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From New York Harbor's Depths, Muck to Restore Islands in Jamaica Bay

By **SAM ROBERTS**

For generations, the islands of Jamaica Bay, the 26-square-mile natural sanctuary off the Brooklyn and Queens shoreline that is home to hundreds of species of migratory birds and marine life, have been disappearing, victims of environmental neglect.

A combination of factors, including development encroaching into the bay and erosion caused by the dumping of contaminants, led to the shrinking of the bay's salt marsh islands to 800 acres, from more than 16,000 acres a century ago. At the rate they are being lost, about 33 acres annually, they could vanish entirely in two decades.

But now the bay's fortunes are rebounding, thanks to the leftovers from a giant project taking place in New York Harbor that most people never see and probably know nothing about.

For more than a decade, workers using giant digging machines have scooped up enormous mounds of rock, clay, sand and silt from the waters around New York to deepen the shipping channels to accommodate giant cargo vessels that will navigate the widened Panama Canal starting in the middle of the decade.

The dredging has produced millions of cubic yards of muck.

“What do you do with all that stuff?” said Col. John R. Boulé II, commander of the New York District of the [Army Corps of Engineers](#), which is overseeing the dredging. “Some of it we’re using to restore the islands in Jamaica Bay.” Recalling the lush “[Mannahatta](#)” that Henry Hudson encountered when he sailed into New York Harbor 400 years ago, Colonel Boulé added: “We want to put a little more of 1609 back into 2010.”

The Army Corps of Engineers and the [National Park Service](#) are the primary partners in a collaboration of city, state and federal environmental, parks and port agencies and private partners to revitalize what is known as the Hudson-Raritan Estuary, focusing primarily on Upper and Lower New York Bay. Eventually, oyster beds will be restored to serve as living water filters, and shellfish may someday be harvested commercially again.

Jamaica Bay is part of the park service's Gateway National Recreation Area, which spans the harbor and will be expanded by hundreds of acres when the city's former Fountain and Pennsylvania Avenue landfills in Brooklyn, recently forested with 35,000 trees, are incorporated as parkland in a few years.

Jamaica Bay, a wildlife refuge in the national park system, boasts a 9,000-acre expanse filled with birds, horseshoe crabs, diamondback turtles and many other fauna. "Jamaica Bay is in many ways the lungs of the estuary," said Maria Burks, commissioner of the [National Parks of New York Harbor](#).

For about a century or so, those lungs were periodically clogged with one contaminant or another, from the carcasses of dray animals (hence the bay came to be known as Dead Horse Bay), garbage and occasional victims of murder and drowning.

The bay was destined more than once to become a major seaport, from the late 19th century through the 1940s. In 1910, with the state deepening the barge canal linking upstate to the Great Lakes and with New York City still the nation's leading manufacturing center, financing was approved to transform Jamaica Bay into what was described as "the world's chief harbor." It would be fringed by 1,000-foot-long docks, terminals and railroads and protected by the natural barrier of Rockaway Beach.

The Army Corps was enlisted to deepen channels, using the dredged material to fill in the shallows and enlarge the bay's islands for maritime development.

Delays spared the bay from becoming a major seaport, but the subsequent development of [Floyd Bennett Field](#) (which itself required 14 million cubic feet of fill), John F. Kennedy International Airport, Cross Bay Boulevard and several residential developments gobbled up wetlands and salt marshes.

Nitrogen from waste treatment plants, leaching contaminants from surrounding landfills, runoff from the Belt Parkway and airplane fuel threatened the remaining natural resources — including the 330 bird and 80 fish species that Barry Sullivan, general superintendent of Gateway for the [National Park Service](#), said have been logged in the area.

"Since the middle of the last century, we lost more than half of the salt marsh, which is critical for development of all of those species," he said. "The wetlands are the nurseries of the ocean."

Conservation efforts were begun in earnest by Mayor [Fiorello H. La Guardia](#) and Parks Commissioner [Robert Moses](#) in the late 1930s and accelerated when Congress created Gateway National Park in 1972 after lobbying by the administration of Mayor [John V. Lindsay](#).

But Emily Lloyd, a former environmental protection commissioner for the city, said that while

public agencies and some private volunteers were committed to improving conditions, “the bay lacked a real constituency.” She enlisted the [National Parks of New York Harbor Conservancy](#) to help advocate for Jamaica Bay’s health. (The conservancy’s chairwoman, Marian S. Heiskell, was instrumental in establishing Gateway.)

As a result, instead of filling in the bay to build docks and warehouses, the Army Corps is using sand to restore an almost pristine grassy natural habitat with a bucolic vista framed by the Manhattan skyline less than 10 miles to the northwest.

Elders Point, an island south of the Brooklyn-Queens border, is among the most ambitious restoration projects under way. About 42 acres of wetlands have already been restored on Elders Point East. About 200,000 cubic yards of dredge material has been used to restore 34 acres of salt marsh on Elders Point West, which is expected to be completed later this year.

Another 250,000 cubic yards will be transformed into 50 acres of marsh at Yellow Bar Hassock. By the time the dredging project is finished in 2014 about 42 million cubic yards of material from the Ambrose Channel, Kill Van Kull and the Bay Ridge Channel will have been blasted, excavated and removed by barge to deepen shipping channels to 50 feet. Most of the muck has been dumped in the ocean, while some is being used for other projects in the New York area. Jamaica Bay has become an early beneficiary of the dredging project.

“We’ve been working on this for the last decade,” said Daniel T. Falt, the manager of the Jamaica Bay restoration project for the Army Corps. “We’re excited to finally see something in the ground.”