

## Erosion Continues to Shape Waquoit Bay



Beach Erosion From Small Waves

Wind and waves continually rework the sandy beaches that line the shores of Waquoit Bay, eroding them and rearranging sand deposits. Not as dramatic as the changes that have occurred at south Washburn Island, yet over the years the changes can add up. For example, small waves erode the beaches (1) and often expose the rhizome (root) system of the beach grass (2), which otherwise provides structure to the beach and helps it resist erosion.

Larger waves and very high tides bring the water to the foot of the west end bluff (3 - see map on other side) and wash away its base. As a result, the face of the bluff is quite unstable and sand slumps down, carrying vegetation with it (3). All of this is quite natural and is being left to its own accord. Over time, the face of the west bluff gradually wears away, shrinking the distance between the Swift Mansion and the bay.

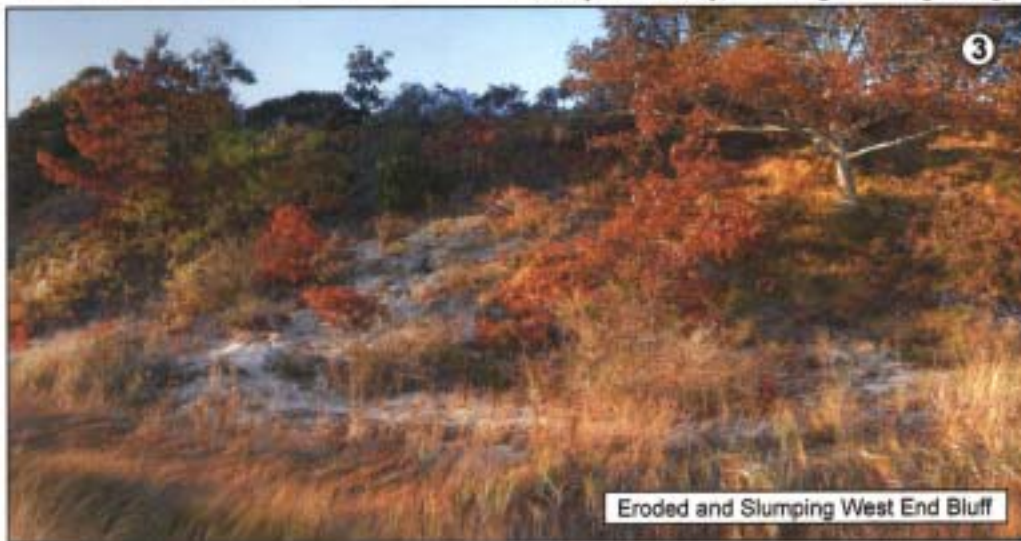


Exposed Grass "Roots"

At the east bluff the story is quite different. Landowners there have slowed the loss of their property. A wall of hay bales wrapped in fish netting was anchored at the base of the bluff. Although the bales didn't last long - anchor stakes along the beach (4) mark where the bales were - they stabilized the beach face. This allowed sand to accumulate and grass to take root (5). Land owners also planted grass and shrubs further up the bluff (5) to help stabilize it. Guy wires hold trees near the top, delaying their eventual tumble to the beach. Where does the washed away sand go? The conspicuous delta at the east end's Caleb Pond outlet (6) is an actively growing geological feature. Longshore currents carry the eroded sand eastward where it settles at the delta. As the north end of the bay erodes away, the delta grows and gets larger.



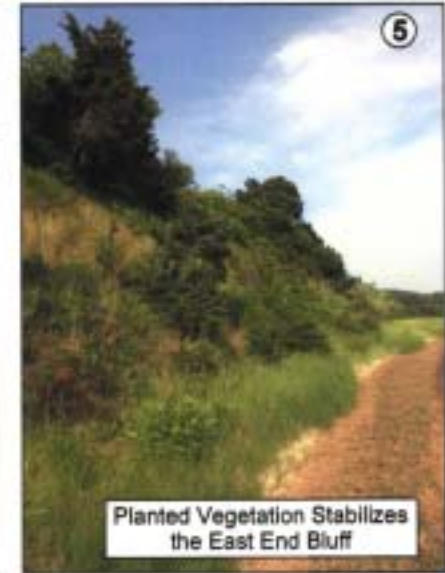
East End of Northern Waquoit Bay



Eroded and Slumping West End Bluff



Erosion Abatement At High Tide



Planted Vegetation Stabilizes the East End Bluff