

ENF Environmental Notification Form

For Office Use Only
Executive Office of Environmental Affairs

EOEA No.: **14341**
MEPA Analyst: **Deirdre Buckley**
Phone: 617-626-**1044**

The information requested on this form must be completed to begin MEPA Review in accordance with the provisions of the Massachusetts Environmental Policy Act, 301 CMR 11.00.

| | | |
|---|---|--|
| Project Name: Upper Mystic Lake Dam Rehabilitation Project | | |
| Street: Near Lakeshore Drive in Arlington, MA | | |
| Municipality: Arlington and Medford | Watershed: Mystic River Watershed | |
| Universal Transverse Mercator Coordinates: 19 323223 E 4699607 N | Latitude: 42.4306° N Longitude: 71.1490° W | |
| Estimated commencement date: Fall 2009 | Estimated completion date: Spring 2011 | |
| Approximate cost: ~\$4,000,000 | Status of project design: 50 %complete | |
| Proponent: Department of Conservation and Recreation | | |
| Street: 251 Causeway Street | | |
| Municipality: Boston | State: MA | Zip Code: 02114 |
| Name of Contact Person From Whom Copies of this ENF May Be Obtained: Nicole Sanford, Sr. Environmental Scientist | | |
| Firm/Agency: Stantec Consulting Services | Street: 136 West Street, Suite 203 | |
| Municipality: Northampton | State: MA | Zip Code: 01060 |
| Phone: 413-584-4776 | Fax: 413-584-3157 | E-mail: nicole.sanford@stantec.co |

- Does this project meet or exceed a mandatory EIR threshold (see 301 CMR 11.03)?
 Yes No
- Has this project been filed with MEPA before?
 Yes (EOEA No. _____) No
- Has any project on this site been filed with MEPA before?
 Yes (EOEA No. _____) No
- Is this an Expanded ENF (see 301 CMR 11.05(7)) requesting:
- a Single EIR? (see 301 CMR 11.06(8)) Yes No
 - a Special Review Procedure? (see 301 CMR 11.09) Yes No
 - a Waiver of mandatory EIR? (see 301 CMR 11.11) Yes No
 - a Phase I Waiver? (see 301 CMR 11.11) Yes No

Identify any financial assistance or land transfer from an agency of the Commonwealth, including the agency name and the amount of funding or land area (in acres): **The Project is a Capital Funded Project supported by the Executive Office of Energy and Environmental Affairs (EOEEA).**

Are you requesting coordinated review with any other federal, state, regional, or local agency?
 Yes (Specify _____) No

List Local or Federal Permits and Approvals: **The Project will require Orders of Conditions (limited project) from both the Arlington and Medford Conservation Commissions pursuant to the Massachusetts Wetlands Protection Act; a 401 Water Quality Certificate from the Massachusetts Department of Environmental Protection (DEP)**

pursuant to the Massachusetts Clean Water Act; a Chapter 91 license from DEP pursuant to the Massachusetts Public Waterfront Act; authorization from the New England District of the United States Army Corps of Engineers (USACOE) pursuant to the Massachusetts Programmatic General Permit (PGP) and Section 404 of the Clean Water Act; a Chapter 253 Dam Safety Permit from the Office of Dam Safety; and approval from Massachusetts Historical Commission

Which ENF or EIR review threshold(s) does the project meet or exceed (see 301 CMR 11.03):

- | | | |
|---------------------------------|---------------------------------------|---|
| <input type="checkbox"/> Land | <input type="checkbox"/> Rare Species | <input checked="" type="checkbox"/> Wetlands, Waterways, & Tidelands |
| <input type="checkbox"/> Water | <input type="checkbox"/> Wastewater | <input type="checkbox"/> Transportation |
| <input type="checkbox"/> Energy | <input type="checkbox"/> Air | <input type="checkbox"/> Solid & Hazardous Waste |
| <input type="checkbox"/> ACEC | <input type="checkbox"/> Regulations | <input checked="" type="checkbox"/> Historical & Archaeological Resources |

| Summary of Project Size & Environmental Impacts | Existing | Change | Total | State Permits & Approvals |
|--|--|---|--|---|
| LAND | | | | <input checked="" type="checkbox"/> Order of Conditions <input type="checkbox"/> Superseding Order of Conditions <input checked="" type="checkbox"/> Chapter 91 License <input checked="" type="checkbox"/> 401 Water Quality Certification <input type="checkbox"/> MHD or MDC Access Permit <input type="checkbox"/> Water Management Act Permit <input type="checkbox"/> New Source Approval <input type="checkbox"/> DEP or MWRA Sewer Connection/ Extension Permit <input checked="" type="checkbox"/> Other Permits (including Legislative Approvals) – Specify: Authorization from United States Army Corps of Engineers under the Massachusetts Programmatic General Permit; <u>Chapter 253 Dam Safety Permit from the Office of Dam Safety; and approval from Massachusetts Historical Commission</u> |
| Total site acreage | 6.2 | | | |
| New acres of land altered | | 0 | | |
| Acres of impervious area | 1.6 | 0 | 1.6 | |
| Square feet of new bordering vegetated wetlands alteration | | None | | |
| Square feet of new other wetland alteration | | LUW = 30,500 BLSF = 25,600 Bank = 1,210 LF | | |
| Acres of new non-water dependent use of tidelands or waterways | | 0 | | |
| STRUCTURES | | | | |
| Gross square footage | Medford Boat Club = 6,400 Gatehouse = 500 | No change | Medford Boat Club = 6,400 Gatehouse = 500 | |
| Number of housing units | N/A | N/A | N/A | |
| Maximum height (in feet) | Medford Boat Club = 24 Gatehouse = 12 | No change | Medford Boat Club = 24 Gatehouse = 12 | |
| TRANSPORTATION | | | | |
| Vehicle trips per day | | No change | | |
| Parking spaces | 90 | -5 | 85 | |

| WATER/WASTEWATER | | | |
|---|-----|-----|-----|
| Gallons/day (GPD) of water use | N/A | N/A | N/A |
| GPD water withdrawal | N/A | N/A | N/A |
| GPD wastewater generation/ treatment | N/A | N/A | N/A |
| Length of water/sewer mains (in miles) | N/A | N/A | N/A |

CONSERVATION LAND: Will the project involve the conversion of public parkland or other Article 97 public natural resources to any purpose not in accordance with Article 97?

Yes (Specify _____) No

Will it involve the release of any conservation restriction, preservation restriction, agricultural preservation restriction, or watershed preservation restriction?

Yes (Specify _____) No

RARE SPECIES: Does the project site include Estimated Habitat of Rare Species, Vernal Pools, Priority Sites of Rare Species, or Exemplary Natural Communities?

Yes (Specify _____) No

HISTORICAL /ARCHAEOLOGICAL RESOURCES: Does the project site include any structure, site or district listed in the State Register of Historic Place or the inventory of Historic and Archaeological Assets of the Commonwealth?

Yes (Specify: **Existing dam and gatehouse are listed as historic structures**) No

If yes, does the project involve any demolition or destruction of any listed or inventoried historic or archaeological resources?

Yes (Specify: **Project involves modifications to both the existing dam and gatehouse**) No

AREAS OF CRITICAL ENVIRONMENTAL CONCERN: Is the project in or adjacent to an Area of Critical Environmental Concern?

Yes (Specify _____) No

PROJECT DESCRIPTION: The project description should include (a) a description of the project site, (b) a description of both on-site and off-site alternatives and the impacts associated with each alternative, and (c) potential on-site and off-site mitigation measures for each alternative (You may attach one additional page, if necessary.)

On behalf of the Department of Conservation and Recreation (DCR), this Environmental Notification Form (ENF) is being submitted for the proposed Upper Mystic Lake Dam Rehabilitation project (Project) located in Arlington and Medford, Massachusetts. This ENF is being submitted to the Massachusetts Environmental Policy Act (MEPA) office because the project exceeds the MEPA thresholds listed at: 301 CMR 11.03 (3)(b)1b – alteration of 500 or more linear feet of bank along a fish run or inland bank; and 301 CMR 11.03 (10)(b)1 – demolition of all or any exterior part of any Historic Structure listed in or located in any Historic District listed in the State Register of Historic Places or the Inventory of Historic and Archaeological Assets of the Commonwealth. The Upper Mystic Lake Dam (NID No. MA00769, State ID No. 4-9-10-1) is located on the Mystic River and serves to divide the Upper Mystic Lake from the Lower Mystic Lake. The upstream impoundment is the Upper Mystic Lake. The bank of the Lower Mystic Lake is at the toe of the dam. The town line between Arlington and Medford bisects the dam, with the right (west) abutment in Arlington and the left (east) abutment in Medford. The dam is located within the Department of Conservation and Recreation's Mystic River Reservation. The Dam location is shown on the USGS Boston North, MA topographic map. Please refer to Figure 1, Site Locus in attached Narrative.

The purpose of the project is to rehabilitate the existing dam. The Upper Mystic Lake Dam is classified as a Significant – Class II Hazard Potential based on the extent of the potential dam break flood wave. Significant Hazard potential is defined in Massachusetts Dam Safety Regulations (302 CMR 10.06) as, in the event of dam failure, producing a flood wave that "may cause loss of life and damage home(s), industrial or commercial facilities, secondary highway(s) or railroad(s) or cause interruption of use or service of relatively important facilities."

GZA GeoEnvironmental, Inc. (GZA) completed a *Follow-Up Inspection/Evaluation Report* on July 18, 2007 after a visual inspection of the dam. The report notes that the condition of the dam is Poor and requires a major rehabilitation to bring the structure in compliance with current dam safety regulations and dam engineering practice. DCR has set aside the funding necessary to complete the rehabilitation project but the work needs to begin by Fall 2009 date to secure complete funding of the project.

The Project proposes modifications to the primary spillway to allow for improved capacity of the spillway during high intensity flood events, improved flood control operations, and operation of the spillway to improve fish migration from the Upper Mystic Lake to the Lower Mystic Lake (out-migration). The project also proposes the construction of a secondary spillway to eliminate possible failure by better passing low-frequency flooding events without overtopping the dam and modifications to the right abutment so that flooding events up to the 500-year flood are less likely to result in flooding of private properties adjacent to the dam.

Three primary alternatives were considered for the Project: No action; dam breach; and dam rehabilitation. In the "No Action" alternative, the dam would remain in its current state with the same existing operational procedures. The dam is currently considered to be in Poor condition, with significant operational and structural deficiencies. Leaving the dam in its current condition would likely lead to continued deterioration of the dam, occasional flooding of adjacent private residence, and potential failure of the dam. As the existing condition of the dam represents a significant source of potential liability for the DCR, the "No Action" alternative is not recommended.

For the dam breach alternative, the dam would be altered so that it would no longer be classified as a dam under current dam safety regulations (302 CMR 10.03). The dam would be completely removed, partially breached, or otherwise altered so that the dam either impounds less than 15 acre-feet of water at maximum storage or is less than six feet in height. Complete removal of the dam or a partial dam breach would have a significant impact on existing public and private recreational facilities at the Upper Mystic Lake, and would likely be met with significant opposition from public and private users of the lake and local residents. Given the recreational, historic, and aesthetic importance of the Upper Mystic Lake Dam and the Upper Mystic Lake, dam removal or partial breaching/alteration of the dam is not recommended.

The Dam Rehabilitation alternative will address the existing operational and structural deficiencies at the dam through the repair, replacement, modification, or redesign of the existing dam elements combined with the modification or replacement of existing operational procedures. Under this alternative, the existing normal pool elevation of the dam will remain unchanged, and the dam will continue to operate as a regulated structure. The Dam Rehabilitation alternative is recommended in that it will address the dam safety deficiencies at the dam while maintaining the historic, recreational, and aesthetic functions of the dam.

The preferred alternative is dam rehabilitation and modification of existing facilities. This alternative has less impact to regulated resource areas and historical structures than complete dam removal or replacement. Further, the combined rehabilitation of the dam and modification of existing facilities would reduce the cost and impacts of the project compared to a complete replacement or removal of the dam, while maintaining the existing normal pool characteristics in the Upper Mystic Lake.

Erosion control barriers, silt curtains and cofferdams are mitigation measures that will be in place during construction to mitigate actual and potential impacts to regulated resource areas during construction. Other mitigations, including construction of fish and eel ladders, are proposed to provide environmental benefits. Please read and review the attached narrative for more specifics on the project description, alternatives analysis, existing environment, impact assessment, mitigation measures, regulatory requirements and stakeholder consultations surrounding the rehabilitation of the Upper Mystic Lake Dam.

In conclusion, this ENF has been enhanced in an attempt to eliminate the need for scoping of a discretionary EIR. DCR has made significant efforts at stakeholder outreach in advance of the MEPA process in an effort to understand and address issues raised by the proposed project. DCR is requesting that the Secretary issue a Certificate requiring no further MEPA review so that the project can stay on schedule in order to secure funding necessary to complete the construction.