

FACT SHEET 4: POTENTIAL ENVIRONMENTAL EFFECTS FROM THE PROJECT

Effects on the Shoreline, Wildlife and Recreation

The South Shore Water Reclamation Facility (previously known as the Bay Park Sewage Treatment Plant) and the Cedar Creek Water Pollution Control Plant (WPCP) will continue to treat wastewater to meet the State Pollutant Discharge Elimination System (SPDES) permit requirements issued by the New York State Department of Environmental Conservation (NYSDEC). The treated water will be discharged approximately three miles offshore via the Cedar Creek WPCP ocean outfall to a one-mile-long diffuser array containing 120 diffuser ports. Studies by the State University of New York School of Marine and Atmospheric Sciences (SoMAS) indicate that the current discharge from the Cedar Creek WPCP ocean outfall and diffuser array has a minor and localized (approximately three miles offshore) impact on water quality. The added discharge of treated water from the South Shore Water Reclamation Facility into the Atlantic Ocean via the Cedar Creek WPCP's ocean outfall would not be expected to result in a measurable change in water quality and is not expected to impact wildlife or recreational opportunities along the shoreline. The SoMAS report can be found on the here: <https://www.bayparkconveyance.org/resources>.

Effects from Additional Effluent

As described above, the added treated water from the South Shore Water Reclamation Facility into the Atlantic Ocean via the Cedar Creek ocean outfall would not be expected to result in a measurable change in water quality. The total flow discharged from the Cedar Creek outfall will mix with ocean waters and dissipate. The Cedar Creek outfall and diffuser system are approximately three miles offshore of Jones Beach Island. Based on a thorough study of the mixing and dilution zone for the Cedar Creek outfall and diffuser system, a chronic dilution factor of 70 was determined. A value of 70 is very good and reflects the field tests that proved that effluent constituents from the outfall are diluted to background levels of the Atlantic Ocean within 95 meters of the diffusers, far from the shoreline. The higher the chronic dilution factor, the more quickly the influence of the outfall flow is dispersed. This level of dilution is indicative of a well-designed and effective ocean outfall diffuser system.

In addition, Nassau County has recently added a Biological Nitrogen Reduction treatment process at the South Shore Water Reclamation Facility reducing the nitrogen content of the treated water; therefore, the diverted water from the South Shore Water Reclamation Facility will contain less nitrogen than that from the Cedar Creek WPCP.

Effects from Additional Pumping Station at the South Shore Water Reclamation Facility

A new pump station will be constructed within the South Shore Water Reclamation Facility property to convey treated water through the new force main segments and the rehabilitated aqueduct to the Cedar Creek WPCP's ocean outfall. No additional pump stations are required along the force main. The National Environmental Policy Act Environmental Assessment concluded that potential noise levels from the new pump station at the South Shore Water Reclamation Facility would have no impact on ambient noise levels outside of the South Shore Water Reclamation Facility property.