

JAMAICA BAY: A NATIONAL TREASURE IN JEOPARDY

Jamaica Bay's restful open space, rich waters and lush green marshes provide a home for many threatened and endangered species, a critical stopover point for migrating birds and a haven for the millions of people that visit – all within view of Manhattan's skyscrapers.

But the important services this unique area provides are in jeopardy as a result of poor water quality, vanishing wetlands, and uncoordinated planning efforts.

Jamaica Bay is an oasis amid America's largest city:

- Over half of the bay's 26,645 acres of open water, marsh, meadowland, beaches, dunes, and forests comprise the Gateway National Recreation Area's Jamaica Bay Unit, established as part of an effort to help conserve outstanding natural areas adjacent to major urban centers.¹
- Gateway's Jamaica Bay Wildlife Refuge is the only national wildlife refuge accessible by subway and bus.
- More than 80 fish species and a number of endangered and threatened species, such as the peregrine falcon, piping plover, and the Atlantic Ridley sea turtle, can be found within the bay.²
- Visited by nearly 20 percent of the continent's species of birds every year, Jamaica Bay is considered one of the best bird-watching locations in the western hemisphere.³ More than 325 species of waterfowl and shorebirds live or travel through the bay on the Eastern Flyway migration route to breeding grounds further north.⁴
- Jamaica Bay is part of one of the largest and most productive coastal ecosystems in the northeastern United States and includes the largest tidal wetland complex in the New York metropolitan area.⁵ These wetlands serve as flood protection and shoreline erosion control for the bay's homes and businesses.
- More than five hundred thousand New Yorkers live in the Jamaica Bay watershed/sewershed.⁶ The bay is bounded by Brooklyn and Queens on its northwestern and northeastern shores, Rockaway Peninsula (also part of Queens) on the south, and Hempstead, Nassau County, along a section of the bay's southeastern shore.⁷

But Jamaica Bay's resources are compromised by poor water quality, vanishing wetlands, and uncoordinated planning efforts:

- On a daily basis, the city's sewage treatment plants release approximately 300 million gallons of treated wastewater, containing thirty to forty thousand pounds of nitrogen, into the bay.⁸ The bay's marshes are only capable of removing between a tenth and a fifth of these nitrogen inputs.⁹
- Wastewater and overflows from sewage treatment plants and stormwater runoff contribute to harmful algae blooms that strip oxygen from the water.¹⁰ Since 1986, the bay's algae levels have been rising and its water visibility has declined more than 20 percent.¹¹ Dissolved oxygen levels in parts of the bay can dip so low that aquatic life unable to swim away dies. Metals and organic pollutants from sewage overflows and stormwater collect in hotspots on the bay's floor and accumulate in the tissues of organisms.¹²
- Between 1924 and 1999, more than 50 percent of the bay's marshes disappeared, and the rate of this loss has accelerated from an average of 26 acres per year between 1974 and 1994 to an average of 44 acres per year between 1994 and 1999.¹³ Scientists predict that at the current rate the marsh islands will completely vanish by 2024.¹⁴ The exact cause of this loss is unclear; recent studies have focused on a reduction in the amount of sediment washing up on the marshes and excessive sulfides in sediments due to water pollution.¹⁵
- More than 25 governmental agencies have jurisdictional responsibilities in Jamaica Bay and while they confer on specific projects, their programs have often lacked coordination.¹⁶

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- ³ U.S. Army Corps of Engineers-New York District. 2004, June. Hudson-Raritan Estuary environmental feasibility study: Jamaica Bay study area report.
- ⁴ Davis, T. H. 2002. Birds of Jamaica Bay. Pamphlet revised 2002 by D. Taft; Gateway National Recreation Area. Accessed 19 June 2006 from http://www.nps.gov/gate/jbu/pdf_files/nature_birds_of_jamaica_bay_brochure.pdf.
- ⁵ City of New York Local Law 71. 2005. Developing a watershed protection plan for the watershed/sewershed of Jamaica Bay.
- ⁶ Karpati, A., X. Lu, F. Mostashari, L. Thorpe, and T.R. Frieden. 2003. The health of Canarsie and Flatlands. NYC community health profiles; New York City Department of Health and Mental Hygiene, 1(31):1-12. Karpati, A., X. Lu, F. Mostashari, L. Thorpe, and T.R. Frieden. 2003a. The health of southwest Queens. NYC community health profiles; New York City Department of Health and Mental Hygiene, 1(30):1-12. Karpati, A., X. Lu, F. Mostashari, L. Thorpe, and T.R. Frieden. 2003a. The health of southwest Queens. NYC community health profiles; New York City Department of Health and Mental Hygiene, 1(30):1-12. Karpati, A., Y. Lu, F. Mostashari, L. Thorpe, and T.R. Frieden. 2003b. The health of southwest Queens. NYC community health profiles; New York City Department of Health and Mental Hygiene, 1(30):1-12.
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- ⁷ National Park Service, Gateway National Recreation Area, and Jamaica Bay Institute. 2004. *The Evolving Legacy of Jamaica Bay*.
 ⁸ Potts, M. 2004, December 5. A Shell of the Former Industry. *Newsday*, G07.
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- ⁹ Mankiewicz, P.S. 2005, March 30. Memo to the Honorable James F. Gennaro, Chair of the New York City Council Committee on Environmental Protection, Re: Intro 565 and Res. No. 830.
- ¹⁰ New York City Department of Environmental Protection. 2004. The 2003 New York Harbor water quality report. Sambrotto, R. No date. Nitrogenous nutrients and plankton production in Jamaica Bay, NY. In Integrated reconnaissance of the physical and biogeochemical characteristics of Jamaica Bay. Gateway National Recreational Area and Columbia Earth Institute.
- ¹¹ New York City Department of Environmental Protection. 2004. New York City Department of Environmental Protection. 2005. Unpublished 2004 harbor water quality data. Provided by J. Stein.
- ¹² Litton, S. 2003, August. Contaminant Assessment and Reduction Project Water (CARP).
- ¹³ New York State Department of Environmental Conservation. Strategy for addressing loss of intertidal marsh in the marine district. Accessed 23 June 2006 from www.dec.state.ny.us/website/dfwmr/marine/twloss.html.
- ¹⁴ Hudson River Foundation. 2004. Health of the harbor: The first comprehensive look at the state of the NY/NJ Harbor Estuary. Prepared for the NY/NJ Harbor Estuary Program.
- ¹⁵ Hartig, E.K., A. Kolker, and V. Gornitz. No date. Investigations into recent salt marsh losses in Jamaica Bay, New York. In Integrated reconnaissance of the physical and biogeochemical characteristics of Jamaica Bay. Gateway National Recreational Area and Columbia Earth Institute.
- ¹⁶ National Park Service, Gateway National Recreation Area, Jamaica Bay Institute. 2004.