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Gap in Chatham beach widens Officials consider plan to fill breach

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By Beth Daley, Globe Staff | June 4, 2007

When an April northeaster punched a gap through the long, sandy spit that forms Nauset Beach in Chatham, local geologists and officials were not overly alarmed. Several predicted the sea would soon return the same amount of sand it took away and plug the cut.

But the break in the barrier beach, which protects much of mainland Chatham from the Atlantic, is only getting deeper and wider. If it continues to erode, officials say, it could eventually expose more than 100 North Chatham waterfront homes to the ocean's relentless pounding.

Now, Chatham officials are considering a massive public works project to close the cut.

"Shows you how much we know. . . . We thought it would close," said Ted Keon, Chatham coastal resources director. "But it's showing no indication it will."

Selectmen have authorized Keon to seek emergency state permits to fill in the cut, which grew from about 50 feet wide in late April to more than 600 feet today. Tomorrow, they are scheduled to discuss holding a special town meeting to ask residents if they would be willing to pay a tab that could reach \$1 million, or more, to close the opening.

Chatham officials say they want to have the permits in hand so they can move quickly if the community decides to go forward -- and before the cut gets too wide.

The town's looming decision highlights the practical and philosophical concerns about re-engineering nature on a shoreline that is constantly changing. It is not clear if the effort will work, because it is difficult to plug a breach that has the ocean running through it. Town officials are not sure residents will want to foot such a large bill to save a relatively small number of homes.

The National Park Service, which has jurisdiction over Nauset Beach, a part of the Cape Cod National Seashore, has long had a hands-off philosophy when nature redesigns the coast. Environmentalists, meanwhile, say the filling-in would take place near a sensitive marine habitat for fish.

But not doing anything, others say, could lead to another kind of re-engineering. They say homeowners on North Chatham's waterfront will rush to armor their property from the ocean with sea walls and sandbags that could also affect the distribution of sand along the waterways.

"We are going ahead with the permitting," said Selectman Ronald Bergstrom. "But a whole lot of things could happen between now and then. The seashore could say no. . . . People may not want to foot the bill for these homes."

Chatham, at the Cape's elbow, is known for shifting sands that have stranded scores of fishermen and boaters over the last century and made updating navigational maps a cartographer's nightmare. Every day, the Atlantic eats at the shoreline as it delivers vast amounts of sand to form the town's spits, shoals, and sandbars.

Most of the changes are gradual but every decade or so, sudden shifts occur. In 1987, a powerful winter storm cut through the middle of a narrow part of Nauset Beach that had protected downtown Chatham from the Atlantic. Eventually, ten homes on the mainland were washed away. Now that gap is more than a mile wide.

In November 2006, a Thanksgiving storm deposited enough sand to reconnect remote South Monomoy Island

to mainland Chatham for the first time in almost 50 years.

But it is the memory of the 1987 cut that is most frightening to some residents and town officials. They fear that the new cut, less than 3 miles north of the 1987 opening, will continue to slowly widen and become the main tidal route for Chatham Harbor and Pleasant Bay.

If that happens, an enclave of about ten homes on Nauset Beach, locally known as North Beach, which was separated from the mainland during the April storm, could face severe erosion. Another group of homes on the other side of the cut, which is still connected to the mainland, is also vulnerable.

Additional widening will also probably deliver sand to Chatham Harbor in more unpredictable ways, Keon said, hampering navigation for the community's fishing fleet and perhaps one day locking the fish pier. Fears, however, are greatest along more than 2 miles of coastline in North Chatham.

"Having lived through 1987, we decided to quickly group together," said Richard Miller, one of the 132 North Chatham waterfront homeowners he estimates could be vulnerable to erosion if the cut continues to widen. He recently helped form a group, SOS -- Save Our Shores -- that wants the community to avoid the delays and indecision that occurred after the 1987 break. Then, Miller said, homes were washed out to sea while owners waited for permits to build sea walls.

"We are not necessarily, from an environmental point of view, crazy about filling it in," Miller said yesterday. "But we are looking at all the buttons that need to be pushed to see what can be done."

Based on rough calculations, Keon estimates about 100,000 cubic yards of sand would be needed to fill the opening. He has identified several nearby dredging sites that he believes will do the least harm to marine life and habitat. But he warned the job would be difficult: As sand is dumped in the opening, water rushing through moves faster, taking sand with it.

"It's not a simple job, but it's not unfeasible," Keon said.

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