Photo by Christina Santucci

Years of environmental problems have destroyed the once rich marshland in Jamaica Bay. Residents can see the barren ecosystem from their backyards in Broad Channel.

# Jamaica Bay marshes washing away with tides

## Environmentalist warns relief efforts far outpaced by rapid deterioration of fragile ecosystem

BY IVAN PEREIRA

For years, lifelong Broad Channel resident Dan Mundy has seen the once lush marshland in Jamaica Bay rapidly deteriorate into nothing.

"You'd be able to look at that clump over there and it would be alive with tall marshes," he said while riding in his boat recently through Yellow Egg marsh. "Now there's nothing left and what used to be grass is now all water."

A report issued last year by the Jamaica Watershed Protection Plan Advisory Committee, a special city-run group that Mundy is a part of, warned that if nothing was done to stop the loss, the 3,000-acre ecosystem would be gone in four years.

Although government restoration efforts have been implemented during the last five years, Mundy said the rate of the deterioration is so rapid that it negates the expensive efforts to bring back the marshes.

Nevertheless, the 70-year-old retired firefighter, who has been trying to alert officials for more than a decade, has had some successes in raising awareness of the problems and said there is much more work to be done if the marshland is to be rescued.

### The discovery

Mundy said he first discovered the decline in the ecosystem's plant life in 1995, when he went boating around Big Egg Marsh, located in the bay's northeast section. He noticed that a creek within the middle of the marsh had gotten wider and over the years the grass had not grown as high as before.

"That kind of opened your eyes to say, 'Hey, what's going on here?' " he said.

Mundy and his friends, who would eventually form the environmental group known as the Jamaica Bay Ecowatchers, took their concerns to the bay's owner, the National Park Service, but initially their calls went unheard.


Photo by Christina Santucci

Broad Channel resident Dan Mundy, who helped form the environmental group the Jamaica Eco Watchers, points out what is left of the diminishing Yellow Bar Marsh in Jamaica Bay.

After more calls to government officials at the city, state and national level and after the Ecowatchers conducted their own studies of the marshland loss, the federal government convened a blue ribbon panel to investigate the allegations.

In May 2001, the panel confirmed Mundy's fears: The bay had lost nearly half of its marshland between 1974 and 1999.

### The cause

A follow-up study issued last year by the Jamaica Bay Watershed Committee, which was created by the City Council in 2005 and the city Department of Environmental Protection indicated that excess nitrogen levels in the bay's water were an important factor in the deterioration.

More photos
PAGE 30

The study found that an excess of nitrogen in the water was causing the oxygen levels to drop. Without the oxygen, the marsh soil loses its nutrition, which weakens the plants' roots.

"The nitrogen affects the soil. As it breaks up, it becomes clumsy and it can't handle the storms or tides," Mundy said.

The study indicated that one of the possible sources of the excess nitrogen could originate from four DEP water filtration plants located around the bay. The DEP made recommendations last year to upgrade its facilities with new equipment that would reduce the nitrogen that is dumped in Jamaica Bay, but no action has been taken at the plants as of yet.

The state Department of Environmental Conservation has created a special task force that will work with the city to find a solution to the problem and has been in constant talks with the DEP, according to a DEC spokesman.

Mundy said he is fed up with the lack of action by the government agencies to stop the nitrogen problem at its source.

"We've got to stop talking and start doing. It's a long process to get those things done," he said.

### The effects

Mundy pointed out how great the marshland deterioration has become over the years as he took his boat to Black Wall Marsh, which has lost more than 60 percent of its original 41 acres over the last 30 years. His 6-year-old boat's GPS map showed the craft could navigate

*Continued on Page 43*

# Jamaica Bay

*Continued from Page 4*

the craft could navigate over areas where there is now water in place of what had been marshes.

"Right now, I'd be over the marsh," he said as he steered the boat over the area.

In some areas of Black Wall Marsh, the original shoreline footprint was clearly visible despite the fact that there was no grass. Mundy predicted that the entire marshland would be gone very soon without any type of restoration project.

In addition to the loss of plant life, the 142-square-mile ecosystem suffers in a symbiotic manner when the marshes are gone, according to the DEC.

Jamaica Bay is the largest wetland in the city and is home to more than 300 species of birds and 100 species of fish, as well as numerous species of reptiles, amphibians and insects. Without rich plant life to sustain some of these animals, the entire area's environment could deteriorate next.

"You'd look at that clump there and it used to be alive with mussels," he said as he cruised near the Yellow Bar marsh island to the south. "It's important because the birds that migrate here need the calories to fatten up and move on."

**What's being done**

While the government agencies are discussing ways to stop the deterioration, several projects have been completed and are underway to restore the grass to the bay. The first was done at Big Egg Marsh in 2003 by the National Parks Service, which owns and maintains the ecosystem.

The agency used special machines that sucked up the soil near the marsh and spewed it over the areas where the grassland was completely gone. Over a six-month period, engineers planted new seeds on the native soil and today the marsh has regained two acres of its land.

Mundy said he was impressed with how quickly the project came together and believed that its success should be used as a basis for other restorations in the future.

Another restoration project, one undertaken by the U.S. Army Corps of Engineers, DEC and DEP, took place at Eldits Point in 2006. The corps, with the help of a federal grant, was able to replant 30 acres on the southern island's east side with new techniques.

The ecological specialists were able to deposit new sand brought in from New York Harbor and planted it with seeds from the marshlands. Some parts that had not deteriorated were either moved and clumped together for better growth or left alone and surrounded by the new soil, according to Mundy.

So far, the grass has grown tall and healthy.

"You can now see the top of the grass and it's all even," Mundy said.

More restoration projects are earmarked for the future by the DEP, including the western portion of Eldits Point and Yellow Bar, which has lost 54.5 percent of its original 176 acres of marshland since 1974, a spokeswoman for the agency said.

**The outlook**

Despite the restoration efforts, Mundy said more needed to be done to stop the deterioration of the marshes and he has repeatedly called on the city to step up its efforts to reduce the nitrogen.

Nevertheless, the environmentalist said he is confident that the bay will be restored because so many people have been advocating for action since the problem first started. With more help from politicians, scientists and eco-friendly activists around the city, he said the environmental damage would be stopped.

"I think that the momentum is there from all the groups and agencies that are zeroing in [on the bay]," he said. "I think that the fact that we're aware of the problems and if the technology is there. If we keep the momentum up, we can stop the problem."