



The Commonwealth of Massachusetts
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114

Deval L. Patrick
GOVERNOR

Timothy P. Murray
LIEUTENANT GOVERNOR

Ian A. Bowles
SECRETARY

Tel: (617) 626-1000
Fax: (617) 626-1181

<http://www.mass.gov/envir>

October 24, 2008

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
ON THE
ENVIRONMENTAL NOTIFICATION FORM

PROJECT NAME : Phosphorus Inactivation Project: Lovers Lake and
Stillwater Pond
PROJECT MUNICIPALITY : Chatham
PROJECT WATERSHED : Cap Cod
EOEA NUMBER : 14306
PROJECT PROPONENTS : Town of Chatham, Department of Health
and Environment
DATE NOTICED IN MONITOR : August 27, 2008

Pursuant to the Massachusetts Environmental Policy Act (G. L. c. 30, ss. 61-62I) and Section 11.06 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).

Project Description

The project consists of a nutrient inactivation project for Lovers Lake and Stillwater Pond to address eutrophication problems associated with excessive phosphorus loading. The project is designed to improve water quality and ecological conditions in the ponds. The proposed treatment consists of application of an aluminum sulfate (alum)/sodium aluminate mixture to deep water sediments. As described in the Environmental Notification Form (ENF), the phosphorus inactivation method proposed is a lake management technique that was previously reviewed as part of a state-wide Final Generic Environmental Impact Report (GEIR) for Eutrophication and Aquatic Weed Control submitted by the Massachusetts Department of Environmental Protection (MassDEP) and the Department of Conservation and Recreation (DCR). A Certificate on the Final GEIR indicating that it adequately and properly complies with MEPA, was issued on March 19, 2004.

MEPA Jurisdiction and Permitting

The project was submitted for MEPA review pursuant to Section 11.03(11)(b) because it is located within a designated Area of Critical Environmental Concern (ACEC) and Section 11.03(3)(a)(1)(b) because it will involve alteration of ten or more acres of wetlands (the proposed alum treatment will affect approximately 28 acres of pond area). However, as noted below, the project is covered under the Final GEIR for Eutrophication and Aquatic Weed Control and is not subject to MEPA review. The project requires a License to Apply Chemicals from MassDEP and an Order of Conditions from the Town of Chatham Conservation Commission (and, on appeal only, a Superseding Order from MassDEP).

Based on the ENF and supplemental information provided by the Town during MEPA review, the project will be implemented in accordance with the performance guidelines in the Final GEIR for Eutrophication and Aquatic Weed Control. The Certificate on the Final GEIR, dated March 19, 2004, stated that projects implemented in accordance with performance guidelines in the Final GEIR's *Eutrophication and Aquatic Plant Management in Massachusetts* and *The Practical Guide to Lake and Pond Management in Massachusetts* do not require individual MEPA review, except for:

- a) dredging projects that exceed any of the thresholds found in 301 CMR 11.00;
- b) proposals to implement new physical or biological techniques for lake management; or
- c) proposals to use any new pesticide active ingredient with an aquatic pattern and/or a substantially different formulation from a currently registered active ingredient.

The ENF indicates that the project will be implemented in accordance with the Final GEIR performance guidelines and does not include any of the exceptions listed above. Therefore, the project is not subject to individual MEPA review and the waiver of the mandatory EIR requirement requested by the Town is not applicable.

I acknowledge the comments received from DCR's ACEC Program and others regarding the potential toxic effects of alum treatment and the importance of monitoring and compliance with the Final GEIR performance guidelines. I ask that the Town consult with DCR, MassDEP, the Division of Fisheries and Wildlife, Natural Heritage and Endangered Species Program (NHESP) and the Pleasant Bay Resource Management Alliance, prior to and during project implementation, to ensure all appropriate measures are in place to avoid and minimize any adverse environmental effects associated with the alum treatment.

Rare Species

The project is located within priority habitat of rare species. The project is subject to review by the Massachusetts Division of Fisheries and Wildlife, Natural Heritage and Endangered Species Program (NHESP) for compliance with the Massachusetts Endangered Species Act (MESA).

In a letter to the Conservation Commission, dated September 15, 2008, the NHESP indicated that the project, as currently proposed, will not adversely affect the actual Resource Area Habitat of state-protected rare wildlife species. NHESP indicates that the project appears to

meet the state-listed species performance standard under the Wetlands Protection Act (WPA) for the issuance of an Order of Conditions. I remind the proponent that a direct filing with NHESP is required. NHESP indicated, in its September 15th letter to the Commission, that no soil or vegetation disturbance, work, clearing, grading or other activities related to the filing shall be conducted anywhere on the project site until the NHESP has completed its MESA review.

Fisheries

As noted in comment letters from the Division of Marine Fisheries (DMF), DCR and NHESP, the project site includes valuable fisheries resources. The DMF recommends caution in applying the alum treatment because Cape Cod ponds have a low buffering capacity and alum treatments can create toxic conditions due to changes in pH (power of hydrogen). DMF has recommended a time-of-year (TOY) restriction from March 1 through September 15 and a pilot water testing program to determine proper alum/sodium aluminate ratios. The project as proposed in the ENF appears to be consistent with DMF's recommendations. The ENF includes a *Lovers Lake and Stillwater Pond Eutrophication Mitigation Plan Report (ENSR report)*, prepared for the Town of Chatham by ENSR Corporation (Final Report, August 2008). The ENSR report includes a detailed analysis of existing conditions and alternative lake treatment options and proposes mid-September through mid-October as the optimum time for the proposed alum treatment, which would extend over an approximately 10-day period. The report identifies the potential for short-term fish kills and the need for buffering and additional sediment testing to determine appropriate ratio of alum and sodium aluminate. The report also recommends a comprehensive and well-designed monitoring plan to ensure that pH and aluminum levels are kept in acceptable ranges.

NHESP in its letter to the Conservation Commission, made recommendations regarding conditions to be adhered to for the project, including project oversight and notification and reporting to NHESP. I expect the Conservation Commission will incorporate NHESP and DMF recommendations as appropriate in its Order of Conditions, including specific requirements to avoid and minimize potential fish kills. I ask that the town also consider potential impacts to freshwater clams or mussels as recommended by the Pleasant Bay Resource Management Alliance in its comment letter.

ACEC

The project site includes two Great Ponds located within the Pleasant Bay ACEC, which includes salt marsh and tidal flats, salt and freshwater ponds, rivers, bays, barrier beaches and other habitats. Approximately 80 percent of this ACEC has been identified as core habitat by NHESP as part of its BioMap project. Pleasant Bay is also designated as an Outstanding Resource Water (ORW). The ponds are deep kettle ponds that are hydrologically connected to each other and to Pleasant Bay and contain important ecological resources including rare species and one of the last two remaining alewife runs in the Pleasant Bay watershed.

DCR's ACEC program supports the overall goals of the project. However, as noted in its comment letter, and in others received, aluminum is toxic to fish and other organisms. I expect that the proponent will follow the performance guidelines including those specifically identified

in the ACEC comment letter. The ACEC Program recommends that the Town develop and implement a detailed monitoring plan prior to initiation of the project that outlines specific protocols for carrying out the monitoring and specific procedures to follow in case pH is measures outside of the non-toxic range. I strongly encourage the Town to consult with DCR and MassDEP during development of the monitoring plan and protocols.

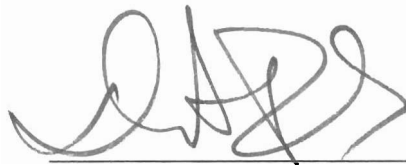
The ACEC program supports the phased approach to alum treatment recommended in the ENF. The approach includes alum treatment at Lovers Lake followed by a 2-3 year assessment period to determine how removal of influent phosphorus affects nutrient dynamics in Stillwater Pond. This first phase would be followed by a second phase if necessary in which Stillwater Pond is treated with Alum. It appears that the Town is considering treatment of both ponds at the same time rather than the phased approach. I strongly encourage the Town to consult with MassDEP for its advice on modifications to the proposed treatment plan to minimize adverse effects. Such modifications may include reducing the initial application dose and allowing more time between treatments for aquatic system recovery and monitoring. I encourage the Town to consult with the Pleasant Bay Resource Management Alliance also regarding its comments on this phasing approach.

The ACEC Program recommends that the Town prepare a lake management plan for both Lovers Lake and Stillwater Pond and implement watershed controls to limit future phosphorus inputs and avoid further eutrophication of the ponds. Lake management planning is also recommended in *The Practical Guide to Lake and Pond Management in Massachusetts*. A treatment approach, which combines phosphorus inactivation with watershed controls, has also been recommended by the Pleasant Bay Resource Management Alliance, the Cape Cod Commission, and in the ENSR report.

I am satisfied that no further MEPA review is required for the project providing it is implemented in accordance with the performance guidelines in the Final GEIR's *Eutrophication and Aquatic Plant Management in Massachusetts* and *The Practical Guide to Lake and Pond Management in Massachusetts*. I expect that the Town will address state agency recommendations to protect state-listed species and aquatic resources as outlined above and in the comment letters received. I expect that any additional conditions necessary for protection of state-listed species and fisheries and other aquatic resources will be incorporated as appropriate by the Chatham Conservation Commission in its Order of Conditions, and by MassDEP in its License to Apply Chemicals or any other permit it may issue.

October 24, 2008

DATE



Ian A. Bowles, Secretary

Comments Received:

09/16/08	Division of Fisheries and Wildlife, NHESP Program
09/19/08	Division of Marine Fisheries
10/10/08	Pleasant Bay Resource Management Alliance
10/14/08	Department of Environmental Protection, Southeast Regional Office
10/14/08	Department of Conservation and Recreation, ACEC Program
10/14/08	Cape Cod Commission

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