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FOR IMMEDIATE RELEASE 14-102
December 30, 2014

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Department of Environmental Protection Completes \$83 Million Upgrade to Jamaica Wastewater Treatment Plant That Will Significantly Improve the Health of Local Waterways

DEP has Committed More Than \$187 Million to Reduce Nitrogen Discharges from the Four Wastewater Treatment Plants Located on Jamaica Bay by 50 Percent

Photos of the Work and Jamaica Bay can be viewed on DEP’s Flickr Page

New York City Department of Environmental Protection Commissioner Emily Lloyd today announced the completion of a nearly \$83 million upgrade to the Jamaica Wastewater Treatment Plant that will reduce the amount of nitrogen discharged from the facility into Jamaica Bay by approximately 6,500 pounds per day, or nearly 2.5 million pounds each year. The nitrogen reduction project included the installation of new equipment to convert the organic nitrogen present in wastewater into inert nitrogen gas that can then be released harmlessly into the atmosphere before the treated water is released into the surrounding waterways. DEP has committed more than \$187 million to reduce nitrogen discharges from the four wastewater treatment plants located on the Bay by 50 percent over the next ten years, and nearly \$20 million to wetland restoration projects within the Bay.

“Jamaica Bay is one of the city’s most diverse natural resources and protecting it

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is a top priority,” said **DEP Commissioner Emily Lloyd**. “The newly installed nitrogen reduction technology at the Jamaica Plant is part of our commitment to improving water quality, protecting the Bay as a premier wildlife refuge, and continuing the critically important work to bring back a healthier Bay for generations to come.”

State Department of Environmental Conservation Commissioner Joe Martens said, “Jamaica Bay is an outstanding natural resource that is accessible to millions of New Yorkers and provides numerous environmental benefits. DEP’s upgrades to the wastewater treatment plant and commitment to reduce nitrogen discharges at four other plants are another giant step toward the restoration and protection of Jamaica Bay and its watershed. We will continue to work closely with DEP and others to build on this project to further protect the water quality of Jamaica Bay, enhance its wetlands and habitats, and preserve its critical marshlands.”

“Clean and safe waterways benefit the quality of life of all New Yorkers and I am proud that my office was able to work with the City of New York to reduce nitrogen discharged by the City’s wastewater treatment plants into the East River and Long Island sound,” said **Attorney General Eric Schneiderman**. “This upgrade to the Jamaica Wastewater Treatment plant will protect the Bay’s precious natural resources.”

“We welcome the news of DEP’s continuing progress in reducing nitrogen discharges into Jamaica Bay—a wildlife refuge of national significance and an essential wetland that helps protect the city from coastal flooding,” said **Eric A. Goldstein, New York City Environment Director at the Natural Resources Defense Council**. “We also look forward to DEP’s further advances in curbing pollution discharges and runoff into New York’s waterways during 2015.”

“We commend DEP for the tremendous investment they have made to upgrade the Jamaica Wastewater Treatment Plant and the huge nitrogen loading reduction that these upgrades are achieving,” said **Daniel Mundy of the Jamaica Bay Eco-Watchers**. “The high nitrogen loading has long been a cause of water quality problems and we are extremely pleased to report that we are already noticing significant reductions in harmful algae blooms and increases in dissolved oxygen and water clarity due to the activation of this new technology. In addition, the wetland funding that the DEP has provided has already led to the restoration of two wetland islands that are not only critical to the ecology of the bay but also offer protection to the adjacent communities during storms.”

Nitrogen is a naturally occurring element that is found in food and other organic materials and is present in wastewater when it enters treatment plants. Because nitrogen is not a pathogen and poses no threat to human health, the wastewater treatment plants were not originally designed to remove it from the treated water before it is discharged into the receiving water body. However, high levels of nitrogen can degrade the overall ecology of a waterway by reducing levels of dissolved oxygen and promoting excessive algae growth, especially in warm weather months.

The newly installed biological nutrient removal technology at the Jamaica Plant required significant upgrades to the facility including the overhaul of the existing aeration tanks, the installation of new aeration tank influent gates, mixers, and froth control systems. In addition the upgrade included a new tapered diffuser grid, a new process air header, refurbished process air blowers, and automation of the aeration system instrumentation and control. These upgrades will help to ensure that the Plant remains in a state of good repair for decades to come.

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.

In addition to the nitrogen removal projects on Jamaica Bay, DEP is investing more than \$1 billion to reduce nitrogen discharges from the four Upper East River wastewater treatment plants—Bowery Bay, Hunts Point, Tallman Island, and Wards Island—which will reduce total nitrogen discharges from those four plants by more than 50 percent. The work is being funded by DEP and is the result of an agreement between DEP, the Office of the New York State Attorney General, and the New York State Department of Environmental Conservation.

The Jamaica Wastewater Treatment Plant was originally built in 1903 and was upgraded in the 1940s. The plant is designed to treat 100 million gallons of wastewater per day from roughly 728,000 residents living in a nearly 26,000 acre area of Southeast Queens.

DEP manages New York City's water supply, providing more than one billion gallons of water each day to more than nine million residents, including eight million in New York City. The water is delivered from a watershed that extends more than 125 miles from the city, comprising 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 7,500 miles of sewer lines and 96 pump stations take wastewater to 14 in-city treatment plants. In addition, DEP has a robust capital program, with nearly \$14 billion in investments planned over the next 10 years that will create up to 3,000 construction-related jobs per year. This capital program is responsible for critical projects like City Water Tunnel No. 3; the Staten Island Bluebelt program, an ecologically sound and cost-effective stormwater management system; the city's Watershed Protection Program, which protects sensitive lands upstate near the city's reservoirs in order to maintain their high water quality; and the installation of more than 820,000 Automated Meter Reading devices, which will allow customers to track their daily water use, more easily manage their accounts and be alerted to potential leaks on their properties. For more information, visit nyc.gov/dep, like us on nyc.gov/dep [facebook.com/nycwater](https://www.facebook.com/nycwater), or follow us on Twitter at twitter.com/nycwater.

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