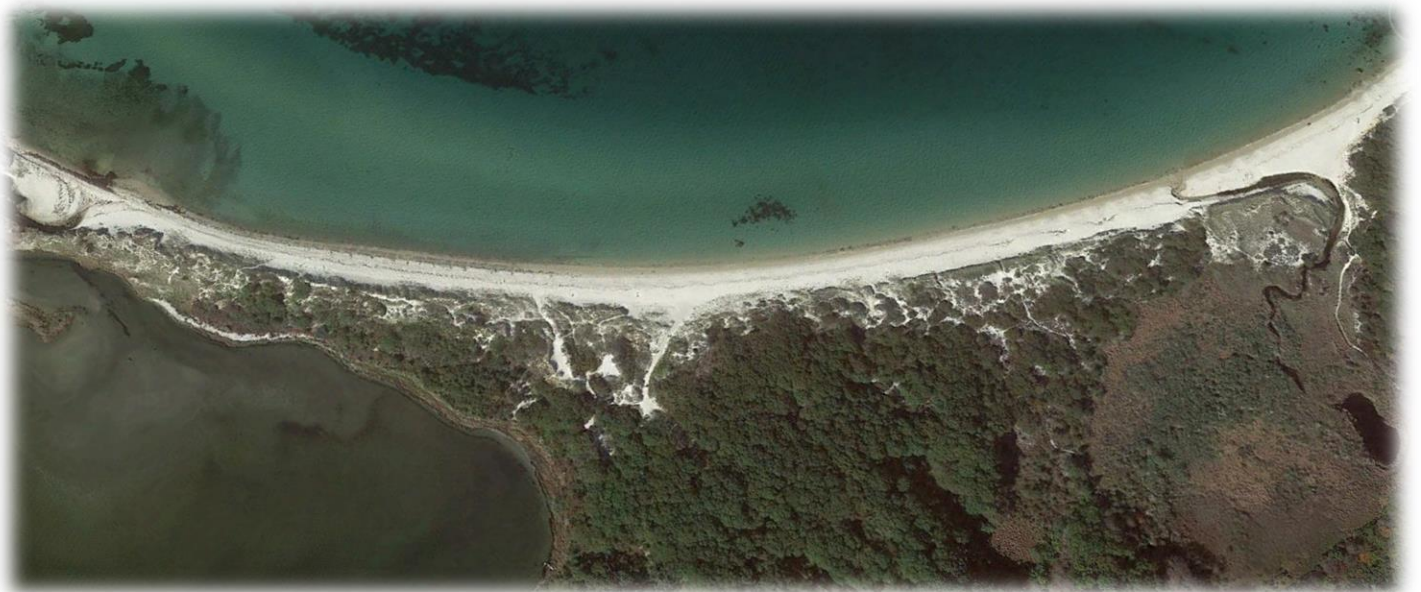




COASTAL PROCESSES SPECIALIST
WOODS HOLE SEA GRANT | CAPE COD COOPERATIVE EXTENSION
gberman@whoi.edu | gberman@barnstablecounty.org
508-289-3046 | 193 Oyster Pond Road, MS #2, Woods Hole, MA 02543-1525

June 16, 2023

TO: West Tisbury Conservation Commission
CC: West Tisbury Parks and Recreation
FROM: Greg Berman, Coastal Processes Specialist (WHSG & CCCE)
RE: Site visit to Lamberts Cove Beach, West Tisbury, MA – 06/06/2023



Background: Since the inception of the coastal processes position established within WHSG & CCCE, on-site and remote technical assistance on coastal processes has been and continues to be an on-going, effective technical information communication and dissemination tool. Technical assistance relating to coastal processes, shoreline change, erosion control alternatives, coastal landform delineation, potential effects of various human activities on coastal landforms, coastal floodplains, coastal hazards and hazard mitigation analyses, and dune restoration techniques provided in the field and remotely will continue to be provided on an as-needed basis. Site visits generally address site-specific coastal processes or coastal hazards related issues. Follow-up unbiased, written technical alternatives analyses are generally provided.

Site Details: This is a follow-up to our site visit of Lambert’s Cove Beach (Figure 1) on 06/06/2023 to discuss the sand deposition patterns and fencing installed on the beach access through a dune. This report is a brief summary of the discussion at the site of plans for the next few seasons. For more information on the dynamics of the site the reader is referred to previous reports by WHSG & CCCE from the site visits performed in 2011, 2012, 2015 and 2018 (these reports are available upon request). Dunes and beaches provide habitat as well as dissipate storm wave energy, which minimizes effects to landward areas. As in previous site visits, the purpose of this site visit was to further discuss the goal of how to continue to reduce the frequency and intensity of beach access maintenance, while continuing the restoration of some areas that have been damaged due to wind scour, past practices, and foot traffic.

The following sections refer to Figure 2 of this report:

Summer 2023 – The temporary boardwalk (green) installed during the summer should be placed as far to the east as possible. This will aid in the next phase of path re-alignment. If there is concern about a “drop-off” at the end of the boardwalk a MobiMat™ (blue), or similar, could be used at the end of the boardwalk.

Fall 2023 – A “V” of permanent sand fencing (red) should be installed to extend the dune towards the east. This is essential for the subsequent path re-alignment. Alternating rows of seasonal sand fence (yellow) in the access path should be used to keep wind-deposited sand closer to the bottom of the dune. This type of “zipper-style” pattern is frequently used, as it provides good baffling of the wind and still allows pedestrian access while it is installed. An additional, longer seasonal sand fence would be installed at the bottom of the path, but well above potential wave action. In the spring, this temporary seasonal fencing would need to be removed to allow for higher foot traffic during the summer. If the fencing is placed at the end of October and left in until late March it will prevent more sand from building up higher on the dune path. The longer that the path is exposed without seasonal fencing the more time sand will have to move up the dune. **Please note that the Coastal Processes Specialist is willing to be onsite during the installation of posts during this phase of the project.**

Spring 2024 – All seasonal sand fencing (yellow) is to be removed. Sand accumulated at the seasonal fencing may be moved into the “V” of permanent sand fencing (red), if it is not completely full from its’ own sand trapping over the winter. If a significant volume of sand has accumulated at the peak of the dune access path, the un-naturally accumulated material might also be moved to additionally fill the “V” of permanent sand fencing (red). This area would then be planted with beachgrass in order for the vegetation to naturally take over the wind-baffling and sediment deposition instead of the buried fencing. This would restore a portion of the dune area which would reduce windblown sand from reaching the peak of the dune access path.

Summer 2024 – Assess if the conditions at the site are now appropriate for a “zigzag” path, as the gentle curve to the path has not prevented sand accumulation. A “zigzag” path will take up more area than a straight path, however it is still recommended as it often increases the resilience of the overall system. Even the state’s 1994 *Guidelines for Barrier Beach Management in Massachusetts* suggests that beach access “*should be constructed in a zig-zag fashion in order to avoid the development of wind and wave tunnels through the dune systems.*” The summer boardwalk (green) should be angled aggressively towards the northeast. If the boardwalk cannot be aligned in this way, then the potential for disconnecting the boardwalk at the angle should be explored. If the MobiMat™ (blue) was previously successful, it could also be employed at the location of this angle.

Fall 2024 – Seasonal sand fencing (yellow) will continue to be needed every Fall until Spring in order to reduce the windblown sand entering the beach access path.

Great progress has been made at this location. The stakeholders have effectively sculpted a new path by building up the dunes in areas adjacent to the desired path. This has all been done by having sand drop out of the wind. Now more work is needed to fine-tune the angle of the path. It is likely the goal of all the stakeholders that the final configuration of the path will change the wind exposure so that further intensive manipulation of the dune will not be needed.

Figure 1. Overview map illustrating the location of Lambert's Cove in relation to Martha's Vineyard.

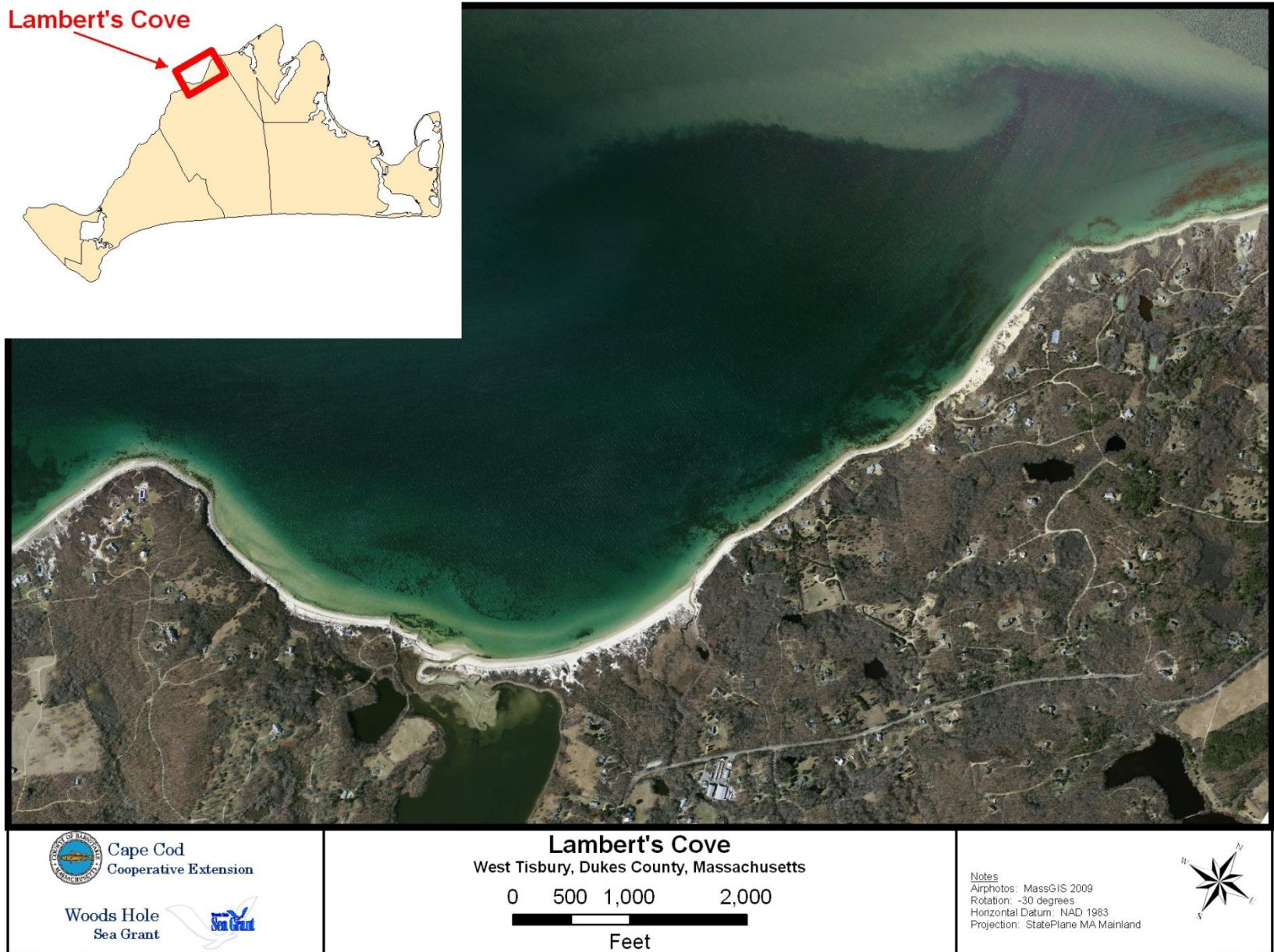


Figure 2. These images show a rough outline of activities that should reduce the higher-than-natural volumes of sand blowing up the dune, which will lead to less frequent maintenance required for the beach access path.

