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# FOR IMMEDIATE RELEASE 17-97

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# Department of Environmental Protection Investing \$400 Million in Resiliency Upgrades at New York City's Critical Wastewater Facilities

Wastewater Infrastructure Valued at More Than \$1 Billion At-Risk From Rising Sea Levels and Storm Surge Events

\$400 Million in Upgrades Will Safeguard Equipment, Minimize Disruption in Critical Services and Help to Protect the Environment and Public Health

The New York City Department of Environmental Protection (DEP) today announced that work is underway on approximately \$400 million in resiliency upgrades at the City's critical wastewater collection and treatment facilities to help protect them from rising sea levels and storm surge events. The work is part of the NYC Wastewater Resiliency Plan and includes raising critical equipment above the flood plain, installing floodgates and waterproofing rooms and buildings. Work has already been completed at the Manhattan and Gowanus Canal Pumping Stations, and is currently underway at the North River Wastewater Treatment Plant. Work will begin shortly at the Tallman Island and Wards Island Wastewater Treatment Plants, while upgrades are being designed for several other facilities.

"Our mission at DEP is to protect public health and the environment and this means that our wastewater infrastructure must be hardened against rising sea levels and storm surge events," said **DEP Commissioner Vincent Sapienza**. "The groundbreaking NYC Wastewater Resiliency Plan analyzed our entire system and as we complete each of the upgrade projects, our wastewater system becomes more resilient and New York City is better prepared for a changing climate."

Council Member Costa Constantinides, Chair of the Council's Environmental Protection Committee, said, "This \$400 million investment will make our wastewater facilities more resilient to storm surge and rising sea levels, issues which have been exacerbated due to climate change. This plan will protect our city's infrastructure and our environmental health at the same time. I commend DEP Commissioner Sapienza for his leadership on this vital issue."

The groundbreaking plan includes an asset-by-asset analysis of the risks from storm surge under new flood maps at all 14 wastewater treatment plants and 58 pumping stations, representing more than \$1 billion in infrastructure. If no action were taken, it is estimated that damage to the equipment from repeated coastal flooding at projected sea levels could exceed \$2 billion over the next 50 years. The analysis recommended a host of cost-effective upgrades at these facilities to protect valuable equipment and minimize disruptions to critical services during future storms.

## More Information

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NYC Department of Environmental Protection Public Affairs

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DEP operates 7,500 miles of sewers, 96 pumping stations, and 14 wastewater treatment plants that employ advanced biological and chemical processes to treat more than 1.3 billion gallons of wastewater to federal Clean Water Act standards every day. Hurricane Sandy's storm surge inundated many of the facilities with sea water that damaged pumps and electrical equipment. DEP staff worked around the clock, in often dangerous conditions, to maintain or restore service and, just four days after the storm, 99 percent of all New York City wastewater was being treated. DEP also enacted a number of emergency preparedness and response plans prior to the storm to protect its facilities. Those measures prevented much higher costs and significantly longer service disruptions. In total, 10 of the City's 14 treatment plants, and 42 of the City's 96 pumping stations, were damaged during Sandy requiring more than \$100 million in repairs.

The New York City Wastewater Resiliency Plan presents an assessment of the facilities identified as at-risk for flooding, potential costs of future damages, and suggested protective measures, such as elevating and water proofing critical equipment to reduce the risk of damage and loss of services. The study, the first to assess coastal flooding risks based on fine resolution maps and a detailed analysis of the elevation of individual components of the wastewater system, serves as a national model.

The Federal Emergency Management Agency's new advisory base flood elevation maps for a 100-year flood event were selected as the baseline for the analysis. An additional 40 inches of flooding was added to this baseline to account for expected sea level rise by the 2050s, the high end of projections from the New York City Panel on Climate Change. Flood pathways at each DEP facility and the location of critical equipment were then compared to the anticipated flood elevation level to determine which infrastructure is potentially at risk. In determining the appropriate resiliency measures and the level of acceptable costs, DEP considered the value of each asset at wastewater treatment plants and pump stations, the population and critical facilities they serve, and potential impacts on nearby beaches and waterways. Cost-effective protective measures, such as elevating equipment, water proofing buildings, and replacing traditional pumps with submersible pumps, were then selected based upon cost and level of risk reduction. The result is a portfolio of strategies that will be implemented as part of future capital projects or as other funding mechanisms are identified.

DEP manages New York City's water supply, providing approximately 1 billion gallons of high quality drinking water each day to more than 9 million residents, including 8.5 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. DEP has nearly 6,000 employees, including almost 1,000 in the upstate watershed. In addition, DEP has a robust capital program that will create up to 3,000 construction-related jobs per year. For more information, visit nyc.gov/dep, like us on Facebook, or follow us on Twitter.

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