

Commonwealth of Massachusetts

Executive Office of Environmental Affairs ■ MEPA Office

ENF

Environmental Notification Form

For Office Use Only
Executive Office of Environmental Affairs
 EOE No.: *13991*
 MEPA Analyst: *Beriony Angus*
 Phone: 617-626-*1029*

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: Paradise Pond Dredging		
Street: West Street and College Lane at Smith College		
Municipality: Northampton	Watershed: Connecticut River	
Universal Transverse Mercator Coordinates: N4,687588m, E694301m	Latitude: 42° 19' 6" N Longitude: 72° 38' 30" W	
Estimated commencement date: 8-2007	Estimated completion date: 11-2007	
Approximate cost: \$500,000	Status of project design: 75 %complete	
Proponent: Smith College Physical Plant		
Street: 126 West Street		
Municipality: Northampton	State: MA	Zip Code: 01063
Name of Contact Person From Whom Copies of this ENF May Be Obtained: Nathaniel Arai, P.E.		
Firm/Agency: Baystate Environmental Consultants, Inc.	Street: 296 North Main Street	
Municipality: East Longmeadow	State: MA	Zip Code: 01028
Phone: 413-525-3822	Fax: 413-525-8348	E-mail: narai@b-e-c.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 301CMR 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): **None**

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

List Local or Federal Permits and Approvals: **City of Northampton Stormwater Ordinance; Order of Conditions; 401 Water Quality Certification; 404 Dredging Permit**

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 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> -MESA -USEPA/MADEP-Construction General Permit <-Sediment reuse hauling (temporary)
Total site acreage	16±			
New acres of land altered		-2.0-		
Acres of impervious area	0.26	-0-	0.26	
Square feet of new bordering vegetated wetlands alteration		-0-		
Square feet of new other wetland alteration		261,360 (Dredging)		
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	-0-	50±	50±	
Parking spaces	-0-	-0-	-0-	
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: **Estimated and Priority Habitat**) 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 _____) No (Awaiting determination from MHC)

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) Project Site

Paradise Pond is a man-made impoundment formed by a dam across the Mill River and is located entirely within the 125 acre campus grounds of Smith College in Northampton (Figure 1 – *Locus Map* and Figure 2 – *Existing Conditions*). The pond water surface area is approximately 9.2 acres and is surrounded by a combination of open space, college campus buildings and infrastructure, and the college athletic fields. Smith College maintains both a boat house and crew house on the pond's eastern shore. At Paradise Pond, the Mill River drains an estimated 54 square miles of mostly rural, undeveloped land comprised of steep topography and relatively erosive soils. The expansive watershed provides for flashy hydrologic conditions along the Mill River including significant sediment transport and deposition. Sedimentation within the pond has historically been problematic, and the pond has been periodically dredged to remove the accumulations of sand and silt to restore a water depth suitable for the recreational use of the pond.

(b) Alternatives

The proposed dredging of Paradise Pond is specific to the site. The on-site alternatives are limited to the following:

1. No dredge.
2. Hydraulically dredge the pond at normal pond water level using an on-shore sediment dewatering process (geotubes or belt-filter press) which will return expelled water to the Mill River. (Preferred Alternative)
3. Conventionally dredge the pond by draining the pond and using conventional excavation equipment, working "in the dry".

The No Dredge alternative has no impacts, other than eventual loss of the pond resource.

The Conventional Dredging alternative would have both short- and long-term impacts to the pond and its surroundings. Drawdown of the pond is integral to the conventional dredging process as dewatering of the sediments primarily occurs (for an extended period of time) in place prior to excavation. This requires allowing the sediments to sit in the drained condition. Extended exposure of the pond bottom can impact the entire pond bottom and the associated wetlands and shoreline vegetation, not just the area to be dredged. Impacts to aquatic wildlife can be significant. Draining the pond is achieved by opening the low-level outlet controlled by a sluice gate in the bottom of the dam. Once the pond has been drained, the flow of the Mill River will naturally create a channel in the pond bottom by scouring a path through the sediments and transporting them downstream. Historically, this method has been practiced during previous dredging efforts at Paradise Pond where sediment transport and deposition downstream of the dam has been documented. Sediment releases

have the potential to impact rare and endangered species habitats located downstream of the pond.

The Hydraulic Dredging alternative will have short-term impacts to pond aquatic wildlife and will present some potential for introduction of turbidity to the pond water column. Aquatic wildlife include water fowl, beaver, muskrat, fish, and benthic (pond bottom dwelling) organisms. Hydraulic dredging completely avoids the need for draining the pond, thus avoiding the negative environmental impacts associated with complete pond drawdown. The cutterhead of the dredge has the potential to create some ambient turbidity by re-suspending a small fraction of very fine sediments in the immediate vicinity of the dredge. The potential for turbid discharge of water from the onshore sediment dewatering facility exists if the process is not conducted properly or is not monitored closely.

(c) Mitigation Measures

The impacts of conventional dredging can be difficult to mitigate. Water fowl and beaver would have the ability to relocate during the drawdown and some fish will migrate up or downstream. There would likely be unavoidable fish kills. Affects of the drawdown on benthic organisms and fringing wetlands are unavoidable, although past dredging efforts have not permanently impacted these resources. The release of sediments upon initial opening of the low-level outlet in the dam is expected to be insignificant; however, once the pond is drained, the flow of the Mill River through the pond area would result in significant downstream sedimentation.

The impacts of hydraulic dredging on pond aquatic wildlife will largely be mitigated naturally. Water fowl and beaver have the ability to avoid the dredge and may only be temporarily displaced by it. Fish also have the ability to avoid the activity of the dredge. The potential for repopulation of removed benthic organisms is certain. The proposed dredging program encompasses a limited portion of the pond area (Figure 7 - Required Bathymetry Plan), therefore leaving a significant undisturbed stock of organisms which will repopulate the pond after the dredging. Turbidity generated by the cutterhead is typically minimized by the suction created by the pump line attached to the dredge that immediately removes the sediments once they are dislodged from the pond bottom by the cutterhead. Past observations have indicated no significant increases in turbidity in the water column as close as fifty feet from active dredging. The dredged material will be pumped to a dewatering facility on shore which will be composed of grit chambers and sediment slurry conditioning followed by either geotextile fabric tubes (geotubes) or belt-filter presses for final dewatering. Dewatered sediments will be properly reused or disposed of in accordance with the 401 Water Quality Certification (to be obtained). This process provides for a rapid and effective separation of material from the water. A polymer flocculent, similar to those used in the drinking water treatment process, is introduced which will capture the fine-grain suspended particles. Clarified water will be monitored carefully for turbidity before it is eventually discharged to the Mill River.

(d) Planning and Coordination

The Proponent has long recognized that sedimentation within Paradise Pond has been and will always be a significant maintenance issue. Sediments have been periodically dredged from the pond using conventional excavation techniques following complete draining of the pond.

As a recreational focus point for not only Smith College but also the Northampton community, Paradise Pond is a cultural resource worthy of protection and management. To further these goals, Smith College has prepared a "Paradise Pond Management Plan" (BEC, 2005) that describes riverfront pond management activities, one of which is periodic dredging. The Management Plan was submitted to the Northampton Conservation Commission, MADEP-WERO and the Natural Heritage and Endangered Species Program in February 2006. Initial public hearings with the Conservation Commission were positive and supportive of the Management Plan, and since April 2006, the NCC has been awaiting comment from MNHESP prior to closing the public hearing and issuing an Order of Conditions permitting all activities described in the Management Plan, with the exception of pond dredging, which will be subject to a separate Notice of Intent and subsequent Order of Conditions.

The Proponent has worked closely with MNHESP to address their concerns for rare and endangered species habitat in the Paradise Pond vicinity. At the present time, the Proponent believes it has adequately responded to the MNHESP concerns and has conditioned the proposed work to avoid any take of state-listed species.