



# Natural Resources Protective Association

of Staten Island Inc.

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Established 1977

## Problems Associated with 1994 Beach Replenishment Project in Brooklyn, New York

### Introduction

In the late 1980's, plans began to replenish Brooklyn's public beaches. The Nor'easter of 1992, hit the beaches of southern Brooklyn pretty hard. In Sea Gate, a private, gated community at the western end of the Coney Island peninsula, a house fell into the water.

In 1994, the U.S. Army Corps of Engineers started to replenish the public beaches (Brighton Beach and Coney Island) along the south facing shore of the Coney Island peninsula. Sea Gate did not want to pay for the replenishment of their private beach and if it was replenished it at public expense, they would have had to provide public access. The Sea Gate community was unwilling to do so. An 800+ foot long groin was constructed between Coney Island and Sea Gate (the West 37th St. groin), to keep the replenished sand on the public beaches.

It was acknowledged that the groin would block the normal East-West flow of sand along the Coney Island peninsula to Sea Gate. So the Corps placed a large fillet of sand on the western face of the groin to prevent flanking. The fillet of sand was also supposed to replace the transport of sand to Sea Gate, that the West 37th St. groin interrupted. This project was supposed to provide protection for many years.

### Problems with the level of sand

- Burial of public restrooms in Brighton Beach and Coney Island: There were several large, concrete buildings housing restrooms located under the Brighton Beach/Coney Island Boardwalk. The Corps' contractors were supposed to protect the structures from being filled as sand was pumped onto the beach. They did not, and EVERY public restroom was buried in sand. The NYC Parks Dept. tried to dig them out, but to no avail. The plumbing pipes were completely filled with sand. The only solution was to completely bury all of these structures. It took about five years and millions of taxpayer dollars to construct new restroom facilities.
- Havens for the homeless: Because the structures were buried, large, cave like pockets resulted under the Boardwalk, which became havens for the homeless. Over the course of a few years, their cooking flames resulted in several small fires which destroyed parts of the Boardwalk and a large fire which also destroyed an apartment building and several restaurants.
- Blowing sand and Boardwalk rot: In order to eliminate the homeless problem, NYC Parks had to fill in the entire area under the Boardwalk with sand, so that there was no space left under the Boardwalk. Where the sand is in direct contact with the boards, they are rotting. In addition, the sand is piled so high that it comes through the boards and accumulates in piles on the Boardwalk. The sand is dispersed with the wind. Sand is not a renewable resource and millions of dollars of it are just blowing away.
- Parks has tried to prevent the accumulation of sand with the placement of fences and the digging of trenches, with little success. Both require considerable amounts of their limited manpower resources.

### Problems in finding a suitable "borrow site"

- Difficulty in finding a suitable "borrow" site: Sand for beach replenishment is obtained by "borrowing" it from an offshore site. As the sand is pumped onto the beach, a large, deep "borrow pit" results. The contractor had to make many attempts to find a suitable site. The end result was a beach sprinkled with old shoes, butcher's waste (old, cut up animal bones) and liberal amounts of coal. After ten years of regular sand sifting by NYC Parks, the situation is better, but each storm reveals yet another layer of coal, bones, etc.
- Improperly dug borrow pits: Borrow pits in and of themselves are very controversial. They can provide great refuge and habitat for fish. But there is considerable debate about the oxygen content in deeper pits. The contractor was supposed to dig relatively shallow pits with sloping sides, that would be more likely to encourage well oxygenated water. Instead, they were dug deep and with steep sides. It should be noted that the Army Corps of Engineers has proclaimed many of these "steep and deep" pits in the Lower Bay as "dead zones", which should be restored by filling them with contaminated dredge material! (*U.S. Army Corps of Engineers Dredged Material Management Plan for the Port of NY and NJ, Sept. 1999*)

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### **Problems with swimming**

- The westernmost blocks of Coney Island are permanently closed to swimmers: NYC Parks has decreed that the last two bays in Coney Island, adjacent to the eastern face of the West 37th St. groin are permanently off limits to swimmer. NYC Parks claims that lifeguards report a steep drop off and severe rip currents along the face of the groin. The Army Corps claims that the situation there is no different than along the few other remaining groins in Coney Island and the closure is due to a lifeguard shortage (Note—many areas of NYC beaches have been closed in recent years because of a lifeguard shortage, but this is the only area in Brooklyn that has been declared *permanently* closed.)
- Is there a drop off?: Since the beach on the eastern face is accumulating sand, many believed that the shoreline was now closer to the deeper waters of an offshore channel. The Army Corps recently provided maps that show that a swimmer would have to be in at least eight feet of water before there was a sudden drop into the channel.
- Are there rip currents?: So far, this question remains unanswered. It is hoped that the Corps will provide data to back up their claims that the currents at the western end of Coney Island are not markedly different from other areas of the beach.

### **Sand migration into Gravesend Bay**

- A new beach on the wrong side of Coney Island: Perhaps the worst outcome of construction of the West 37th St. groin was the formation of a new, 200+ foot wide (and growing!) beach on the Gravesend Bay side of Coney Island—where there was no beach before! Shortly after the West 37th St. groin was constructed, sand began to migrate around the tip of the Coney Island peninsula (Norton’s Point) and began to fill in along the northern, bayside shore of the peninsula. People began to drive dune buggies there and swim off this “new beach”, so Parks was forced to put up blocks of fencing, which was promptly knocked down.
- Sand problems: The migrating sand has blocked several storm water outfalls—one 60 inch outfall has been reduced to less than 18 inches in diameter. There is so much sand, that it has created dunes on the streets, at times rendering them impassable. It was necessary to push it back with bulldozers, after a lengthy debate as to which City/State/Federal agency should do the work. Houses on the bay side of the peninsula have had their front yards covered in sand. Sand blowing off the dunes has entered homes and people have complained repeatedly about sand in their refrigerators, dresser drawers and the oil pans of their cars.

### **Erosion worsens in Sea Gate**

- Where is the sand coming from?: The sand that is migrating has come from the shore of Sea Gate. Erosion there is worse than ever and residents have demanded a solution. Homes are in danger and a beach club was rapidly losing its beach. Some of the sand that ended up on the bay side of the peninsula was trucked back to the ocean side.
- The deposition basin: In an attempt to stop the migration of sand to the bay side of the peninsula, a deposition basin was dredged a couple of years ago. It was hoped that it would trap the sand, which could then be dredged out and replaced on Sea Gate’s beach. But of course, there was no way to keep it on the beach.
- The solution—more structures: So the Corps has come up with a plan to construct five “T” and “L” shaped groins, in addition to widening and shortening the West 37th St. groin. It is hoped that this plan will permit sand to accrete on the beach of Sea Gate and remain there. However, groins of this type have never been used in the New York area, although they have been used in other states, albeit under different conditions. Construction is scheduled to begin later this year. This project will cost about ten million dollars of public money. In the process, large amounts of bottom habitat will be covered with rock. (Note—This use of rock will be a godsend to the Army Corps. The deepening of the shipping channels of the Port of New York to fifty feet has required blasting of undersea rock. There is so much rock being produced that the Corps is searching for more and more ways to “beneficially reuse” it.)

### **Conclusion—Are things better now than they were before?**

The Corps claims that the West 37th St. groin is functioning “as planned” in keeping sand from eroding in Brighton Beach and Coney Island. Sand is accreting on the eastern face of the groin (no surprise, the groin is stopping sand that would normally have been transported to Sea Gate) and the beach there is wider than ever. Sand has eroded from the eastern end of Coney Island as well as from Brighton Beach. But sand levels are still higher and the beach somewhat longer than prior to the project.

The community has asked for a *cumulative* study of the impacts of all of this construction on the peninsula, *prior* to the construction of the additional groins in Sea Gate. None is planned.

See *U.S. Army Corps of Engineers Draft Limited Reevaluation Report and Draft Supplemental Environmental Assessment*, Nov. 2002, for more information about the Sea Gate groins and associated problems.