

# ENF Environmental Notification Form

*For Office Use Only*  
**Executive Office of Environmental Affairs**  
 EOE No.: 13118  
 MEPA Analyst: ANNE CANADAY  
 Phone: 617-626-1035

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: Coastal Bank Stabilization for Richard and Susan Morse, Jr.		
Street: 206 Quissett Avenue		
Municipality: Falmouth	Watershed: Buzzards Bay/Quissett Harbor	
Universal Tranverse Mercator Coordinates:	Latitude: N 48°41'10" W Longitude: S 51°07'00" E	
Estimated commencement date: Winter 2003/2004	Estimated completion date: Winter 2003/2004	
Approximate cost: \$40,000	Status of project design: 100	%complete
Proponent: Richard and Susan Morse, Jr.		
Street: 206 Quissett Avenue		
Municipality: Falmouth	State: MA	Zip Code: 02540
Name of Contact Person From Whom Copies of this ENF May Be Obtained: Sarah L. D'Agostino		
Firm/Agency: Woods Hole Group, Inc	Street: 81 Technology Park Drive	
Municipality: E. Falmouth	State: MA	Zip Code: 02536
Phone: 508-540-8080	Fax: 508-540-1001	E-mail: sdagostino@whgrp.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): N/A

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

List Local or Federal Permits and Approvals: Town of Falmouth, Order of Conditions, DEP SE # 25-2827

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 type="checkbox"/> Historical & Archaeological Resources       |

Summary of Project Size & Environmental Impacts	Existing	Change	Total	State Permits & Approvals
<b>LAND</b>				<input checked="" type="checkbox"/> Order of Conditions <input checked="" type="checkbox"/> Superseding Order of Conditions <input type="checkbox"/> Chapter 91 License <input 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 type="checkbox"/> Other Permits <i>(including Legislative Approvals) – Specify:</i>
Total site acreage	2.2			
New acres of land altered		1,250 (permanent)		
Acres of impervious area	0	0	0	
Square feet of new bordering vegetated wetlands alteration		0		
Square feet of new other wetland alteration		1,250 (permanent)		
Acres of new non-water dependent use of tidelands or waterways		0		
<b>STRUCTURES</b>				
Gross square footage	0	0	0	
Number of housing units	0	0	0	
Maximum height (in feet)	0	0	0	
<b>TRANSPORTATION</b>				
Vehicle trips per day	0	0	0	
Parking spaces	0	0	0	
<b>WATER/WASTEWATER</b>				
Gallons/day (GPD) of water use	0	0	0	
GPD water withdrawal	0	0	0	
GPD wastewater generation/ treatment	0	0	0	
Length of water/sewer mains (in miles)	0	0	0	

**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 \_\_\_\_\_)  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.*)

The project site is located along the southeast shoreline of Quissett Harbor and directly faces Buzzards Bay through the harbor entrance. The site contains a number of coastal wetland resource areas including coastal beach, coastal bank, salt marsh and land under the ocean. An existing dwelling, constructed in 1976, is located at its closest point within 11 from the top of the coastal bank. Data analyses show that the coastal bank is eroding at an average rate of 0.5 to 0.8 ft/yr, potentially threatening the dwelling within the next 13 to 22 years.

To provide the necessary level of protection to the existing dwelling, the project includes construction of a rip rap revetment along that portion of the coastal bank that is directly in front of the dwelling. The proposed revetment is 120 ft long and rises to elevation 12 ft NGVD at the center of the structure. Slopes along the upper portions of the bank will be reduced and planted with native species to help stabilize the bank. The ends of the proposed structure will tie in with the existing bank geomorphology by tapering down in elevation towards the east, and merging with a naturally occurring boulder field to the west. The revetment will provide the necessary level of erosion control, storm damage protection, and flood control for the existing house. The proposed structure will protect the toe of the coastal bank from wave attack and erosion, and will provide a stable base above which the upper portions of the bank can be planted.

All excess bank material created during construction of the revetment will be left on site to provide a source of native bank sediment for the adjacent beach. During construction, the sediment will be stockpiled at the western end of the property along the landward edge of the coastal beach. As the revetment is completed, the sediment will be used to fill voids along the face of the structure and will also be spread across the upper beach face above the high water line at the western end of the property. It is estimated that approximately 10 to 15 years worth of native bank sediment (130 to 200 cu yds) will be produced during construction of the revetment. Construction access from the existing driveway area, across the edge of the salt marsh, to the eroding coastal bank will be created during work on the project. Crane mats will be used to protect the salt marsh, and all disturbed areas will be revegetated following completion of the project. A comprehensive monitoring plan has been designed to evaluate the response of the fronting beach to the proposed project.

Prior to design of the proposed revetment, a number of alternatives were considered for storm damage protection and flood control of the existing dwelling that is currently threatened by erosion of the coastal bank. These alternatives are discussed below:

Do Nothing: The option to do nothing does not provide the necessary storm damage protection or flood control to protect the existing house. Measurements of the rate of bank erosion suggest that the house could be threatened within 13 to 22 years, or potentially sooner with an extended period of increased storm intensity.

Relocate Dwelling: The possibility of relocating the existing dwelling to a more landward location on the lot was also evaluated. The costs associated with this type of activity were obtained from a local contractor with expertise in house moving. It was determined that the house would need to be cut into three or more pieces and moved separately. Estimated costs for such a project would be on the order of \$200,000 to \$300,000, thus making this option prohibitively expensive.

Soft Engineering: The possibility of utilizing soft engineering to help stabilize the coastal bank was also investigated. The use of stacked fiber rolls along the base of the bank was considered, as was regrading the bank to a more gentle slope coupled with revegetation. It was determined that both soft engineering alternatives would not provide the level of desired protection without continual and costly maintenance of the bank.

Beach Nourishment: Another alternative that was considered was the placement of beach nourishment along the coastal beach in front of the eroding coastal bank. The beach at the project site is a rocky beach with very little sandy component. The high energy wave conditions at this site combined with the lack of sand in the littoral system tends to limit the ability of the beach to act as a site for sand deposition. The placement of a sandy beach in this area would result in rapid dispersal of the sand to adjacent beaches and resources, and would provide little to no protection for the existing house. Frequent nourishment would be required to maintain the beach. Additionally, dispersal of the nourishment may adversely impact nearby salt marsh resources.

Results from the alternatives analysis indicated that construction of a rip rap revetment would be the preferred approach to providing the necessary level of erosion control, storm damage protection, and flood control for the existing house.