

Hammonasset Beach erosion solution proposed

By: Hannah Vahl, Staff writer 12/02/2008

MADISON-Nourishing Hammonasset State Park's West Beach with sand dredged from Clinton Harbor and the Housatonic River and adding a terminal groin would be the best solution to the state beach's erosion problems, a study has found.



Wear and storm undermining has resulted in boardwalk repair in 1989, 1991, 1992, 1993, 1996 and in 2000. Photo by Hannah Vahl

Consultants Fuss & O'Neill

and the Woods Hole Group, on behalf of the state Dept. of Environmental Protection, studied beach erosion and prepared a report and environmental impact evaluation. A public hearing at Memorial Town Hall on the study and Environmental Impact Evaluation was held last week.

Erosion at the state park, said Woods Hole Group coastal engineer Kirk Bosma at the hearing, "Has been a well-documented major issue since the '20s." A 1950 beach erosion study resulted in beach nourishment and the construction of Meigs Point. A 1973 study resulted in Tom's Creek jetty.

Wear and storm undermining has resulted in boardwalk repair in 1989, 1991, 1992, 1993, 1996 and in 2000. Bosma predicted that in a ten year storm event, the boardwalk would be gone. And at high tide, West Beach can be just a thin strip of sand.

Between 1883 and 2007, Hammonasset Beach has exhibited steady erosion on West Beach at an average of a foot a year, but the rates of shoreline change have increased in the past 33 years, according to the report.

West Beach at one point was eroding about two feet a year, and that extreme erosion occurred near the West Beach bath houses.

Erosion is particularly a problem at West Beach because tides there run southeast, parallel to the shore, and tend to carry sand the waves wash into Long Island Sound in that direction, consultants found. To have a unidirectional current is unusual, said Bosma. "At first we had trouble believing it," he said.

The state Dept. of Environmental Protection has been replenishing sand on West Beach as a stopgap measure, often either before or after a storm, ever since 2005. A pile of sand dredged from another part of the park for that purpose sits next to a West Beach Bathhouse.

After considering more long-term solutions ranging from retreat and relocation to beach dewatering, consultants found that replenishing Hammonasset's sand with that taken from those Federal Navigation Projects would be the most cost-effective and efficient solution. Transporting sand by barge would reduce hauling costs, as would cost-sharing and piggybacking on studies and permits already completed by the Army Corps of Engineers, which is managing those two projects.

Sand from those two projects show some trace contaminants but would be safe for beach nourishment. Testing revealed elevated levels of PAHs, a class of organic compounds commonly found in oils, tar, and coal, at both sites. From the Housatonic sampling, the traces were found mostly upriver and seemed to be from pieces of burnt wood and coal. In Clinton Harbor sand, slightly elevated levels of PAHs and of some metals were found but deemed unlikely to affect surface water or human health.

At that meeting, Jeffrey Kriete of Westbrook expressed concern about size of sand grains from Clinton Harbor and asked why the shoal off Meigs Point was not a better source of sand.

Sand from Clinton Harbor is finer than would be ideal, and therefore more easily washed away, but it compatible with the beach's current sand, the report states. And the beneficial reuse of sand that was already being dredged was hard to ignore.

"To me, it's silly to waste material when you can get cheap, pretty good - not perfect, mind you, but pretty good quality sand," responded Bosma.

Consultants estimated the cost of the beach nourishment with 563,000 cubic yards of federal navigation project sand, plus the building of a 250-foot terminal groin perpendicular to the beach at \$8.3 million for the initial construction, and \$21.3 million total for construction and maintenance over 50 years, with the initial sand replenishment lasting 25 years.

But funding for neither of those federal dredging projects, which are under the oversight of the Army Corps of Engineers, is not currently available in the case of Clinton Harbor, and there are doubts whether the economic benefits of dredging of the Housatonic River are worth the costs.

If that sand does not become available, consultants in the report recommend uplands sand sources. Other sources of sand could be a shoal area southeast of Meigs Point, where much of West Beach's eroded sand seems to be gathering, or another shoal five miles offshore from Hammonasset State Park.

Use of either sand would require additional evaluation for environmental impacts. Last week's public meeting was held under Connecticut Environmental Policy Act, which requires time for public review and comment on projects that may have a significant environmental impact.

The DEP is accepting comments on the proposal through Dec. 8.

Hannah Vahl can be reached at 752-2716 or hvahl@ctcentral.com