Carter Strickland
Commissioner

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DEP Announces a Pilot Program to Measure and Monitor Combined Sewer Overflow Discharges into New York Harbor

Real-Time System To Help NYC Respond to Assess Water Quality Impacts and Provide Better Public Notification

Environmental Protection Commissioner Carter Strickland today announced that DEP will install remote sensors that monitor combined sewer overflows in real time at five combined sewer overflow outfall locations. The purpose of the pilot is to allow DEP to better evaluate the impact of combined sewer overflows on harbor water quality, respond to developing emergencies, enhance the existing public notification system for overflow discharges during rain storms, and optimize the existing sewer system. Once installed, the monitors will be tested to determine how accurately they measure the volume of combined sewer overflow released at that outfall, and whether they can reliably transmit that data instantaneously.

"All of the new waterfront developments and recreational opportunities on New York City's waterways show that New York Harbor has made a stunning comeback," said Commissioner Strickland. "Years of investments, including unprecedented billions of dollars in projects committed to under Mayor Bloomberg, have proven that environmental degradation can be reversed. But there is always more work to be done, especially tackling the hundred-year-old challenge of combined sewer overflows. Our NYC Green Infrastructure Plan maps a path forward to use green installations, like green roofs and enhanced tree pits, to capture the water before it ever enters our system. We also need better data so that we can accurately measure when sewer overflows happen in real time. These new sensors should give us that critical information so that we can better quantify the environmental impact and inform the public as soon as they happen."

Like many cities in the Northeast and Midwest, during heavy storms, the New York City sewer system often reaches capacity and must discharge a mix of stormwater and wastewater—called a combined sewer overflow (CSO)—into the city's surrounding waterways. These discharges are released from the city's 423 combined sewer overflow outfalls.

The new types of real-time sensors should provide additional data that is not currently possible with the current combined sewer overflow monitoring system. Right now, the city has 108 sensors at combined sewer outfall locations, located near recreational areas. These sensors have the ability to monitor and transmit the elevation of wastewater in the underground sewer system near combined sewer overflow locations. However, the sensors do not detect the direction of flow, making it impossible to distinguish CSOs from any tidal effects. Moreover, the rate of flow is not measured, making it extremely difficult to quantify exactly how much combined sewer overflow is occurring at any given time. The goal of the new system is to measure both wastewater elevation and the rate of flow, allowing DEP to calculate the CSO volumes released at that outfall. The improved monitoring is essential to better understand the

effects of combined sewer overflows and enhance the system that alerts the public when they occur. The sensors are currently being procured, and will be installed and transmit data by the end of 2012.

The five outfall sites already selected for the pilot are at the following locations:

- Near the Navy Yard, which empties into the East River
- In Dutch Kills, which ultimately feeds into Newtown Creek
- At the Gowanus Canal
- Near Soundview Park, which empties into the Bronx River
- Near Gravesend Bay

DEP is also planning to add three additional monitoring sites in the near future at outfalls leading into the Hudson River, the upper East River and Jamaica Bay.

DEP has taken numerous steps in the past few years to increase the amount of public information on harbor water quality available to the public:

- In February 2011, DEP finished replacing combined sewer outfalls signs at a cost of $1 million with new signs that not only meet the requirements of the New York State Department of Conservation, but are easier to read from a distance, have clearer warnings for wet weather events, and have graphic images that convey unambiguous warnings about recreational use to English and non-English speakers alike;
- DEP has created a Waterbody Advisory webpage, available at www.nyc.gov/dep, showing real-time advisories for secondary contact—such as boating—for 25 waterbodies, that is being continuously improved;
- In September 2011, DEP, for the first time ever, started posting weekly harbor water quality data online, available at www.nyc.gov/dep, in advance of distributing an annual report that has been compiled since 1909.

DEP also committed to integrate waterbody advisories into the NotifyNYC system, potentially allowing users to request notifications about specific water bodies.

New Yorkers produce, and the Department of Environmental Protection treats, more than 1.3 billion gallons of wastewater every day. The wastewater is collected through 7,400 miles of lateral sewers that flow downhill into large interceptor sewers, which lead directly to the city's 14 wastewater treatment plants. The plants have the capacity to handle New York City's wastewater on any dry day, and twice that amount during wet weather. Two-thirds of New York City's sewered areas have a combined sewer system that collects wastewater and stormwater runoff together in the same pipe from properties and streets. During heavy rainstorms, treatment plants can reach their capacity and to relieve the sewage system, the interceptor sewers have "regulators" equipped with overflow weirs that divert combined stormwater and wastewater into New York City's surrounding waterways through 423 sewer outfalls.

Reducing the environmental impact of combined sewer overflows has been a significant priority for New York City. Upgrades to the city's wastewater treatment plants and sewers, including roughly $6 billion to upgrade wastewater treatment plants and approximately $1 billion to reduce combined sewer overflows since 2002, have allowed for the capture a greater amount of overall flow, from about 30% in the 1980s to more than 72% today, and overflows are more

dilute, with the percentage of sanitary waste decreasing from 30% in 1980 to approximately 12% today. The city has also produced the NYC Green Infrastructure Plan to drastically cut combined sewer overflows even further over the next 20 years. More information on the plan can be found at www.nyc.gov/dep/greeninfrastructure.

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. DEP employs nearly 6,000 employees, including almost 1,000 in the upstate watershed. DEP has a robust capital program with a planned $13.2 billion in investments over the next 10 years that creates up to 3,000 construction-related jobs per year. 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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