 23, 2011

l. 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

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