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DEP Launches New Measures to Improve Overall Ecology of Jamaica Bay

Nitrogen Discharges Cut by 4,000 Pounds a Day at 26th Ward Wastewater Treatment Plant; 50% Increase in Harbor Water Quality Testing Sites

Environmental Protection Commissioner Cas Holloway today announced the launch of the first phase of enhanced treatment measures to reduce the amount of nitrogen being discharged into Jamaica Bay at 26th Ward Wastewater Treatment Plant. The installation of biological nitrogen removal technology at the plant will reduce nitrogen discharges by more than 4,000 pounds per day, or 10% of the total nitrogen discharges from treatment plants into the bay, until additional investments are completed by 2014. DEP also began an enhanced water quality testing program in Jamaica Bay, increasing the number of sampling sites there by 50% – from 13 to 20 locations. Bay and harbor monitoring gives DEP vital information needed to ensure that the City's 14 wastewater treatment plants meet or exceed State and Federal treatment standards. The nitrogen removal and sampling are part of the historic agreement announced by Mayor Bloomberg in February between DEP, the New York State Department of Environmental Conservation, the Natural Resources Defense Council, and other environmental stakeholders to improve the overall water quality and mitigate marshland loss in Jamaica Bay through \$115 million of investments over the next decade. These investments, along with \$95 million of capital projects will cut nitrogen discharges into Jamaica Bay in half.

"This is another measure in the steady drumbeat of great news for the health of Jamaica Bay," said Commissioner Holloway. "Although a number of investments will take several years to complete, we're already making good on Mayor Bloomberg's commitment to improve water quality in Jamaica Bay by taking immediate interim steps to substantially reduce nitrogen discharges while permanent facilities are under construction. And the new sampling we are doing will give us the most complete picture yet of water quality in the bay. This is further evidence of what can be achieved when the City and our regulatory and environmental partners work together to reach a common goal."

MORE INFORMATION

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Although it is not a pathogen and poses no risk to human beings, high levels of nitrogen can degrade the overall ecology of a waterway. High levels of nitrogen can lead to reduced levels of dissolved oxygen in waterways and excessive algae growth, especially in warm weather months. Currently, the 240 million gallons of daily wastewater handled by the four wastewater treatment plants on Jamaica Bay result in the discharge of approximately 40,000 pounds of nitrogen each day. The Rockaway Peninsula closes off Jamaica Bay and prevents the circulation of oxygenated water, which exacerbates nitrogen impacts in the bay, as compared to surrounding waterways.

DEP's wastewater treatment plants were not originally designed to remove nitrogen, a naturally-occurring component of all wastewater. The project at 26th Ward includes upgrades that will address this issue by retrofitting existing equipment to increase the treatment capacity of the existing infrastructure, which facilitates the underlying chemical reactions that remove nitrogen from wastewater via the activated sludge process. It is expected that these new processes will reduce discharges of nitrogen to the bay by more than 4,000 pounds per day, or 10% of the total nitrogen discharges into the bay. An innovative technology, called the Ammonia Recovery Process, is now being designed, which will further reduce nitrogen discharges from the 26th Ward by 3,000 pounds per day by 2014.

DEP's Harbor Survey Program tests the New York Harbor waters and sediments at 56 locations. Sampling takes place year-round. Most sites are sampled weekly from May through September and monthly from October through April. Typical tests measure bacteria, turbidity, temperature and the level of dissolved oxygen in the water. The results are used to assess the effectiveness of all of the City's water quality programs and to monitor water quality trends.

The City is investing \$100 million to install new nitrogen control technologies at wastewater treatment plants located on Jamaica Bay. The other wastewater treatment plants that will be upgraded are the Coney Island Wastewater Treatment Plant in Brooklyn and the Rockaway Wastewater Treatment Plant in Queens. The first upgrade will be operational in 2015, and all improvements will be completed by 2020. These investments, made in concert with \$95 million the City already has committed for nitrogen control upgrades, will reduce the nitrogen loads discharged into Jamaica Bay by nearly 50% over the next ten years. The City also will invest \$15 million for marshland restoration projects around the bay.

Jamaica Bay has experienced marshland loss due to many factors, including sea level rise, a loss of sediment and fresh water flows and reduced tidal activity from the extension of the Rockaway peninsula. The City's \$15 million investment will be spent on saltwater marsh restoration projects in the interior of Jamaica Bay. Since 2002, the City has invested \$37.4 million to reclaim more than 440 acres of environmentally sensitive land adjoining Jamaica Bay and plans to remediate nearly 100 additional acres. The City will leverage its new \$15 million investment in the bay's marshlands by applying for Federal matching funds, which could net an additional \$30 million in funding for Jamaica Bay marshland preservation projects.

Last month, DEP launched the second phase of the Eelgrass Restoration Project to help improve Jamaica Bay's local ecosystem. The project will consist of 1,000 individual plantings and is part of the City's efforts to improve the

overall water quality and ecology of Jamaica Bay. The project is being done in collaboration with Cornell Cooperative Extension and the National Park Service.

Jamaica Bay is a 31-square-mile water body with a broader watershed of approximately 142 square miles, which includes portions of Brooklyn, Queens, and Nassau County. The bay is a diverse ecological resource that supports multiple habitats, including open water, salt marshes, grasslands, coastal woodlands, maritime shrublands, and brackish and freshwater wetlands. These habitats support 91 fish species, 325 species of birds, and many reptile, amphibian, and small mammal species.

Mayor Bloomberg has made investing in the City's infrastructure a top priority. Since 2002, the City has invested more than \$5 billion in upgrading its 14 wastewater treatment plants. That work has already yielded benefits for New York's waterways, which are the cleanest they have been in 100 years since the City has began collecting water quality data in New York Harbor.

DEP manages the City's water supply, providing more than 1 billion gallons of water each day to more than 9 million residents, including 8 million in New York City. New York City's water is delivered from a watershed that extends more than 125 miles from the City, and comprises 19 reservoirs, and three controlled lakes. Approximately 7,000 miles of water mains, tunnels and aqueducts bring water to homes and businesses throughout the five boroughs, and 7,400 miles of sewer lines take wastewater to 14 in-City treatment plants.

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