



**Environmental
 Notification Form**

For Office Use Only
Executive Office of Environmental Affairs
 EOEA No.: 13945
 MEPA Analyst: W. Gage
 Phone: 617-626-1025

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 Shawme Lake Dam Rehabilitation Project		
Street: 42 Water Street		
Municipality: Sandwich	Watershed: Mill Creek	
Universal Transverse Mercator Coordinates:	Latitude: 41° 45' 03" Longitude: 70° 30' 08"	
Estimated commencement date: Sep 2007	Estimated completion date: Jan 2007	
Approximate cost: \$800,000	Status of project design: 40%	%complete
Proponent: Town of Sandwich		
Street: 16 Jan Sebastian Drive		
Municipality: Sandwich	State: MA	Zip Code: 02563
Name of Contact Person From Whom Copies of this ENF May Be Obtained: Kurt Staller		
Firm/Agency: McMahon Associates, Inc.	Street: 930 Century Drive, Suite 103	
Municipality: Mechanicsburg	State: PA	Zip Code: 17055
Phone: 717-691-5512	Fax: 717-691-5513	E-mail: kurt.staller@mcmtrans.com

- 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):

Financial Assistance from: DCR Office of Dam Safety - \$350,000

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

List Local or Federal Permits and Approvals:

USACE, New England District, Chapter 91, 401 Water Quality Certification, NHESP/MESA, SE Regional Mass DEP (NOI submission), Chapter 253 Permit and Town of Sandwich Conservation Commission.

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

- | | | |
|---------------------------------|--|--|
| <input type="checkbox"/> Land | <input checked="" 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 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 <i>(including Legislative Approvals) – Specify:</i> Chapter 253 Dam Construction Permit and MESA Project Review
Total site acreage				
New acres of land altered				
Acres of impervious area				
Square feet of new bordering vegetated wetlands alteration				
Square feet of new other wetland alteration				
Acres of new non-water dependent use of tidelands or waterways				
STRUCTURES				
Gross square footage				
Number of housing units				
Maximum height (in feet)				
TRANSPORTATION				
Vehicle trips per day				
Parking spaces				
WATER/WASTEWATER				
Gallons/day (GPD) of water use				
GPD water withdrawal				
GPD wastewater generation/treatment				
Length of water/sewer mains (in miles)				

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: Box Turtle) 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: Town of Sandwich Historic District) No

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

Yes (Specify _____) 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.*)

- (a) The existing Upper Shawme Lake Dam is located in Barnstable County in the Town of Sandwich in southeastern Massachusetts. The dam is shown on the Sagamore Massachusetts USGS quadrangle at 41° 45" North latitude and 70° 30" West longitude. More specifically, the Upper Shawme Lake Dam is positioned approximately 2,600 feet upstream of the Shawme Lake Dam. Shawme Lake Dam is located 50 feet upstream from the intersection of State Route 130 and Main Street in the center of Sandwich. The primary surface cover within the area of the dam is a combination of woods with brush and random residential development with large sized lots.
- (b) There were basically three alternatives considered for the Upper Shawme Dam, as described in detail below. The rehabilitation alternative was considered the most feasible since it is the only alternative that will retain the Upper Shawme Lake and provide for the safety of the public.

No-Action Alternative

Since the DEM Office of Dam Safety has listed the structure as "unsafe", doing nothing is not an alternative. The structure in its present condition represents a risk to the public welfare and has the potential to cause loss of life in the event of a dam failure. Failure is a risk during flood events and severe storms, as well as, under "sunny day" conditions. Under severe flood events a dam potential failure could occur through overtopping, collapse of the wooden spillway or if one of the large trees were to be uprooted by wind, thereby weakening the embankment. During "sunny day" conditions seepage could create a piping failure or the wooden spillway could deteriorate and cause an uncontrolled release of water. The modes of failure are plausible and therefore the no-action alternative is not feasible.

Breach Alternative

Another alternative to rehabilitation of the existing structure is breaching the dam. Breaching the embankment would eliminate the safety concerns of the existing structure. However, breaching the dam would have many of the same impacts to the environment as the rehabilitation alternative. Construction equipment would still require access to the site for the breach alternative, as well as, dewatering of the construction area. Impacts to the bank and bordering vegetated wetland at the downstream toe would also be impacted by a breach alternative. The breach alternative would also impact aquatic habitat upstream by eliminating the Upper Lake. Elimination of the lake would impact

the aesthetic quality of the surrounding landscape for the development that is present along the eastern and southern shoreline of the existing lake. Thus, do to the impacts previously summarized, the breach alternative was not considered for Upper Shawme Lake.

Rehabilitation Alternative

In 2001, Gannett Fleming completed a Preliminary Design Report for the Rehabilitation of Upper Shawme Lake Dam. The report outlined two preliminary design alternatives to bring the facility into compliance with current design standards. Based on this report the Town of Sandwich selected one of the rehabilitation alternatives presented. Additionally, the project entails re-establishing the Herring fishery to Upper Shawme Lake. The rehabilitation project includes the design and construction of a new fishway at the Upper Shawme Lake Dam. Under the existing conditions there is a dry herring run at the site that has been out of operation for approximately 30 years. Under the proposed project 20.7 acres of additional aquatic habitat will be restored for migratory fish species. Additional aspects of the design include the following:

- New earth embankment with internal drains
- 3H:1V upstream and downstream slopes
- 12-ft crest width
- Concrete drop spillway
- New pre-fabricated fish ladder

The rehabilitation alternative restores the area to its prior land use and removes the risk to public safety. In addition, it will have an increased benefit to migratory fish species. Every effort will be taken to minimize the overall project impacts during final design and construction and at the completion of the project the land will return to its prior use. Therefore, the rehabilitation alternative was considered to be in the best interest of the environment and public.

- (c) The proposed project basically impacts three inland resources, defined banks, bordering vegetated wetlands (BVW) and land under waterbodies. Removal and replacement will impact 340 linear feet of bank and the new dam will replace approximately 160 feet of the bank in the same general area. The project will also impact about 2,800 square feet of BVW and we are proposing a 1:1 replacement in the same general area. The footprint of the proposed dam will be larger than the existing dam and impact approximately 5,000 square feet of land under waterbodies. There is no specific mitigation proposed for this loss. However, the project will include a new fishway that will open an additional 20.7 acres of aquatic habitat for migratory fish species. Further detail of impacts and mitigation measures are located in the NOI documentation.

The proposed project is eligible as a limited project as stated in 310 CMR 10.53 (i).