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February 8, 2008

FINAL RECORD OF DECISION

PROJECT NAME : Thissell Marsh Restoration Project
PROJECT MUNICIPALITY : Beverly
PROJECT WATERSHED : North Coastal
EOEA NUMBER : 14140
PROJECT PROPONENT : Endicott College
DATE NOTICED IN MONITOR : January 23, 2008

Pursuant to the Massachusetts Environmental Policy Act (MEPA) (G.L.c.30, ss. 61-62H) and Section 11.11 of the MEPA regulations (301 CMR 11.00), I have reviewed this project and grant a waiver from the requirement to prepare a mandatory Environmental Impact Report (EIR).

Project Description

As described in the Environmental Notification Form (ENF), the proposed project consists of the restoration of a culverted tidal creek, Centerville Brook, and degraded and filled coastal wetlands within Thissell Marsh. The project includes replacing the existing culvert with a new 5x5-foot box culvert through the dune behind Patch Beach and removing and/or abandoning the remaining culvert sections. The proponent will construct a new naturalized creek system similar to historical conditions. It will regrade portions of the existing 2.1 acre marsh to control the recolonization of Phragmites. The proponent would remove the fill associated with the existing tennis courts (one acre). This work would expand the total inter-tidal wetland area to 4.1 acres. The project also includes a 70-foot timber walkway over the marsh in an area that is used by the proponent to access the beach. The area of the project is 4.7 acres.

Categorical Inclusion

The project is included for the preparation of a mandatory EIR pursuant to Section 11.03(3)(a)(1)(a) of the MEPA regulations because it alters one or more acres of Salt Marsh or Bordering Vegetated Wetlands (BVW).



Jurisdiction

The project will require a Section 401 Water Quality Certificate and a Chapter 91 Waterways License from the Department of Environmental Protection (MassDEP). The project may require a Section 10 Permit and a Section 404 Authorization from the U.S. Army Corps of Engineers. It may need to comply with the National Pollutant Discharge Elimination System (NPDES) General Permit for stormwater discharges from a construction site. A Federal Consistency Review by the Massachusetts Coastal Zone Management (MCZM) office may also be necessary. The project will require an Order of Conditions from the Beverly Conservation Commission as a “limited” project (salt marsh restoration). Because some Commonwealth funds may be used for the project, MEPA jurisdiction extends to all aspects of the project that may have significant environmental impacts.

Waiver Request

On November 26, 2007, the proponent requested a waiver from the requirement for the preparation of an EIR. The waiver request was discussed at the consultation/scoping session, which was held on December 21, 2007.

Criteria for Waiver

Section 11.11 of the MEPA Regulations provides that a waiver may be granted upon a finding that strict compliance with the regulations will result in undue hardship and will not serve to minimize or avoid damage to the environment. In the case of categorically included projects, this finding shall be based on one or more of the following circumstances: 1) the project is likely to cause no damage to the environment; and 2) ample and unconstrained infrastructure exists to support the project. The terms agreed to as a condition of the waiver will bring about benefits in excess of those that could be achieved in the absence of a waiver.

Findings

1. The proponent will improve the environment by restoring Thissell Marsh and Centerville Brook by reconstructing a natural creek system and enhancing degraded salt marsh, and by removing existing tennis courts and extraneous fill to restore former salt marsh similar to historical conditions at a cost of approximately \$1.2 million (with substantial additional costs to re-locate the tennis courts). The project will improve tidal exchange between Salem Sound and Thissell Marsh to address documented water quality impairments and control invasive plant species within the marsh.
2. The work will improve environmental conditions within the existing 2.1 acre marsh and expand the total inter-tidal wetland area to 4.1 acres. In order to implement the restoration

project, the existing wetland resource areas may be altered. The project will replace the existing culvert with a new 5 x 5 ft box culvert through the dune, remove or abandon the remaining culvert sections, construct a new naturalized creek system similar to historical conditions, re-grade portions of the existing marsh to control the recolonization of *Phragmites*, and remove the fill associated with the tennis courts. Proposed impacts to Resource Areas are as follows:

The replacement of the culvert will require work within the Coastal Dune and Coastal Beach. Both resources also serve as Barrier Beach. Up to 9,170 square feet (sf) of temporary impacts will take place in the Coastal Dune, which will be restored by means of placing coarse sand fill, grading, and plantings. Portions of the dune are currently severely eroded due to failures in the existing culvert. Up to 6,205 sf of Coastal Beach will be temporarily impacted due to the replacement of existing stone, as well as the removal of the existing concrete culvert. Similar to existing conditions, the stone will be below the surface of the summer beach profile. There will be up to an additional 500 sf of permanent impact to Coastal Beach associated with the placement of the new 5 x 5 ft culvert and the scour protection at the outlet.

The removal of the existing stone culvert north of the Coastal Dune will result in up to an additional 1,785 sf of temporary Salt Marsh alteration not impacted by other adjacent construction activities (e.g., *Phragmites* removal and creek naturalization). The removal of the failed small culvert from Patch Beach will result in up to 1,185 sf of temporary Coastal Beach alteration. The removal or abandonment of the remaining portion of this drainage system will result in up to 7,100 sf of temporary Coastal Dune alteration. The impacts associated with the drainage feature removal are included with creek naturalization activities.

The removal of the fill under the existing tennis courts and the fill immediately south of the tennis courts will result in the restoration of approximately 1.6 acres of Salt Marsh, inclusive of the proposed tidal creek. The required grading will also result in the conversion of two small patches of low-value Bordering Vegetated Wetlands (BVW) totaling 1,580 sf adjacent to the stone channel and up to 24,050 sf of temporary alteration to the surrounding Coastal Bank.

The primary creek will be approximately 1,000 in length, while the smaller second creek will be approximately 430 feet in length. The naturalization of the creek will create additional Riverfront Area totally approximately 106,000 sf. The naturalization of these creeks will result in the conversion of up to 6,620 sf of existing Salt Marsh. The grading necessary to construct the creek system will result in the temporary alteration of up to an additional 41,290 sf of Salt Marsh. The amount of material to be excavated for the creek naturalization within the existing Salt Marsh will total approximately 690 cubic yards.

The existing stone channel immediately downstream of Hale Street experiences higher velocities due to a steeper gradient. Portions of this section of the existing stone channel will remain intact. The portions of the existing stone channel walls that are scheduled to be removed will be stabilized with bioengineering practices to improve stream bank habitat conditions. This activity will result in the enhancement of up to 240 feet of inland Bank. The entire current length of the three-sided stone channel is considered inland Bank and the project will result in an overall impact of 850 linear feet to this resource area.

Three areas of former Salt Marsh, which are dominated by invasive stands of *Phragmites*, are planned to be controlled by combination of herbicide treatment and shallow excavation. These activities will result in the conversion of up to 17,870 sf of degraded BVW to Salt Marsh. Care will be taken to properly dispose of the material to avoid the spread of *Phragmites* elsewhere.

The overall benefits to the structure, functions, and ecological condition of Thissell Marsh far outweigh impacts associated with construction disturbance and the conversion of degraded habitat.

3. The proponent will utilize swamp mats and/or low ground pressure (<3 psi) equipment to reduce impacts on existing Salt Marsh when working in areas of the marsh that are not accessible from the planned temporary construction road.
4. The vegetation establishment within the restored Salt Marsh will consist of planting bare root stock or peat plugs, and the seeding of species native to New England, as well as natural colonization from seed sources. Organic and finer grained mineral material contained within the existing Salt Marsh peat salvaged from the creek channel excavation will be used to supplement the organic matter content within the exposed sandy fill material and improve growing conditions. In addition, a portion of the planting material can also be salvaged as plugs. Care will be taken to avoid the reuse of peat material containing invasive plant material.
5. A pile-supported timber boardwalk (approximately 70 feet in length) is proposed in order to maintain beach access along an existing foot path. The boardwalk will be constructed in a manner which reduces the negative effects from shading.
6. Within the steeper gradient reach of Centerville Brook, it may be possible to provide limited spawning habitat for rainbow smelt (*Osmerus mordax*) by improving the substrate. Further details on anadromous fish restoration opportunities, including additional coordination with the Division of Marine Fisheries and National Marine Fisheries Service, will be investigated during future design phases. The restoration site currently does not support an anadromous fish run, which if present would require time of year restrictions on in-water work.

7. The proponent will provide a qualified inspector on-site during construction activities. The construction report will be prepared and include descriptions of the effectiveness of the erosion controls, maintenance performed on the erosion controls, problems encountered during construction, and the remedies enacted.
8. The proponent will power wash all vehicles used in the project work area that exhibit dirt or debris that could harbor the seed stocks of invasive species.
9. Any excess material (e.g. soil and/or spoil), which is to be removed from the site, will be disposed of in a legal manner.
10. The contractor will time work activity to avoid storms, astronomically high tides, and other factors that could result in adverse impacts to the resource areas.
11. Any necessary servicing, fueling, or maintenance of construction equipment will occur on a confined pad to control any release of fluids.
12. No construction material storage or stockpiling will occur on the Barrier Beach except for the stockpiling of the existing sand or stone that is to be excavated and backfilled. All construction materials will be removed from the Barrier Beach daily.
13. The proponent's post-construction monitoring program will extend at least five growing seasons following construction completion. It will forward annual monitoring reports regarding wetland restoration to the Beverly Conservation Commission, MCZM, and MassDEP on or before December 15th of years one, two, three and five.
14. The proponent has the resources and knowledge to successfully conduct the proposed restoration project with MCZM's guidance. It has committed to complete the above work by 2010. The proponent will apprise MassDEP and MCZM of any changes in the construction schedule.

Based on these findings, it is my judgment that the waiver request has merit and meets the tests established in Section 11.11. MassDEP has sufficient permitting authority to ensure that the proponent complies with the findings of this Certificate. Therefore, I grant the Waiver requested for the Thissell Marsh Restoration Project, subject to the above findings.

February 8, 2008

DATE



Ian A. Bowles

No comments received:

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