

Commonwealth of Massachusetts

Executive Office of Environmental
Affairs ■ MEPA Office

ENF

**Environmental
Notification Form**

<i>For Office Use Only</i>	
<i>Executive Office of Environmental Affairs</i>	
EOEA No.:	13468
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: Sconset Beach Nourishment Project		
Street: Baxter Road, Codfish Park Road		
Municipality: Siasconset, Nantucket	Watershed: Cape & Islands	
Universal Transverse Mercator Coordinates: 419140 m E; 4570668 m N; Zone: 19	Latitude: 41.2834 N Longitude: 69.9656 W	
Estimated commencement date: Spring 2006	Estimated completion date: Winter 2006-07	
Approximate cost: \$15 million	Status of project design: 10% complete	
Proponent: Siasconset Beach Preservation Fund		
Street: c/o Jenny Garneau, 18 Sesapana Road		
Municipality: Nantucket	State: MA	Zip Code: 02554
Name of Contact Person From Whom Copies of this ENF May Be Obtained: Mark Rits		
Firm/Agency: Epsilon Associates	Street: 150 Main Street	
Municipality: Maynard	State: MA	Zip Code: 01754
Phone: 978-897-7100	Fax: 978-897-0099	E-mail: mrirts@epsilonassociates.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. **11719/9099**) 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):

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

List Local or Federal Permits and Approvals:

Nantucket Conservation Commission Order of Conditions, Town of Nantucket approval to use Town-owned beach area, USACE Section 10/404, Potential review and leasing of borrow site in federal waters by Minerals Management Service

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
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 type="checkbox"/> Other Permits <i>(including Legislative Approvals) – Specify:</i>
Total site acreage	0 (all work in wetlands)			
New acres of land altered		0 (all work in wetlands)		
Acres of impervious area	0	0	0	
Square feet of new bordering vegetated wetlands alteration		0		
Square feet of new other wetland alteration		323		
Acres of new non-water dependent use of tidelands or waterways		0		
STRUCTURES				
Gross square footage	N/A	N/A	N/A	
Number of housing units	N/A	N/A	N/A	
Maximum height (in feet)	N/A	N/A	N/A	
TRANSPORTATION				
Vehicle trips per day	N/A	N/A	N/A	
Parking spaces	0	0	0	
WATER/WASTEWATER				
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 **Piping Plover and Least Tern 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 **Entire Island of Nantucket is a National Historic Landmark 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.)

The Project is a large-scale beach nourishment Project designed to protect eroding coastline along the southeastern corner of Nantucket Island. The primary elements of the Project are beach nourishment and the dredging of nourishment material from offshore.

The base Project will provide beach nourishment from the Town Sewer Beds south of Codfish Park to the Sankaty Head Lighthouse, which encompasses approximately 2 miles of shoreline (Figures 1 and 2). Options are also being investigated also to extend the Project approximately an additional mile to the north in the vicinity of Sesachacha Pond. Fundamentally, the Project involves placement of a substantial volume of sand to build a wide high beach to protect the eroding coastal bluffs and threatened upland property and structures.

The conceptual beach nourishment design includes construction of a beach nourishment profile that is designed to provide lasting protection and withstand the rigors of a severe coastal storm. Specifically, the beach width is expected to be increased to between 200 and 250 ft (as measured between the bluff and the high tide shoreline). The berm height is expected to be at least 10 feet above the high tide elevation. Based on preliminary calculations using site-specific beach and bathymetric survey data, the volume of sand required to build the beach according to the conceptual design is approximately 1.6 million cubic yards for the base Project, and up to 2.4 million cubic yards for the extended Project. To provide a last line of defense against a severe coastal storm, a geotextile tube also is proposed to be buried within the nourishment at the base of the bluff. Further, shore-perpendicular sand retaining devices ("sand gates") are proposed to manage the alongshore transport of sand.

Sediment required to construct the base beach nourishment Project will be obtained from an offshore borrow site(s). Previous investigations conducted in 1992 identified two potential borrow sites located in the vicinity of offshore shoals (Figure 3). The northernmost site, which covers approximately 380 acres, is located in average water depths of - 25 ft Mean Low Water (MLW), and lies within both state and federal jurisdiction. The southern site, which lies completely within federal jurisdiction, covers approximately 200 acres and is located in average water depths of - 20 ft MLW. These sites were identified during the 1992 investigations based on adequate sediment volumes, beach compatible sediment characteristics, as well as operational requirements of an offshore dredge plant such as water depth and distance from the nourishment site. As shown in Figure 3, other regions of the same shore parallel shoal are also being considered as potential borrow sites for the base Project. Future field investigations (described in Section 6.0) will focus on portions of this shoal, and will utilize similar criteria to the 1992 borrow site investigation, to evaluate its potential use as a borrow site. Use of a regional borrow site in Nantucket Sound, or other nearby location, is also being considered as a viable offshore sand source for existing and future nourishment projects at Sconset. Final borrow site location(s) will be selected as part of the engineering design and environmental review processes.

For the SBPF to continue to provide the Project's public benefits a shore protection alternative must be pursued. The SBPF has investigated numerous shore protection alternatives over the past decade. Options investigated have included several structural

alternatives, bank stabilization, the no action alternative, and beach nourishment. Seawalls and revetments were determined not optimum in the Project area primarily for environmental regulatory reasons.

Breakwaters were also ruled out due to serious questions about their effectiveness. Emergent breakwaters can be more effective from an engineering standpoint, but only when constructed in massive rock configurations that are undesirable for this location.

One of the initial alternatives considered by the SBPF was bank stabilization, either by vegetation alone or by a combination of vegetation and bank terraces. Early in their review of alternatives, the SBPF determined that bank stabilization by vegetation alone would not provide adequate storm damage protection. While this vegetation would help prevent runoff-induced erosion from destabilizing the bluff, the primary cause of bank retreat is due to wave-induced scarping of the toe of the bluff, which in turn causes bluff slumping and failure.

The no action alternative would be to allow natural processes to occur without any form of human intervention to prevent coastal bank erosion. The obvious outcome of this approach would be to require that structures, including the Sankaty Head Lighthouse, at the top of the bluff either be moved or lost as the bluff continues to retreat landward. Tax revenues and public infrastructure losses to the Town of Nantucket would be substantial. The Town sewer beds would be threatened. This alternative would also diminish public access as the beach would be narrower than with the preferred alternative, the public parking area at Codfish Park would be gradually lost, beach access stairways would be lost, and the historic bluff walk would be lost.

Mitigation measures are described in Sections 5.0 and 6.0 and include: (1) conducting the dredging operation within appropriate time of year windows to minimize or avoid fisheries impacts, (2) studying potential impacts to the benthos and the benthic environment prior to Project implementation, (3) conducting wave and sediment transport historical analyses and modeling to ensure the borrow site is located such that no significant wave focusing on the shoreline results, and so that shoals are not destabilized, and (4) conducting shoreline monitoring to ensure that adjacent beaches are not adversely impacted.

LAND SECTION – all proponents must fill out this section

I. Thresholds / Permits

A. Does the project meet or exceed any review thresholds related to land (see 301 CMR 11.03(1)) X Yes No; if yes, specify each threshold:

II. Impacts and Permits

A. Describe, in acres, the current and proposed character of the project site, as follows:

	<u>Existing</u>	<u>Change</u>	<u>Total</u>
Footprint of buildings	<u>0</u>	<u>0</u>	<u>0</u>
Roadways, parking, and other paved areas	<u>0</u>	<u>0</u>	<u>0</u>
Other altered areas (describe)	<u> </u>	<u> </u>	<u> </u>
Undeveloped areas	<u>0</u>	<u>0</u>	<u>0</u>
(All work in wetlands)			

B. Has any part of the project site been in active agricultural use in the last three years?
 Yes X No; if yes, how many acres of land in agricultural use (with agricultural soils) will be converted to nonagricultural use?