

FACT SHEET 2: EXISTING INFRASTRUCTURE

Structural Integrity of the Cedar Creek WPCP Ocean Outfall

The existing Cedar Creek Water Pollution Control Plant's (WPCP) outfall pipeline and diffuser array continues to undergo inspection, testing and maintenance necessary to maintain the current level of discharge of treated water from the Cedar Creek WPCP and convey the additional flow from the South Shore Water Reclamation Facility (previously known as the Bay Park Sewage Treatment Plant). No structural issues have been identified, and routine inspections will continue to ensure that the outfall remains fully functional. The Cedar Creek WPCP ocean outfall was constructed in 1971 and is expected to have a design life of approximately 100 years.

As part of the Bay Park Conveyance Project (Project), the Design-Builder will be performing a full inspection and cleaning and make any required repairs of the outfall pipe network. At the completion of the Project, the Cedar Creek ocean outfall will continue to be monitored and undergo routine inspections as needed.

Recent Cedar Creek WPCP Upgrades

Several substantial upgrades have been made at the Cedar Creek WPCP recently. Over the past few years, the following upgrades have been completed:

- Influent Screening Facility Improvements
- Grit Collection Improvements
- Odor Control Facility Improvements
- Protected & Domestic Water System Improvements
- Effluent Screens Improvements
- Sludge Reduction

The Project will result in additional upgrades to the Cedar Creek WPCP, including new tides pumps, repairs to the outfall diffuser (which was damaged by a fishing net), and a deep cleaning of the ocean outfall. These upgrades will further improve the reliability of the Cedar Creek WPCP.

Capacity of the Cedar Creek WPCP Ocean Outfall

The ocean outfall from the Cedar Creek WPCP has a working capacity of 150 million gallons per day (MGD). The existing outfall can carry the average daily flows of both the Cedar Creek WPCP and South Shore Water Reclamation Facility, which each range from 50-60 MGD. These average daily flows can be accommodated without reaching the working capacity of the outfall pipe, much less the design capacity.

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Current Effluent at Cedar Creek WPCP & South Shore Water Reclamation Facility

Wastewater treatment plants are required to monitor and report discharge flow quality and quantity to the New York State Department of Environmental Conservation (NYSDEC) in regular Discharge Monitoring Reports to ensure compliance with State Pollutant Discharge Elimination System (SPDES) permit limits. Discharge Monitoring Report data for both the South Shore Water Reclamation Facility and the Cedar Creek WPCP are available on the EPA's website:

<https://echo.epa.gov/trends/loading-tool/water-pollution-search>

The existing Cedar Creek WPCP ocean outfall has sufficient capacity to handle expected combined flows from the South Shore Water Reclamation Facility. Please refer to the previous section, Capacity of the Cedar Creek WPCP Ocean Outfall.

Current Monitoring at Cedar Creek WPCP & South Shore Water Reclamation Facility

The South Shore Water Reclamation Facility will continue to treat wastewater to meet the SPDES permit requirements issued by the NYSDEC and will not transport untreated water, solids or sludge through the force main to the Cedar Creek ocean outfall. The NYSDEC permit will ensure that conveying the treated water from the South Shore Water Reclamation Facility will continue to meet the applicable water quality standards. There are numerous parameters currently monitored and sampled at the South Shore Water Reclamation Facility and the Cedar Creek WPCP prior to discharge, pursuant to SPDES permits, including:

- Biological Oxygen Demand (BOD)
- pH
- Volatile and semi-volatile organic compounds
- Suspended solids
- Metals
- Nitrogen, phosphorus, chlorine
- Coliform

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The Sunrise Highway Aqueduct

As part of the Project, an abandoned aqueduct beneath Sunrise Highway will be repurposed. The aqueduct was originally used to convey water from wells in Nassau County to consumers in New York City. However, it has not been used since the 1960s and there are no plans to use this infrastructure for drinking water distribution. Therefore, Nassau County has determined this asset is best used to convey treated wastewater. Nassau County performed a thorough evaluation of the aqueduct in 2017 and determined it is of sufficient integrity to be used for this conveyance.

Construction along Sunrise Highway will consist of installing a new pipe within the existing aqueduct in a process known as sliplining. The completed construction will include a newly placed and pressure tested fiberglass reinforced pipe with grout encasing the new pipe within the existing steel pipe. This final condition will provide greatly improved structural integrity and be watertight. The new pipe will form a portion of the force main that will convey the treated water from the South Shore Water Reclamation Facility to the Cedar Creek ocean outfall.