Commonwealth of Massachusetts
Executive Office of Environmental Affairs ■ MEPA Office

ENF Environmental Notification Form

For Office Use Only *Executive Office of Environmental Affairs*
EOEA No.: 13119
MEPA Analyst: Deirdre Buckley
Phone: 617-626-1044

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: **Plymouth Long Beach Nourishment**		
Street: **Long Beach, off Warren Avenue**		
Municipality: **Plymouth**	Watershed: **South Coastal**	
Universal Tranverse Mercator Coordinates: **4645301 N, 364620 E**	Latitude: **70º38'** Longitude: **41º57'**	
Estimated commencement date:	Estimated completion date:	
Approximate cost: **$3,000,000**	Status of project design: **90** %complete	
Proponent: **Town of Plymouth, Department of Parks and Forestry**		
Street: **11 Lincoln Street**		
Municipality: **Plymouth**	State: **MA**	Zip Code: **02360**
Name of Contact Person From Whom Copies of this ENF May Be Obtained: **Sean W. Kelley**		
Firm/Agency: **Applied Coastal**	Street: **766 Falmouth Road, Suite A-1**	
Municipality: **Mashpee**	State: **MA**	Zip Code: **02649**
Phone: **508-539-3737**	Fax: **508-539-3739**	E-mail:skelley@appliedcoastal.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. 11260) ☐No

Has any project on this site been filed with MEPA before?
☒Yes (EOEA No. 12124, 7956) ☐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: Plymouth Conservation Commission Order of Conditions, 401 Water Quality Certification, Chapter 91, Army Corps Permit

Which ENF or EIR review threshold(s) does the project meet or exceed (see 301 CMR 11.03):

- ☐ Land
- ☐ Water
- ☐ Energy
- ☐ ACEC
- ☒ Rare Species
- ☐ Wastewater
- ☐ Air
- ☐ Regulations
- ☒ Wetlands, Waterways, & Tidelands
- ☐ Transportation
- ☐ Solid & Hazardous Waste
- ☐ Historical & Archaeological Resources

Summary of Project Size & Environmental Impacts	Existing	Change	Total
LAND			
Total site acreage	26.1		
New acres of land altered		0	
Acres of impervious area	0	0	0
Square feet of new bordering vegetated wetlands alteration		0	
Square feet of new other wetland alteration		1,139,000	
Acres of new non-water dependent use of tidelands or waterways		0	
STRUCTURES			
Gross square footage	0	0	0
Number of housing units	0	0	0
Maximum height (in feet)	0	0	0
TRANSPORTATION			
Vehicle trips per day	0	0	0
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

State Permits & Approvals

- ☒ Order of Conditions
- ☐ Superseding Order of Conditions
- ☒ Chapter 91 License
- ☒ 401 Water Quality Certification
- ☐ MHD or MDC Access Permit
- ☐ Water Management Act Permit
- ☐ New Source Approval
- ☐ DEP or MWRA Sewer Connection/ Extension Permit
- ☒ Other Permits (*including Legislative Approvals*) – Specify:

US Army Corps of Engineers Permit

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 Habitat, Least Tern**) ☐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.*)

Project Purpose and Description: The dike reconstruction and beach nourishment planned for Plymouth Beach is a coordinated effort by the Town of Plymouth, together with the US Army Corps of Engineers, to restore the beach for storm protection of historic Plymouth Harbor. The dike reconstruction will enhance 2,000 feet of the existing stone dike. The final dike elevation will be 18 ft MLW and a scour apron will be added to improve longevity of the structure. Approximately 300,000 cubic yards of sand from an upland source will be placed on the beach, filling an engineered nourishment template that has a 4,500 foot alongshore extent. The northern limit of the nourishment would be the beach road (Ryder Way) "cross-over" of the dike (located near 889792N 2813057E), and the design berm width is 100 feet. The "cross-over" also is the northern limit of the proposed stone dike reconstruction. The planned source of sand for the project is the Town owned sand pit at Camelot Park, which has material with appropriate characteristics and sufficient quantity for completion of the fill. Reconstruction of the dike is planned for the fall/winter of 2004-2005 and construction of the nourishment is planned for the fall/winter of 2005-2006.

Existing Conditions: Plymouth Long Beach is located on the western shore of Cape Cod Bay about 30 miles southeast of Boston, Massachusetts. Long Beach is a continuous barrier beach approximately 2.8 miles long, extending from the mainland in a northwesterly direction that separates historic Plymouth Harbor from the open waters of Cape Cod Bay. In addition to protection of the Plymouth Harbor complex to the west of the barrier beach, Plymouth Beach serves as both a valuable public recreation area and habitat for endangered species. Portions of Plymouth Beach north of the "cross-over" are seasonally opened to vehicular traffic. This area remains one of the most desirable beach destinations in Plymouth. During the summer months, vehicular access is restricted to protect endangered species inhabiting the beach including Piping Plovers and Least Terns. Providing a balance between recreational use and protection of endangered species presents a challenge to the Town each year.

The existing stone dike (which runs the entire length of the beach) effectively controls the shoreline position and prevents the formation of a breach through the barrier; however, this structure also eliminates the landward beach/dune deposits from acting as a sediment source to downdrift shorelines. This dike provides the "last line of defense" during severe storms such as the northeasters in February 1978 and October 1991. Loss of littoral sediments has led to a lowering of the beach fronting the dike system, allowing larger waves to impact the stone dike. Many overwash areas (over the dike and beach) now exist due the present condition of the dike and beach system. Continued lowering of the beach will increase the frequency of overwashes, and eventually cause catastrophic failure of portions of the dike, possibly leading to a complete breach in the barrier beach.

Shore Protection Alternatives: Alternatives considered for shore protection along Plymouth Beach consisted of: 1) No Build, 2) groins, 3) stone dike, 4) Beach nourishment, 5) Combinations of the previous alternatives.

Alternative 1, the "no build" alternative, assumes that the beach will continue eroding and repairs to coastal engineering structures (primarily the stone dike) are only performed to maintain the existing infrastructure. The "no build" alternative

will result in eventual loss of the dike system, possibly allowing a breach of the barrier beach, leaving no protection for the navigation channel and/or Plymouth Harbor. Due to the potential impacts to the navigation interests provided by the barrier beach system, the "no build" alternative was deemed unacceptable.

Alternative 2, the construction of additional groins has also been determined to be an unacceptable means of shore protection for Plymouth Beach. Based on the performance of stone groins and an adjustable groin that presently exist along the project area, shore perpendicular structures used as stand-alone shore protection measures are not effective at Plymouth Beach.

Alternative 5, a combination of *Alternative 3* (the rehabilitation of the existing stone dike) along with *Alternative 4* (an extensive beach nourishment) was determined to be the best alternative. Since no single shore protection alternative addresses all concerns associated with shore protection of the Plymouth Beach barrier, a combination of solutions provides the most appropriate level of protection for the barrier beach system. Beach nourishment will provide a long-term sediment supply to the beach system. In addition, a large-scale nourishment program will add needed shore protection to the existing stone dike system, provide habitat for endangered and/or threatened bird species, and enhance a recreational resource for the Town.

Project Impacts: Total project impacts consist of 25.70 acres of Coastal Beach and Barrier Beach and 0.44 acres of Land Under the Ocean. The dike reconstruction will permanently impact approximately 3.2 acres of Coastal Beach and Barrier Beach; however, a majority of the dike will be covered by beach nourishment. Construction of the beach nourishment will cause temporary impacts to designated wildlife habit areas. The completed nourishment will however be self-mitigating and replace the covered intertidal areas. In addition, it will enhance and widen the sub-aerial portion of the beach, providing new possible nesting habitat. As proposed, the nourishment program serves as mitigation for the regional sediment supply loss caused by the stone dike.

In addition to habitat impacts, temporary impacts to traffic along the planned route between the Camelot Park borrow area and Plymouth Beach are expected. Approximately 15,000 dump truck loads of sand will be required to complete the nourishment of Plymouth Beach. This will require an average of 150 truckloads-per-day along the designated 5.0 mile route between the borrow site and nourishment site (see attached figure for planned truck route).