



August 27, 2015

US Army Corps of Engineers
New England District
696 Virginia Road
Concord, MA 01742-2751
Attn: Phillip W. Nimeskern

**Sierra Club Comments on ACOE Public Notice NAE-2014-259
Re: Proposed Town Neck Beach Project at Sandwich, Massachusetts**

Dear Mr. Nimeskern,

The Sierra Club welcomes the opportunity to offer public comments to assist your agency in considering and evaluating the impacts of this proposed activity, including an overall determination of the public interest.

GENERAL COMMENTS

The Sierra Club has Chapters and Groups in all coastal areas of the United States, and recognizes the urgency of states and local governments to develop strategies for adapting to climate change impacts, especially those from sea-level rise and increased frequency and severity of storm surges. Beach nourishment is one of several approaches to climate change adaptation. Such approaches range from (a) doing nothing and allowing Nature to take its course - generally resulting in a “retreat” of the shoreline inland when such retreat is not otherwise blocked by roads, houses, or other structures, (b) “managed retreat,” which removes or relocates structures interfering with natural retreat of the shoreline, (c) beach nourishment, which periodically replaces sand that has been lost through coastal erosion, including storm events, and (d) seawalls, groins, and other forms of shoreline “hardening.”

Such adaptive strategies are discussed in the Massachusetts Climate Change Adaptation Report published September 2011 by the Massachusetts Executive Office of Energy and Environmental Affairs, and the Draft Massachusetts Coastal Erosion Commission Report and Recommendations published January 7, 2015. The latter goes into considerable detail in listing the various adaptive strategies to be considered, and the annual maintenance costs associated with them.

Beach nourishment is widely used nationally, especially in Florida, as a “soft” alternative to sea walls and other forms of shoreline armoring. The Commonwealth of Massachusetts also has many beach nourishment projects planned or completed, and the state has shown interest in identifying and using offshore sand deposits for beach nourishment projects, as detailed in the Massachusetts Ocean Management Plan.

Beach nourishment has the advantage of protecting properties in the coastal zone that otherwise would be lost to coastal erosion, but in most cases requires an ongoing commitment to periodic re-nourishment projects, with their associated costs, and in the face of ongoing sea-level rise.

PROJECT SPECIFIC COMMENTS

This project consists of two distinctly different segments, (1) Town Neck Hill and (2) Town Neck Beach. The Town Neck Hill beach nourishment/restoration segment involves a recreational beach that fronts private homes. The Town Neck Beach segment involves the beach and dunes further south. Each segment requires a separate analysis for potential impacts and public interest values. Accordingly, we comment separately on them. These segments are pictured below¹:

SEGMENT ONE - TOWN NECK HILL BEACH NOURISHMENT

NOTE: As of the date of our comments, we are aware that the ACOE has been unsuccessful in obtaining easements from private landowners that the ACOE had required as a condition for this project, or at least the Town Neck Hill segment of this project. We understand that the Town of Sandwich is seeking to work out another arrangement for beneficial use of the dredged materials, possibly on the Town Beach segment of the project. Since the ACOE has chosen to keep the public comment period open on this project, we are submitting our comments based on the project as described in Public Notice NAE-2014-259

¹ Source: **Beach Management Plan for Town of Sandwich Beaches**, Woods Hole Group, July 2013, page 7.



Figure 4. Town Neck Beach area.

Potential Environmental Impacts

Potential environmental impacts for this segment of the project include those associated with (a) the maintenance dredging activities within the Cape Cod Canal, including impacts on Essential Fish Habitat, (b) the placement of dredged materials on the beach at Town Neck Hill, and (c) the nearshore ecosystem, including Essential Fish Habitat adjacent to the affected beach. On the latter, we agree that consultation with the National Marine Fisheries Service is required.

• Suitability of Beach Nourishment Materials

In addition to consideration of the potential environmental impacts of the placement of dredged materials on the beach, the compatibility of the dredged materials with the existing beach composition is important for protecting aesthetic and recreational values associated with the current beach. We note that the Public Notice states that “Some of the dredged material may come from the Cape Cod Canal. The Corps is preparing a suitability determination to determine if the nourishment material is compatible with the existing beach sediments,” presumably to address this concern.

We note, however, that the Public Notice also states that “The Town is seeking the flexibility to construct the project using a mixture of trucking and hydraulic pumping of dredged material, potentially in phases over multiple years. This flexibility will allow beneficial reuse of dredged sediment when it becomes available from nearby dredging projects, with additional sand trucked to the site from local sources as funding allows.”

It is not clear what “local sources” may be used “over multiple years,” so we urge that suitability analyses be required for each proposed source of sand.

- **Threatened or Endangered Species**

Some beach nourishment projects in other locations, including Florida, involved beaches used by endangered sea turtles. We note that five species of sea turtles are identified as threatened or endangered under both federal and state statutes. In the case of this project, we also would be concerned about the possible impacts on Diamondback terrapins or their habitat. Although lacking protection under the federal Endangered Species Act, this species has the status of Threatened under the Massachusetts List of Endangered, Threatened and Special Concern Species.²

We note that the Corps is seeking concurrence from the relevant Federal agency, presumably the U.S. Fish and Wildlife Service, with the District Engineer’s determination that “the proposed activity for which authorization is being sought is designed, situated or will be operated/used in such a manner that it is not likely to adversely affect any Federally listed endangered or threatened species or their designated critical habitat.” We believe the Corps will also need to consult with state agencies and would need a permit under the Massachusetts Endangered Species Act.

- **Climate Change, Cumulative Impacts, Economics and Feasible Alternatives**

It is our understanding, from other materials prepared by the Woods Hole Group, that a similar beach nourishment project took place on this site in 2004, and the reference to “multiple years” implies a commitment to beach nourishment projects for an indeterminate period of time. That being the case, we recommend that climate change impacts, especially sea-level rise and the likelihood of more frequent and severe storm surges, be included in the discussion of cumulative impacts and economics associated with this project.³ A longer view of the economics of this project might suggest alternatives such as managed retreat through buy-outs of some of the beach properties at some point in the future. We note that the nearby

² <http://www.mass.gov/eea/agencies/dfg/dfw/natural-heritage/species-information-and-conservation/mesa-list/list-of-rare-species-in-massachusetts.html>

³ See Draft Massachusetts Coastal Erosion Commission Report, Page V2-73.

town of Brewster adopted a managed retreat approach for some of the coastal areas under its jurisdiction.⁴

- **The Public Interest**

As of this date, August 27, 2015, the private-property owners at Town Neck Beach who would benefit from this beach nourishment project have refused to grant permanent easements to some or all of the private beach areas that would be created by this project. That being the case, we question whether this project, or at least this segment of the project, provides sufficient public benefit to justify the use of public funds—the latter of which account for roughly 65% of the project costs. Will this segment of the project provide for increased recreational area available to the public, or will it simply protect and expand private property largely at public expense? It is not possible from the materials presented in this Public Notice for a lay person to determine how much public beach actually would be added in either segment of the project. We respectfully request that the ACOE quantify the public benefits from each segment of the project, in terms of net addition of public beach, and the public costs associated with these benefits.

SEGMENT TWO - TOWN NECK BEACH AND DUNE NOURISHMENT

The second segment of this project appears to consist of dunes fronted by a beach. The project would include nourishment of both the beach and the dunes, raising the elevation of the dunes to approximately 21 feet above sea level. The goal of this segment of the project appears to be protection of the beach and dunes from coastal erosion, in contrast to Segment One's major emphasis on protection of privately owned homes and beach.

- **Suitability of Beach Nourishment Materials**

The concerns for compatibility of beach nourishment sources with the existing beach composition are the same for Town Neck Beach as for Town Neck Hill. It would appear that a separate analysis might be appropriate for determination of the compatibility of dune nourishment materials.

- **Threatened or Endangered Species**

The consultation process for threatened and endangered species mentioned in our Segment One comments would also apply to the Segment Two portion of the project.

The dunes portion of Town Neck Beach offers habitat for numerous species, possibly some threatened or endangered, including three bird species protected by the Massachusetts

⁴ Miller, Chris: Using Managed Retreat to Address Coastal Erosion in Brewster, Brewster Department of Natural Resources.

Natural Heritage & Endangered Species Program (NHESP): The Common Tern (*Sterna hirundo*) and the Least Tern (*Sternula antillarum*), which are considered of Special Concern in Massachusetts, and the Piping Plover (*Charadrius melodus*), which is considered Threatened both federally and in the Commonwealth of Massachusetts.⁵

Precautions are necessary to avoid smothering such species or their critical habitats in the process of restoring dune heights, while recognizing that nourishment of the dunes will ultimately restore or expand the available habitat for species in the area.

- **Climate Change, Cumulative Impacts, Economics and Feasible Alternatives**

Unlike Segment One, the landward portion of Segment Two contains fewer barriers to natural retreat of the shoreline over time. On the other hand, such retreat would reduce the amount of habitat currently provided by the dunes system. One of the goals of the current beach management plan adopted by the Sandwich Board of Selectmen appears to be protection of this habitat, which is designated as a Priority Habitat under the NHESP (See Figure 5).⁶



Figure 5. Natural Heritage and Endangered Species Program Priority Habitat areas for Town Neck Beach. Priority Habitat areas are overlaid on the map in green. The Town owned parcel representing Town Neck Beach is outlined in black.

⁵ Beach Management Plan for Town of Sandwich Beaches, Woods Hole Group, July 2013, page 7

⁶ Ibid. Page 8.

- **The Public Interest**

Unlike the Town Neck Hill beach area, the Town Neck beach area is largely open to the public, and includes publicly-owned parcels. Thus, this segment of the project appears to offer more public benefit than does the Town Neck Hill segment. As mentioned under the Town Hill Beach segment, we respectfully request that the ACOE quantify the public benefits from each segment of the project, in terms of net addition of public beach, and the public costs associated with these benefits.

CONCLUSIONS

Thank you for the opportunity to comment on this project. We appreciate the fact that the proposed project is part of a larger beach management plan for the Town of Sandwich. We also note the need for close coordination in beach management planning with the adjacent Town of Barnstable, which shares management responsibilities for what should be treated ecologically as a single beach and dune system stretching from Cape Cod Canal to Sandy Neck.

Sincerely,

A handwritten signature in black ink, reading "Cathy Ann Buckley". The signature is written in a cursive, flowing style.

Cathy Ann Buckley
Chair