

ENF Environmental Notification Form

<i>For Office Use Only</i>	
<i>Executive Office of Environmental Affairs</i>	
EOEA No.:	<u>13197</u>
MEPA Analyst:	<u>Arthur Pugsley</u>
Phone: 617-626-	<u>1029</u>

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: Michael & Linda Brimm Proposed Bank Stabilization		
Street: 160 2 nd St., Lt. Island		
Municipality: Wellfleet	Watershed: Cape Cod	
Universal Transverse Mercator Coordinates:	Latitude: 041° 54' 3.4" N Longitude: 070° 01' 40.7" W	
Estimated commencement date:	Estimated completion date:	
Approximate cost:	Status of project design:	%complete
Proponent: Michael & Linda Brimm		
Street: c/o Coastal Engineering Co., Inc.		
Municipality: Orleans	State: MA	Zip Code: 02653
Name of Contact Person From Whom Copies of this ENF May Be Obtained: Beth E. Hays		
Firm/Agency: Coastal Engineering Co., Inc.	Street: 260 Cranberry Hwy	
Municipality: Orleans	State: MA	Zip Code: 02653
Phone: 508-255-6511	Fax: 508-255-6700	E-mail: bhays@cecapecod.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): 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: Order of Conditions SE 77-1001

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 checked="" 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 Condition's <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 (including Legislative Approvals) – Specify:
Total site acreage	.84+/-			
New acres of land altered		.02+/-		
Acres of impervious area	.02+/-	0	.02+/-	
Square feet of new bordering vegetated wetlands alteration		0		
Square feet of new other wetland alteration		.02+/-		
Acres of new non-water dependent use of tidelands or waterways		0		
STRUCTURES				
Gross square footage	1032+/-	0	1032+/-	
Number of housing units	1	0	1	
Maximum height (in feet)	25+/-	0	25+/-	
TRANSPORTATION				
Vehicle trips per day	2	0	2	
Parking spaces	4	0	4	
WATER/WASTEWATER				
Gallons/day (GPD) of water use	440	0	440	
GPD water withdrawal	440	0	440	
GPD wastewater generation/ treatment	440	0	440	
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 See attached Div. of Fisheries & Wildlife letter dated 7/17/03 in Appendix A

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: Wellfleet Harbor) 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.)

Alternative 1 -Preferred Alternative: Vegetated Fiber Rolls Fronted by Timber Drift Fence

This project involves stabilization and scarp control to the base of a coastal bank, by means of a "soft solution" for structural integrity of the flank of an existing permitted rock revetment utilizing a combination of bank replenishment, vegetation accompanied by fiber rolls, for base of bank stabilization, and a sand drift fence.

The project covers the installation of wire-reinforced fiber rolls to protect the toe of the bank, and installation of a timber sand drift fence to control the sediment flow rate. Access for the project is over the applicant's property and common way adjacent to the applicant's project.

The flank of the existing revetment is suffering from severe scarping on the eastern end. The scarping is well into the toe of the coastal bank, and is proceeding behind the revetment. If the scarping is allowed to continue, the revetment will suffer failure in that area. The beach elevation at the base of the coastal bank is above Annual High Tide. The bank is in a FEMA mapped velocity zone (V4, el. 15). The bank suffers from toe erosion (scarping) experienced during storm events combined with northwesterly winds.

The erosion of the bank has been monitored during 2001 thru the winter of the 2002/2003 storm seasons. During this period, the base of the bank along the shore to the nearby dune formation has experienced extensive scarping.

The bank serves as a vertical buffer for the prevention of storm damage. Since the erosion rate is relatively slow and, the area/volume is minimal, it is not a major source of sediment for downdrift beaches.

The proposed bank stabilization for this project is designed as a soft solution to stabilize the toe of the bank in order to provide scarp protection for the revetment flank. Fiber rolls are installed from the base of the bank up to the 100 year flood elevation. This area is along approximately 60 feet of the bank directly abutting the revetment. Since fiber rolls are not designed to withstand the wave and ice forces periodically experienced at this location, the fiber rolls are wrapped in a wire mesh of approximately 1.5-inch openings. The wire mesh has a PVC coating bonded to it for corrosion protection. The wire mesh will work to protect the fiber rolls from being torn by storm driven debris.

The fiber rolls will be anchored every three feet using 1/8" diameter wire rope. The fiber rolls will be covered with sand and vegetated. The fiber rolls taper into the bank at the end of the installation to minimize end effects and provide a transition zone for the wave energy moving in the easterly

direction. A sand cover of approximately 4" would be provided over the fiber rolls to facilitate growth of the vegetation into the fiber rolls.

To further protect the integrity of the fiber rolls, the project includes the construction of a timber sand drift fence to front the fiber rolls. This drift fence would serve the following functions: a wave break minimizing direct wave energy upon the fiber rolls; a physical barrier minimizing potential of ice floes from attacking the fiber rolls; a drift fence allowing for accumulation of wind blown sand; and a physical deterrent from major loss of sediment during storm events when the waters reach landward of the drift fence.

This alternative also includes the construction of timber access stairs from the top of the scarped bank to the beach. The timber access stairs would be constructed within the "right-of-way" of an existing non-functional road layout, over which the property owners of Lt. Island have access rights. This access is also utilized by the Massachusetts Audubon Society in their monitoring program for the Endangered Turtle Program.. Currently the base of the bank continues to erode, causing an unstable slope, which would not support timber access stairs. This alternative would stabilize the base of the bank, to allow a stabilized bank slope which should support timber access stairs.

Alternative Analysis

The preferred alternative was derived following analysis of various options. These alternatives included:

- Extension of the rock revetment – This alternative was presented previously to the Wellfleet Conservation Commission. However, it was withdrawn as it was perceived as potentially merely moving the "end scarp" further down the bank;
- Sand filled longard tubes – This alternative would perform much as the rock, and introduce an increase in reflective action;
- Aggressive beach nourishment – This alternative would be non-productive protection, as it has previously been demonstrated that a single storm driven event would remove the material and expose the bank to continued erosion;
- Flank protection of revetment only – This alternative would stabilize the end of the rock revetment, but the erosion would continue in the easterly direction. With the continued erosion, the bank would continue to be unstable and prevent a stabilized, safe beach access.
- Toe protection of the coastal bank – This alternative would not adequately address either the flank protection of the revetment, nor the stability of the slope for the beach access stairs.
- Do Nothing – This alternative would allow the flank stones at the end of the revetment to become unstable, and present a safety hazard on, or adjacent to the rocks. This alternative would allow the erosion to continue along the bank, causing the bank to remain unstable and therefore providing an unsafe beach access.