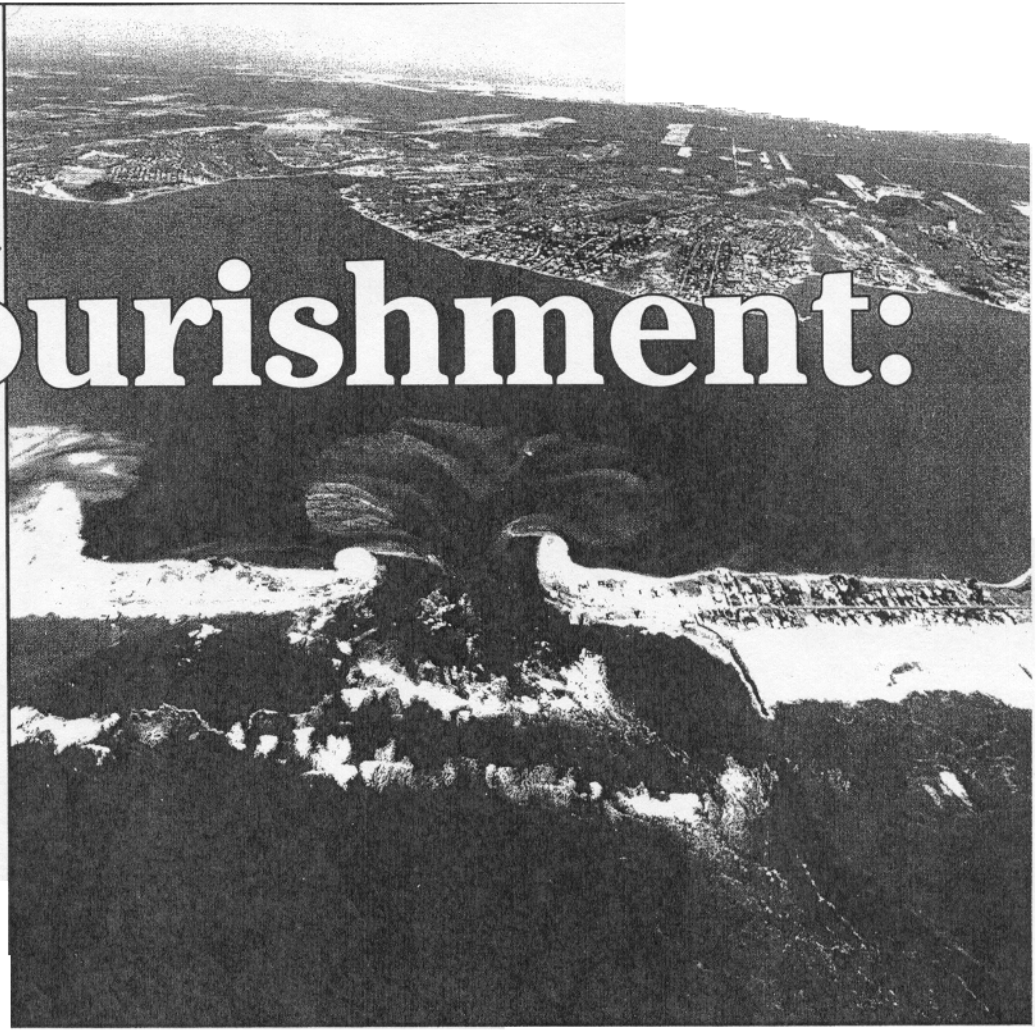
Beach Renourishment:

The Lessons from One Long Island Community



West Hampton Dunes in December 1992.

A $25 million project to restore a storm-battered Long Island beach community has been hailed by some as a model for coastal resource management and by others as an "atrocity." The partnership between federal, state, and local managers that finally led to the beach's renourishment has since deteriorated into a lawsuit. It is a Shakespearean-like drama that clearly illustrates the impassioned positions and many of the challenging issues that coastal managers must balance when deciding whether or not to pump sand onto a beach.

"Nobody could look down the road and see that homes would be lost and that ultimately a life would be lost," says Bill Daley, director of the Bureau of Flood Protection in New York's Department of Environmental Conservation. "There were a number of steps along the way where it all could have been avoided. Certainly one of the long-term lessons that we learned is that we never should have been in this situation in the first place."

This is one of the few points that the majority of those interviewed for this article—from the community's mayor to state managers to environmental groups and researchers—seem to agree upon. The act that never should have happened, they say, was the 1966 construction of a groin field by the U.S. Army Corps of Engineers that due to political pressure began in the wrong place and was never completed.

What is keenly disagreed upon, however, is the wisdom and process of restoring a beach at taxpayer expense that is allowing the rebuilding of an increasingly valuable community in a dynamic and vulnerable location that residents must share with endangered and other species.

The Village of West Hampton Dunes case study shows coastal managers that cooperation and communication among the different government entities involved, scientists, environmentalists, homeowners, members of the general public, and all other interested parties is imperative when dealing with the dicey issue of coastal erosion.

"The situation leading up to the formation of West Hampton Dunes illustrates all the problems with coastal management, coastal engineering, and large-scale coastal projects in general," says Jay Tanski, coastal process specialist for the New York Sea Grant Program. "When engineering decisions are made for political rather than technical reasons, you can run into major problems."

The Tempests

At the heart of the disagreement is the 1994 settlement of a $200 million lawsuit brought by property owners in the Village of West Hampton Dunes against the U.S. Army Corps of Engineers, the state, and Suffolk County. The settlement resulted in a $25 million project where the incomplete groin field was modified and the beach was rebuilt with 4.5 million cubic

yards of sand to a 40-year storm level protection.

Three levels of government are committed to maintain the project for 30 years, at which time the village plans to take over the maintenance. Property owners were allowed to rebuild using construction standards more stringent than those required by the Federal Emergency Management Agency. Public access was improved. Endangered species are being protected, but disagreement over the way to protect these species has led the village to file a lawsuit against federal agencies, and local and state governments.

"The coastal zone is rife with conflicting interests," acknowledges John O'Connell, attorney for the Village of West Hampton Dunes. "We tried to chart our way through the complex, land mine-ridden field to try to come up with what we perceived as a win-win for all the people involved."

Village Mayor Gary Vegliante agrees, calling the settlement "a blueprint for coastal management."

"Here you have a project that went from total devastation to a rebuilt community whose current value went from less than zero to being worth a half billion dollars for 300 parcels of land," says Vegliante. "The economic value returned, we are producing more endangered piping plover than almost anywhere in the U.S., we have new public access, and we have storm protection for not only us, but for inland communities."

He adds, "It was scientifically right and morally right. We have the absolute right to build or rebuild our homes."

Orrin Pilkey, professor emeritus at Duke University and an outspoken critic of beach nourishment, calls the project "the atrocity of the East Coast. The cost per mile was outrageous and the government is now in the position of promising to keep the beach in place for 30 years."

Pilkey believes the project will lead to "huge future storm damages." Residents are building "houses on what was water just a few years before. Now instead of millions of dollars in losses it will be billions of dollars in losses. Projects like this put more people at risk and more property at risk. The human impact is going to continue to be greater and greater."

The bill for any storm damage, he notes, would be footed by taxpayers through federal flood insurance payouts, and taxpayers may get hit again if other communities follow suit and sue governments claiming they are responsible for their erosion.

Renourishment is "not about protecting the beaches," says Jim Tripp, general counsel for Environmental Defense. It's about "protecting the property of a few."

> **"There were a number of steps along the way where it all could have been avoided."**
>
> **Bill Daley, New York's Department of Environmental Conservation**

Man against the Sea

The problems for what is now the Village of West Hampton Dunes began in the 1950s when it was an unincorporated community. Erosion along the south shore of Long Island began to threaten development on nearby Westhampton Beach. The Army Corps of Engineers proposed a renourishment project, with the construction of 23 groins only if necessary.

The Corps' plan was not acted upon, says Sea Grant's Tanski, until a storm in 1962 caused a breach in one portion of the barrier island. "As a result, a call was made for immediate action. The technical plan that had been developed was thrown out the window and the situation became management by crises."

As a result of political pressure, the renourishment project was scrapped and 11 groins were constructed in "the wrong place," explains Tanski. The groins interrupted the east to west littoral flow of sand and began eroding the village's beach, which is two-and-a-half-miles long.

"Erosion was immediately apparent," says Vegliante. The beach's erosion rate went from about one-and-a-half-feet a year to 15 feet a year.

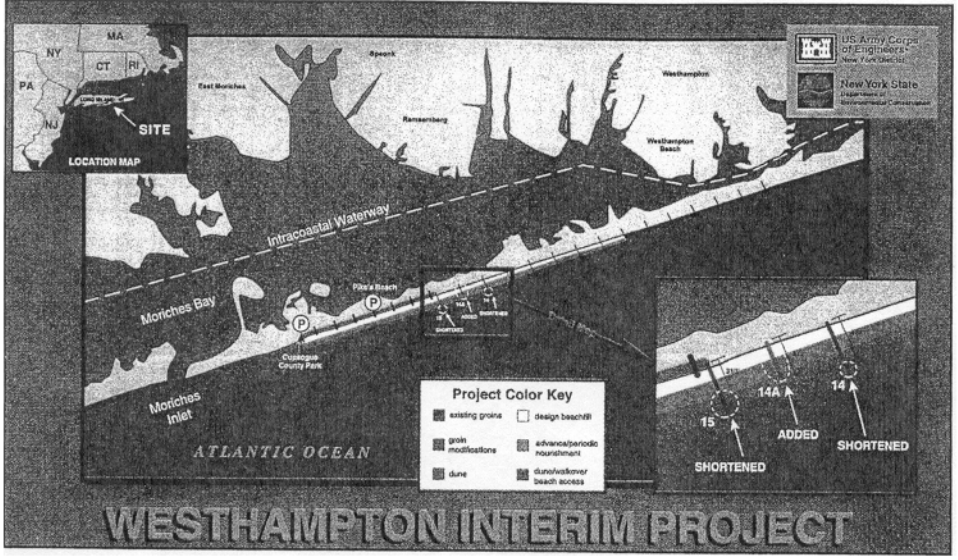
Four more groins were built in 1970 to protect large homes and a condominium on Westhampton Beach, but again the project was not completed. "We were just a bunch of blue collar guys with little houses on the beach," says Vegliante. "We didn't have the political savvy or ability [to get the project completed] and we wound up on the long end of the erosion stick and the short end of the political stick."

"The result was that for a lack of $127,000 [to finish the project] in 1972, everything from that point on happened," says Aram Terchunian, a coastal consultant with First Coastal Corporation and the village's commissioner of wildlife protection. "Everything stops for the next 20 years despite the fact that everybody knows the groins are causing the erosion."

Residents filed a lawsuit in 1973, which never resulted in compensation. Over the years, the village continued to erode and the island was hit with a number of intermittent storms. An association of village homeowners filed a second suit in 1984, but the lawsuit languished.

Storms in 1991 and 1992 "clobbered" the village, destroying large numbers of houses and forming several small breaches, Vegliante says. One of the breaches eventually widened to 3,000 feet, swallowing dozens of houses.

Since the construction of the groins, 190 of the village's 246 homes were destroyed by the surf, with many more severely damaged. After losing so many homes, Vegliante says, "it looked to me as if everything was going to fall apart." As a last-ditch effort, the village incorporated into a municipality. Its lawsuit was settled less than a year later.



hoto and graphic courtesy of U.S. Army Corps of Engineers, New York District

Bureaucratic Challenges

"It was always our intent to keep on going. We put out reports identifying the need to continue, if not a groin field, then sand placement, provided that any alternative to continue was economically justified and environmentally acceptable," says Cliff Jones, Army Corps project manager.

Prior to 1978, there was a drive by state and federal governments to try to complete the groin field and stop the erosion of the village's shoreline, says Bill Daley. These efforts stopped after the President's Council on Environmental Quality expressed environmental concerns about the project and directed the Army Corps "to go back and take a much harsher look at the proposal."

"There was quite a period where the project languished," Daley says. Various efforts to restart the project occurred in the early 80s and again after a storm in 1984, but each time various local, state, or federal concerns or initiatives got in the way.

These ranged from proposed federal cost-sharing ratios for renourishment projects that shifted the primary financial burden to local and state governments, to state coastal management initiatives that included specific standards for shore protection projects.

In 1988, New York's Sea Grant Program brought together a group of top experts from around the country to examine the village's situation, says Jay Tanski. The workshop attendees did not recommend any one solution; rather they looked at all the options available, from doing nothing to constructing a segmented breakwater, and wrote a report with each option's positives and negatives. Although the group's report predicted there would be a breach in that area, "no preemptive action was taken."

Daley notes that the state decided on its preferred technical solution in 1989, which it proposed to the Corps, but "it didn't get very far. The attorneys [for both the state and federal governments] were saying that while we're in the midst of a lawsuit, it's going to be difficult to move forward." The state's proposal eventually became the model for the one used in the final project.

The thing that precipitated action, once again, was a crisis. After the storm of 1992, the state and federal governments began working together to stop the extensive erosion, and the breach was filled in 1993 for $8.8 million. Daley notes that the village becoming a municipality "helped lead to a settlement everyone could agree on" and to the final completion of the renourishment project, but he believes the project would have been done even had the village remained unincorporated.

Settling on a Solution

The lawsuit was finally settled in 1994. In it, residents released all the defendants of monetary damages, which were $200 million at that time. Instead the property owners voted to have "a stable beach environment and to give us back what we lost. To make us whole again," Vegliante says.

Once the project got under way in 1996, Daley says, "everything went wrong that could go wrong." An airline crash turned the area where the sand was to be mined into a crime scene, the year's first endangered piping plover appeared, and a tugboat captain was killed trying to save dredge equipment that had broken loose in a storm.

Since the project's completion in 1997, however, most agree the project has fared well. Jones notes that no major storms have hit Long Island since the early 90s. Dunes have grown five feet since the construction, and the Corps' plan to renourish the beach after three years was able to be pushed back to four years, and still used less sand than predicted.

"We view the project as having been very successful," says Jones. "It looks good and it's performing better than expected."

"That's supposed to be impressive?" asks Sidney Maddock, environmental analyst with Biodiversity Legal Foundation. "If you are trying to hold the shoreline in place, which the village is trying to do, not only will a huge amount of taxpayer money ultimately be wasted, but the stabilization efforts also will result in adverse environmental impacts to the wildlife and plant species that are uniquely adapted to and dependent on the geological conditions of dynamic barrier islands."

Vegliante points to public use as another indication that the project has been a success. Seven public walkways over the dunes have been built, about 200 parking spaces have been added, and the county park hosts 200,000 visitors a summer. "We believe there is plenty of room for everyone on the beach, from homeowners to endangered species."

Maddock disagrees. "While the beach construction project was over two miles long, the access plan provides for public parking only at two public parks. In our car-centered culture, this limitation favors residents and renters and effectively limits public access to the taxpayer-funded beach."

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Another benefit that is hotly debated has been the success of the endangered piping plover on the village's beach. A dispute over the management of the piping plover led the village to file a $12.5 million lawsuit against the U.S. Fish and Wildlife Service, Army Corps, the state, and Suffolk County.

Prologue

Not all renourishment projects are as dramatic as the one in West Hampton Dunes, but the issue of beach renourishment generates spirited debate and disagreement among homeowners, scientists, environmentalists, researchers, managers, private property rights activists, and members of the general public.

Orrin Pilkey notes, "Our big problem is not so much the direct opposition to beach renourishment as such, but the need for societal debate on this issue where all sides are heard."

Jones says the Corps is "trying more so now to have the public involved early in the process. . . We are never going to be able to please everybody, but we can work to address their concerns. We've learned that communication and cooperation are key." ❖

To read the Army Corps' report on the Village of West Hampton Dunes renourishment project, point your browser to www.nan.usace.army.mil/business/prjlinks/coastal/fireisl/index.htm. For more information on the project, contact Cliff Jones at (212) 264-2055 or clifford.s.jones@usace.army.mil; Bill Daley at (518) 402-8140 or wwdaley@gw.dec.state.ny.us; or Gary Vegliante, (631) 288-6571, or whdunes@ieaccess.net. You may also contact Orrin Pilkey at (919) 684-4238 or Sidney Maddock at (252) 995-3312.