



# The Commonwealth of Massachusetts

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March 8, 2007

## CERTIFICATE OF THE SECRETARY OF ENVIRONMENTAL AFFAIRS ON THE ENVIRONMENTAL NOTIFICATION FORM

PROJECT NAME : Lawrence Hydroelectric Project; Inflatable Flashboard Installation  
PROJECT MUNICIPALITY : Lawrence  
PROJECT WATERSHED : Merrimack  
EOEA NUMBER : 13962  
PROJECT PROPONENT : **Lawrence** Hydroelectric Associates c/o Enel North America, Inc.  
DATE NOTICED IN MONITOR : February 6, 2007

Pursuant to the Massachusetts Environmental Policy Act (G. L. c. 30, ss. 61-62H) and Section 11.03 of the MEPA regulations (301 CMR 11.00), I hereby determine that this project **does not require** the preparation of an Environmental Impact Report (EIR).

As described in the Environmental Notification Form (ENF), this project involves the replacement of the existing five-foot high wooden flashboards on the Essex (or Great Stone) Dam with an inflatable flashboard system identical in height. The Essex Dam is associated with a 16.8 Megawatt (MW) hydropower facility located on the Merrimack River in the City of Lawrence and is a 900-foot long cut granite block structure that creates an impoundment extending upstream approximately 9.8 miles and encompassing an area of about 655 acres. The impoundment area includes the communities of Andover, Dracut, Lawrence, Lowell, Methuen and Tewksbury. The project does not propose to increase the impoundment area, nor to change the general operating procedures at the facility. The ENF states that the replacement of wooden flashboards will improve environmental benefits, increase worker safety, improve operational

control of river flow and level, enhance project economics, and contribute to improved dam aesthetics. The project has an existing Chapter 91 License (DEQE No. 556) issued on April 27, 1979.

The proposed inflatable flashboards are intended to eliminate the existing condition under which the wooden flashboards are easily damaged. They will allow greater flexibility in control of water spillover the dam. The proponent anticipates improving fish passage at the dam by limiting uncontrolled spill across the dam face. Under existing conditions, spillage at various points in the flashboards falsely attract fish, and shutdowns of fishway operations to install new wooden flashboards adversely affect passage success. Additionally, the wooden flashboards presently in place at the dam are not adjustable, further hindering fish passage when generation capacity at the dam is exceeded. Several state agencies have commented that due to successive years of flashboard failure at the dam, fish passage has been severely limited. The proponent proposes to assist multi-state and multi-agency efforts to restore anadromous fish populations to the Merrimack River through the replacement of the wooden flashboards with inflatable flashboards.

The project is undergoing MEPA review pursuant to Sections 11.03(3)(b)(1)(f) and 11.03(2)(b)(2) because it requires a State permit and will involve the alteration of ½ or more acres of other wetlands and may involve the taking of an endangered or threatened species or a species of special concern. The project requires a Chapter 91 Waterways License and Section 401 Water Quality Certificate from the Massachusetts Department of Environmental Protection (MassDEP) and a license amendment from the Federal Energy Regulatory Commission (FERC). The project will require a permit from the United States Army Corps of Engineers (U.S. ACOE) in the form of either a Programmatic General Permit (PGP) or an Individual Permit. The project will also require an Order of Conditions from the City of Lawrence Conservation Commission, or in the case of appeal, a Superseding Order of Conditions from MassDEP. The project may require a Conservation and Management Permit from the Division of Fisheries and Wildlife, Natural Heritage and Endangered Species Program (NHESP).

Because the proponent is not seeking financial assistance from the Commonwealth for the project, MEPA jurisdiction extends to those aspects of the project that may have significant environmental impacts and that are within the subject matter of required or potentially required state permits. In this case, MEPA jurisdiction exists over wetlands, waterways and tidelands.

### Wetlands

The project will require the temporary drawdown of the impoundment area to a safe level below the dam crest (about 7 feet to 8 feet below impoundment normal water elevation) to facilitate installation of the inflatable flashboard system. The ENF notes that a maximum of 352,244 square feet (or 51,744 linear feet) of Land Under Water may be impacted during the drawdown period. The project would not change the existing and historic impoundment elevation of the Merrimack River at the Lawrence Hydroelectric Project, nor would it adversely affect the ability of the project to pass high river flows during flood conditions.

The proponent must undertake environmental monitoring and protection measures during construction and must identify these with the appropriate resource agencies during project permitting. Furthermore, the proponent will be required to characterize and describe the project's impact on interests of the Wetlands Protection Act, including impact to water supply, during the Notice of Intent process for the flashboard installation.

### Water Supply

Several comment letters have expressed concerns related to the temporary drawdown of the impoundment area and existing water supply withdrawal points within the Merrimack River. MassDEP has indicated that the towns of Andover and Tewksbury, along with the cities of Methuen and Lawrence all have public water supply intakes on the Merrimack River. Some of these communities provide water not only to their own residents, but also to neighboring communities, either on an on-going basis or as an emergency reserve. Additionally, the anticipated project construction period (July 15 – September 15), which coincides with natural periods of low flow and lower levels of fish ladder activity, also will occur during periods of peak water supply withdrawal. Therefore, it is imperative that the proponent coordinate with the municipalities of Andover, Lawrence, Methuen and Tewksbury to identify and mitigate any short-term impacts upon the public water supplies during installation of the inflatable flashboards. The proponent should work with these communities to identify the location and elevation of public water supply intakes, create a monitoring program to ensure that water supply capacities will not be diminished during the construction period, and establish protocols for mitigation if the drawdown temporarily limits potable drinking water supplies within these communities.

### Rare Species

The Division of Fisheries and Wildlife, Natural Heritage and Endangered Species Program (NHESP) has indicated that the project site is located within *Priority Habitat* and *Estimated Habitat* within the 12<sup>th</sup> Edition of the *MA Natural Heritage Atlas* and therefore requires review through a direct filing with NHESP for compliance with the Massachusetts Endangered Species Act (MESA) and its associated regulations outlined in 321 CMR 10.20 prior to commencement of any work to ensure that a "take" of state-protected species can be avoided. If the project cannot be revised to avoid a "take", a Conservation and Management Permit from NHESP will be required.

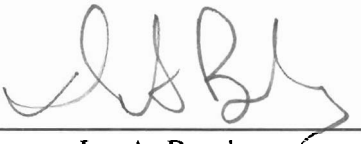
### Historic

The project site is listed on the State Register of Historic Places as the Essex or Great Stone Dam. The Massachusetts Historical Commission has concluded, in a November 1, 2006 response to a request made by the proponent, that "after review of MHC files and the materials you submitted, it has been determined that this project is unlikely to affect significant historic or archaeological resources." The ENF states that a photo documentation log of the project will be completed to track the installation and improvement to the historic dam. The proponent should

commit to preparing this photo documentation log and provide data to MHC upon project completion.

I am confident that the proponent will work with affected communities within the impoundment area and State agencies to ensure that short term impacts to wetlands, rare species habitat and water supplies can be appropriately minimized and/or suitable mitigation provided. The proponent can resolve any remaining issues during the state permitting process. No further MEPA review is required at this time.

March 8, 2007  
Date

  
Ian A. Bowles

Comments received:

- 02/15/2007 Division of Fisheries and Wildlife
- 02/20/2007 Town of Tewksbury
- 02/21/2007 Division of Fisheries and Wildlife – Natural Heritage and Endangered Species Program
- 02/26/2007 Massachusetts Department of Environmental Protection – NERO
- 02/26/2007 City of Methuen, Department of Public Works Engineering Division
- 02/26/2007 Town of Andover

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