

## A Decade After Sandy, PVSC's Quest For Maximum Preparedness Continues



October 29th will mark the 10<sup>th</sup> anniversary of Superstorm Sandy making landfall in New Jersey (at approximately 7:30 pm in Brigantine). Sandy was the most destructive, most deadly and one of the most costly natural disasters in the history of the United States. The intensity at landfall in New Jersey was estimated at 80 miles per hour. The highest winds were recorded along the shore, but the storm's gale-force winds extended well inland, through New Jersey and even well into eastern Pennsylvania.

Sandy hit PVSC's district in the form of an historic, 12-foot storm surge propelled from the Atlantic Ocean. It slammed into New York Harbor and Newark Bay and then into the Passaic and Hackensack Rivers.

The surge knocked PVSC completely offline for almost three days, causing hundreds of millions of gallons of untreated sewage to be released into area waterways. About 200 million gallons of combined bay, rain and wastewater inundated PVSC's 5,000-foot underground utility tunnels. That destroyed much of PVSC's critical process equipment.

Ten years after Sandy, though, PVSC is the model of recovery and resiliency. PVSC's many hard-working and dedicated employees were resolute in coming together to meet significant challenges head-on. Together, they rose to the occasion to help us reconstruct the plant and come back stronger and more unified than ever before.

Our Board of Commissioners, meanwhile, were unwavering in providing invaluable leadership as the agency rebuilt and modernized, while remaining extremely responsive to its 48 contributing municipalities and 1.5 million ratepayers.

A natural disaster resiliency project ensued in the immediate aftermath of the catastrophic damage caused to PVSC by Sandy. The plan was created by the Federal Emergency Management Agency ("FEMA") in collaboration with the United States Environmental Protection Agency, the United States Army Corps of Engineers, and the New Jersey Department of Environmental Protection.

It is a massive undertaking that will likely cost more than \$700 million dollars once it is completed. It is being 90% funded by FEMA. (Continued On P. 2)



*Images (clockwise from the top): Superstorm Sandy's trajectory on October 29, 2012; our clarifiers completely submerged after the storm; damages along PVSC's dock on Newark Bay after the storm; a stairwell into our tunnel completely submerged after the storm; waves harshly crashing into a bulkhead on our dock along Newark Bay during the storm.*





(Continued From P.1) The resiliency project has several main elements, including, but not limited to:

- Construction of a permanent, two-zone, 12,590-foot long, 10-to-12-foot high floodwall that will encircle PVSC's facilities. This enormous, cast-in-place concrete wall will protect the east and west sides of the plant from possible flooding. The project is approximately 40% complete. Its approximate anticipated completion date is the end of 2024.
- Installation of improved internal floodwater collection systems and three massive pumping stations to remove rainwater (contained by the floodwall) from inside the facility. All three pump stations will consist of a 45-foot deep wet well, a pre-engineered metal building, vertical turbine pumps, discharge piping, fittings, valves, and extensive electrical controls. The timetable is similar to the timetable for the floodwall.
- Construction of a 34-megawatt on-site Standby Power Generation Facility to run the plant in case of a loss of power from the grid for any reason, be it caused by nature, intentional acts, or unknown causes. PVSC cannot be without power for seven to 10 hours, let alone several days or even a week.
- The plant-wide replacement and relocation of switchgear and motor control centers. This project is substantially complete.
- The plant-wide replacement of electrical cables and utility tunnel bulkheads. This project is in its early stages.



The need for such a robust resiliency plan is clear. The frequency of large-scale, weather-related disasters around the country has climbed steadily in the last decade. Last month, Hurricane Ian provided us with a reminder of that fact as it plowed through Florida. Ian caused massive flooding and major power outages, and badly damaged homes, transportation infrastructures, sewer systems and wastewater treatment plants.

"The devastating effect that Hurricane Ian had on Florida is not lost on PVSC," said PVSC Executive Director Gregory Tramontozzi. "It served as a reminder of the need to be prepared for the problems that severe weather can bring. PVSC's recovery is just as much about building a stronger future as it is about repairing past damages. I am confident that our resiliency and plant-hardening projects are preparing us in the event that a storm like Ian strikes here."

*Images (clockwise from the top): The interior of the floodwall along Wilson Avenue; an automatic, heavy-duty gate being installed near the intersection of Avenue P and Rutherford Street; work being performed on one of PVSC's pump station wet-wells; drainage piping for PVSC's floodwater collection system being installed.*

While addressing storm-related concerns, PVSC continues to effectively and efficiently operate the fifth largest wastewater treatment plant in the United States and continues to fulfill its role as good environmental stewards by consistently removing polluting matter from Newark Bay, the Passaic River and its tributaries. All the while, PVSC has continued to conduct its critical operations while charging user charges to its ratepayers that are well below the national average and, indeed, among the lowest in the United States.

