DEP BUILDS ON EXPANDED EELGRASS PILOT PROJECT IN JAMAICA BAY

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The following information was released by the NYC Department of Environmental Protection:

Environmental Protection Commissioner Carter Strickland today announced the fourth phase of the Eelgrass Pilot Project to help improve Jamaica Bay's local ecosystem. The project includes an additional 8,000 eelgrass plants in Jamaica Bay near Breezy Point. This larger-scale planting is possible because of lessons learned from previous phases of the eelgrass project. Eelgrass is a type of submerged aquatic vegetation that grows in estuaries and shallow bays. It is important for fish and shellfish as shelter and habitat. Eelgrass plants form meadows on the bay bottom, where aquatic creatures such as shellfish take shelter among the grass-like leaves. They also stabilize sediments, reduce erosion and naturally remove nitrogen from the water. It is part of the city's efforts to improve the overall water quality and ecology of Jamaica Bay and is being done in collaboration with Cornell Cooperative Extension.

"Continuing our eelgrass plantings in Jamaica Bay is another important step in our efforts to improve this invaluable natural resource," said Commissioner Strickland. "Until recently, the water quality in the bay made it impossible for eel grass to survive, but years of investments in upgrading wastewater treatment make the reintroduction of eelgrass now possible. This work follows other major initiatives to improve the bay, like the historic agreement that Mayor Bloomberg announced last year with the State Department of Environmental Conservation, the Natural Resources Defense Council, and other environmental stakeholders to invest $115 million in nitrogen reduction technologies and marsh island restoration programs."

After this current planting, a biweekly monitoring effort will commence to follow the health of the eelgrass, the ambient water conditions, and the impact of local wildlife on the project. In 2009, DEP conducted an initial preliminary planting of eelgrass to develop a better understanding of the growing requirements and to refine planting locations and the timing of when they should occur. The previous plantings had mixed results and the eelgrass ultimately did not survive; the spring 2011 plantings indicate that the water quality in the planting areas is capable of supporting eelgrass, but they ultimately did not survive because of shifting sediment. The monitoring and analysis from the previous data collection phases helped establish a framework for the current planting in order to increase survival chances. As a consequence, the larger planting announced today should limit the effects of shifting sediments because of a greater buffering capacity. The current work is possible due to DEP's capital investments in the area, which have improved water quality and further planned investments may help to increase the chances that eelgrass can be returned to the bay.

Jamaica Bay is a 39-square-mile estuary within a 142 square mile watershed that 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. The bay is a critical stop for birds along the Eastern Flyway migration route and has become an internationally renowned birding destination. Portions of the bay, most notably the Jamaica Bay Wildlife Refuge, have been designated as Significant Coastal Fish and Wildlife Habitats by the federal and state governments.

The City has been making new investments to improve the overall water quality and mitigate marshland loss in Jamaica Bay. As part of a historic Jamaica Bay agreement in 2010 between the city, the state and the Natural Resources Defense Council, DEP committed to invest $100 million to install new nitrogen control technologies at wastewater treatment plants located on Jamaica Bay. The 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 percent over the next ten years. The City also will invest $15 million for marshland restoration projects around the bay. This pilot project is one of several contributing to the overall goal of reducing nitrogen and other nutrients, which can deplete the oxygen that fish and other

aquatic life need to thrive, in the 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 restore 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 $28 million in funding for Jamaica Bay marshland preservation projects.

DEP has also invested in a number of other ecological restoration projects to improve the quality of Jamaica Bay. Eelgrass and oysters were all once widespread throughout the harbor and the loss of these species means the loss of some of nature's finest filtration systems. Last year, DEP re-introduced oyster beds to Jamaica Bay for the first time since they disappeared many decades ago. A single oyster can filter roughly 35 gallons of water per day, and the 10,000 that were added will help to improve water quality by filtering out nitrogen, which can reduce oxygen levels and impact the overall ecology of a water body. In August, DEP launched a pilot ribbed mussel ecological project to help improve the overall water quality and ecology of Jamaica Bay. Like oysters, ribbed mussels are an important part of aquatic ecosystems, filtering out nitrogen and bacteria to improve water quality. The pilot project will test the effectiveness and long-term viability of using ribbed mussels to remove nutrients and other pollutants from the waters of Fresh Creek, a tributary of Jamaica Bay. As the mussels grow throughout the next two years, they are expected to fully cover the structures and filter the water passing through them to remove nutrients, bacteria, and other suspended organic substances. DEP will closely monitor the project for the next two years.

On October 20, DEP partnered with the National Park Service, Brooklyn College and New York Sea Grant to hold the second Jamaica Bay, State of the Bay: Past, Present and Future scientific symposium at Brooklyn College. This event was identified as a strategy of the Jamaica Bay Watershed Protection Plan and is a series of symposia anticipated to occur every few years to highlight ongoing and emerging research on Jamaica Bay. The event had nearly 200 attendees and 15 presentations from leading scientists and researchers covering topics such as the environmental history of Jamaica bay, water quality improvements, green infrastructure demonstration pilots and salt marsh island restoration projects.

DEP manages the 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 7,400 miles of sewer lines take wastewater to 14 in-city treatment plants. DEP employs nearly 6,000 employees, including almost 1,000 in the upstate watershed. DEP has a robust capital program, with a planned $8.9 billion in investments over the next five years. That spending is expected to create 9,000 jobs a year over the same time period. For more information, visit us on Facebook at www.facebook.com/nycwater, or follow us on Twitter at www.twitter.com/nycwater.

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