

## Alarm raised on Sandwich beach erosion

By [George Brennan](#)

STAFF WRITER

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SANDWICH — Dunes rise out of the beach, grass dances in the breeze, and a boardwalk snakes across Mill Creek and marshland in a scene worthy of a postcard.

But take a closer look at Town Neck Beach and you'll see three gaping breaches — 60 to 100 feet wide — and several smaller gaps where the ocean has treated dunes like tiny sand castles crushed by a rising tide. The valleys are now filled with rocks spit up each time the tide crashes through.

"It looks perfect from one side, like something you'd want to paint," said Paul Schrader, an environmentalist and local activist on a recent beach tour. "But the other side looks like a disaster waiting to happen."

The gaps are getting wider, the creek is filling in with silt and concerns grow with each coastal storm.

Schrader is sounding the alarm on erosion problems before it's too late and Sandwich deals with a problem all too familiar to Chatham property owners — a failing barrier beach and a shifting landscape.

During the most recent full moon, high tide flooded the marsh — a sneak peek at how the Sandwich waterfront might look some day if action isn't taken, Schrader said.

He's not alone.

"It is our opinion that if deterioration of the barrier beaches continue then the ocean could move closer to the more densely populated areas," a town committee wrote in a 1988 report that detailed erosion concerns. "It is possible that the downtown area bordering the Mill Creek marsh could have serious flooding danger from future storms. "

Mark Galkowski, director of natural resources for the town, said the beach is definitely vulnerable to a "100-year storm."

### Are jetties partly to blame?

Schrader doesn't own one of the homes with a million dollar view. His house is safely tucked on Farmersville Road some five miles away from the beach. But as the former chairman of the North and South River Watershed Association on the South Shore, he took an interest in the dunes five years ago, when he saw children climbing up them and sliding down.

While people walking and playing in the dunes doesn't help, tides and storms take the heaviest toll. In five years, Schrader has seen dunes disappear and others shrink dramatically in size.

A federal project to build the Cape Cod Canal helped create the problem and federally protected birds are slowing possible solutions.

A 1959 study, done by the Army Corps of Engineers, warned that the Town Neck Beach is eroding at a pace of three feet per year. That same report blames man-made jetties that stretch out from the Cape Cod Canal, under the control of the Corps, "which eliminate sources of supply of the material which formerly provided equilibrium under natural shore processes."

Other researchers have come to the same conclusion.

"In 1906, the Cape Cod Canal constructed those jetties and it shut off the natural flow of sediment from Plymouth down to Sandwich," said Kirk Bosma, a coastal engineer with the Woods Hole Group, employed by the town to seek permits for the town's Old Harbor project. "That has basically starved the Sandwich coastline."

No one is suggesting the removal of the jetties or anything extreme.

"The canal jetties are there for a reason, so they don't have to dredge canal as often," Bosma said. "That's a fair reason. It's not necessarily that they should be taken out, but there is certainly a cause and effect. They have caused or exacerbated erosion on Town Neck Beach."

Federal officials acknowledge the jetties might have some effect, but it will take more and costly studies to come up with possible solutions. "I don't know if you could 100 percent equate the erosion of the beach to the canal work," said Edward O'Donnell, chief of the Army Corps' navigation section.

## **Restoration work never done**

Meanwhile, the Old Harbor project, which would restore the inlet to the east of Town Neck Beach, remains stalled in the permitting process. The town is attempting to deal with concerns raised in the environmental impact report nearly four years ago.

The fading dunes are a nesting spot for protected least terns and piping plovers, Galkowski said. Beach grass, Christmas trees and fencing that was once commonplace to stem the tide of erosion is now frowned upon, he said. "Certainly, if there was a simple approach, we would have been on it by now."

Lisa Capone, spokeswoman for state Natural Heritage officials, said recommendations were made but the town has not followed up.

"The project as proposed would degrade that habitat," Capone said.

It will take permitting, engineering and money to accommodate the birds, Galkowski said. "It's expensive and time consuming."

But if the town doesn't act, Dewey Avenue, Boardwalk Road and even the Route 6A business district could eventually become oceanfront, Schrader said. "If they don't do something, there won't be any habitat left for (the birds) to nest in," he said.

State officials disagree. "We found the habitat that was there last year was good," Capone said.

The 1959 study predicted it would cost \$67,000 to restore the dunes. Town officials now put that number in the millions.

A town study in 1988 indicated none of the work recommended for Town Neck Beach in the 1959 study was ever done. According to the 1988 report, the Army Corps of Engineers no longer thinks it's responsible for the erosion problems.

Selectman Randy Hunt, who is putting together a video with Schrader to raise awareness of the erosion problems, said the town would like the Corps to recognize its role and help fix the problems.

"Maybe we could get them to pay for some of it," he said.

So far, letters from Town Manager George "Bud" Dunham to Corps officials have been ignored. Dunham has written twice since 2006 to request that the Corps fund studies of the Town Neck erosion problems.

"The reduced protection by the narrowing beach and the lack of sediment source has already resulted in significant damage and in some cases complete loss of homes during storm events, as well as the breaching of Old Sandwich Harbor inlet from its existing jetties," Dunham wrote March 2, 2006.

In a follow-up letter last August, Dunham again asked for an Army Corps study of the erosion problems, as well as a temporary fix using dredge materials from a proposed canal project next year. There has been no response to those letters, Dunham said.

Federal officials this week said it takes time to get approvals to do the kind of in-depth study the town is requesting and much of their budget is tied up in projects overseas. "We do owe them a response," said John Kennelly, chief of the Corps planning branch.

## **Battered by storms**

No money is currently budgeted for the canal dredging project, but that's more likely to happen first, O'Donnell said. The town would have to come up with 35 percent of the cost of that and it will require permitting.

In 1990, dredged sand from the canal was used to replenish part of the Town Neck dunes. The contrast between the stretch of dunes west of the Boardwalk that were restored and the area being battered by storm after storm is telling.

People who watch the ebb and flow of beach erosion say even the replenished dunes suffered a staggering blow only months after they were restored.

"It didn't last very long," Hunt said.

Still, they're doing better than the dunes closest to Old Harbor. "At least they're stable," Schrader said.

For now, all town officials can do is to continue working with Natural Heritage officials to work out a solution for the birds and the dunes.

And keep the pressure on the Army Corps of Engineers.

"It's on the radar," Schrader said. "It's just not high enough on the radar."

George Brennan can be reached at [gbrennan@capecodonline.com](mailto:gbrennan@capecodonline.com).

## **Missed opportunities**

Work on the canal jetty was completed but the sand nourishment on Town Neck Beach was not done.

- A 1980 survey done by the Provincetown Center for Coastal Studies also concluded that shoreline erosion is exacerbated by the canal jetty.
- Other recommendations to curb erosion - extending the canal jetty and using dredge materials to replenish Town Neck Beach - were not implemented.

Source: Beach Restoration Committee Report, 1988