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## **DEP** Completes Cleaning of Large Sewers in Northeast Queens

Vacuum Trucks Cleared Whitestone's Drainage Area to Avoid Millions of Gallons of Combined Sewer Overflows into Flushing and Little Neck Bay

Environmental Protection Commissioner Carter Strickland today announced the completion of the cleaning of large sewers in Northeast Queens using new state-of-the-art Vactor trucks. The cleaning of 40,171 feet of large sewers—called interceptors—removed roughly 2,204 cubic yards of debris weighing 3,416 tons. The work performed by DEP crews and a contractor will increase the amount of flow that local sewers can carry to the Tallman Island Wastewater Treatment Plant because cleaned interceptors help convey more stormwater during heavy rains. During storms, parts of the sewer system often reach capacity, and must discharge a mix of storm water and wastewater—called a combined sewer overflow, or CSO—into New York City's surrounding waterways. The additional sewer capacity made available through this work will help reduce up to an estimated 45 million gallons of CSOs a year into Flushing Bay and Little Neck Bay.

"The cleaning of the Northeast Queens interceptors will prevent up to 45 million gallons annually of combined sewer overflows from being discharged into Flushing and Little Neck Bay," said Commissioner Strickland. "This cost-effective and efficient solution to one of the city's longest-standing water quality challenges will maximize the value of existing infrastructure, without having to pay for costly new capital projects. Cleaning and optimizing all 136 miles of our interceptor sewers is an essential part of Mayor Bloomberg's Green Infrastructure Plan, which is designed to save billions of dollars by implementing smart environmental practices that will greatly improve overall harbor water quality for decades to come."

The Tallman Island sewer system consists of three interceptors—College Point, Whitestone and Flushing/Main—covering14.1 miles, including many smaller sewers attached to the interceptors. The two DEP Vactor trucks and one Vactor truck operated by a contractor took roughly three months to clean this area. The pipes range from 30 to 84 inches in diameter and width. The Northeast Queens drainage area of approximately 23.3 square miles conveys about 65 million gallons a day to the Tallman Island Wastewater Treatment Plant. The two DEP Vactor trucks and contractor truck will now proceed to clean the drainage area that is serviced by the Port Richmond Wastewater Treatment Plant.

Northeast Queens is one of the areas that DEP has targeted to be cleaned after an inspection of the entire sewer sytem. To locate debris and sediments that have accumulated over the years, DEP used sonar technology and closed circuit television to survey the sewers in targeted areas. Southeast Queens was the first area to be cleaned, with workers removing 1,562 tons of debris from the interceptors. Since then, DEP has surveyed the Tallman Island sewer system and, once areas with debris were identified, DEP used powerful vacuum systems in the Vactor trucks to suck out debris and sediments. Other areas that have been cleaned by Vactor

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trucks are 26<sup>th</sup> Ward, Jamaica, Newtown Creek, and Rockaway. The remaining areas to be cleaned are Bowery Bay, Owls Head, Oakwood Beach, Coney Island and Wards Island. DEP expects to finish cleaning the city's interceptors by June of this year.

The diesel-powered Vactor trucks use a 30-foot hose to vacuum debris from sewers which are accessed through manholes that connect to the system. The trucks also have a water jet to clear clogs in the sewers. The vacuum pump is attached to the truck's intake vacuum tube which is lowered into the storm drain and the drain is flushed from all angles with the water coming from the tanks. The water helps the vacuum to suck up all the sediment and illegally dumped debris that can build up over many years in certain areas of the sewer system. The two trucks now in service can each collect up to 19 tons of sediment and debris each day. When the Vactor trucks are full, the sediment and debris are transported to the Wards Island Wastewater Treatment Plant in Manhattan, where it is removed from the truck and placed in containers for transport to a landfill.

DEP's goal is to clean all 136 miles of interceptors proactively within two years of when the program was launched in 2010. Interceptors used to be cleaned by contractors when they were heavily clogged or in response to emergencies. Now, interceptor cleaning has become a routine part of daily operations for DEP's in-house forces. Sewer interceptors range up to 10 feet in diameter and are the last stop for wastewater flow before it is conveyed to the city's 14 wastewater treatment plants. The interceptors receive wastewater flow from the city's 7,400 miles of trunk sewer mains and lateral sewers, which take flow from homes, businesses and catch basins on streets.

Optimizing the wastewater system is also a key element of the NYC Green Infrastructure Plan that was unveiled by Mayor Bloomberg in September 2010. The plan will improve harbor water quality by capturing and retaining stormwater runoff before it enters the sewer system. The plan, which includes \$2.4 billion of public and private investment in green infrastructure and cost-effective grey infrastructure investments, will reduce sewer overflows by 40% by 2030. The State Department of Environmental Conservation and DEP recently announced a new agreement to let the city move forward with this groundbreaking plan. Green infrastructure uses vegetation, soils, and other structural elements to absorb and evaporate water and to mimic natural areas and hydrologic cycles. These types of projects are a key component of PlaNYC's sustainability effort because they also shade and cool the city, improve air quality, and increase property values. The Flushing Bay watershed is one of the target areas in the city to receive green infrastructure first, and DEP just released a RFP for design services valued at \$8 million for the Flushing Bay areas.

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 and 95 pump stations 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 \$13.2 billion in investments over the next 10 years that creates up to 3,000 construction-related jobs per year. For more information, like us on Facebook at www.facebook.com/nycwater, or follow us on Twitter at www.twitter.com/nycwater.

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