

Dredging project termed 'win-win'

■ Mirant, the Woods Hole Group and the town of Sandwich team up to restore dunes and make the canal safer.

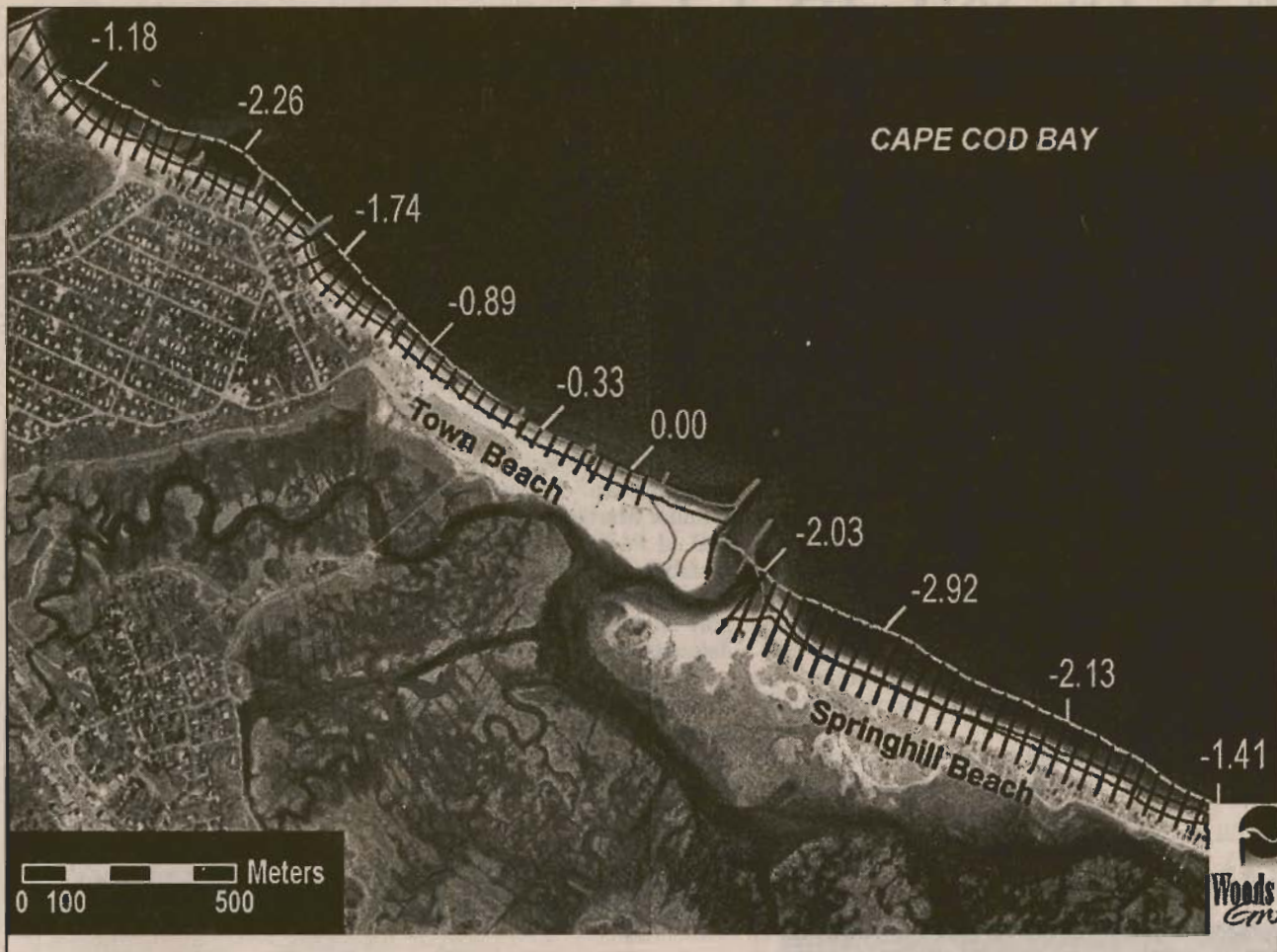
By SEAN GONSALVES
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SANDWICH - Only the scientifically trained or acutely aware eye could tell that the shoreline along Town Neck Beach has eroded considerably over the past 100 years.

In fact, according to local oceanographers, in some areas the shoreline has retracted more than 200 feet over the last century.

But now, as the Cape's shoreline recedes, the town of Sandwich has partnered with the Woods Hole Group of Falmouth and Mirant power plant owners to stem the tide of erosion. In the process, the \$1 million project will also make the canal more navigable for oil-carrying barges heading for the Canal

4/29/04



An aerial photograph of Town and Springhill beaches in Sandwich shows the average shoreline erosion rates over a period of about 125 years. The maximum shoreline retreat on Town is 2.26 feet per year and on Springhill, 2.92 feet per year.

Beach: A cooperative task

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Station Power Plant.

The dredge spoils from the northern mouth of the canal will help reconstruct the dunes behind Town Neck Beach over the length of the beach, spanning 2,000 feet. Approximately 40,000 cubic yards of "clean, beach-compatible" sand will be dumped in the area, said Robert Hamilton, a coastal engineer and vice president of business development for the Woods Hole Group.

Mirant is footing the entire bill for the undertaking.

The design of the project, known as "dune nourishment," is based on historical shoreline change data and local wave and sediment movement patterns close to shore, Hamilton said.

"This dune restoration project is just the first part of a long-term beach management plan. This is not a quick fix."

From the Plymouth and Bourne side of the canal, the bluffs are almost entirely made up of sand.

"What happens is, as those bluffs erode, the sand naturally moves from west to east, over to Sandwich. That's the way the waves move in Cape Cod Bay," Hamilton explained.

Canal sand trap

The Cape Cod canal essentially serves as a barrier with two long, rock jetties on either side of the mouth of the canal. Those jetties trap sand, particularly the jetty on the west side of the canal, he said.

The sand that doesn't get trapped by the jetties settles on the bottom of the 45-foot-deep canal, which is why Mirant is dredging a portion of the canal.

"If there was no canal, the sand

would have naturally made it to the beaches. So this project is the first in a long-term plan to mitigate the effects of the canal," Hamilton said.

"Historically, when they (Canal Power Plant owners) have dredged at the canal, the sand has been taken offshore to be dumped," Hamilton said.

The long-term goal of the project is to re-establish a naturally sustainable beach and inlet system that includes a sufficient storm buffer in addition to being a source of sediment for down-drift beaches along the northern coast of the Upper Cape.

Hamilton said the project will not, by itself, be a panacea for the cumulative loss of sand caused by strong canal currents, but is the first, small step toward a long-term goal.

The first phase of the project is under way and is expected to take a month to complete.

The Woods Hole Group, a business focusing on shoreline erosion and water quality, was founded by senior scientists from the Woods Hole Oceanographic Institution and has overseen similar projects across the globe.

But some area residents have reservations about the project.

Sand quality questioned

"My concern is that they have dredged the spoils from the canal and some of it may contain oil from the Bouchard spill," said Francis Deveney, who lives near the beach.

"People should go down there and see what they are dumping. I just couldn't believe the black muck they were pulling out of the east end of the canal," he said, noting that he worries that the sand will eventually blow off the top of the dredge spoils and leave behind an ugly beach.

"The reason why it's black is because it's been starved of oxygen," Sandwich Selectman Thomas Keyes said. "But after 48 hours or so it looks like regular beach sand."

The sediment from the canal floor was tested extensively to make sure it is clean and compatible with the sand on the beach, Hamilton said. "Some have asked: why not take sand from other nearby dunes? But that's just fixing one place at the expense of another."

Keyes said that all the selectmen have visited the project site and have even photographed the work.

The harsh winter eroded town beach areas between 6 and 8 feet, Keyes said. "So to have this done at this time is just fantastic and it will allow us to put back what was lost."

"It is very much a win-win. And Mirant is not doing this in lieu of taxes," he said, referring to the nearly \$900,000 Mirant owes the town of Sandwich in back taxes.

"Over the years the town and Mirant have had a good working relationship on many projects," Keyes said.

Mirant spokesman Lou Friscoe said that because the canal's depth had been reduced because of accumulating sand, barges transporting oil to the Mirant plant have not been filled to capacity. "We thought it best to be safe rather than sorry. So we've been taking less deliveries on some of the barges" in order to ensure one of the barges doesn't run aground while navigating through the canal.

"It's a benefit for everyone. And we look forward to working with the community on further projects," Friscoe said.