

Cranston Wastewater Treatment Facility - CLIMATE VULNERABILITY SUMMARY



Cranston WWTF is located at 140 Pettaconsett Avenue in Cranston. It treats an average of 13.2 million gallons of wastewater per day, serving approximately 73,200 customers in Cranston. The WWTF shares the site with an incinerator capable of processing 66 dry tons of sludge per day. Additional information is on the back of this summary.



TOP 3 HAZARD MODELING RESULTS



Inundation of six pump stations (Allard, Burnham, Mayflower, Pontiac, Randall, and Youlden) at the 100-year plus 2' event.



Inundation of chlorine contact tanks at the 100-year plus 2' event and inundation of the disinfection and sludge thickening buildings at the 100-year plus 3' event.

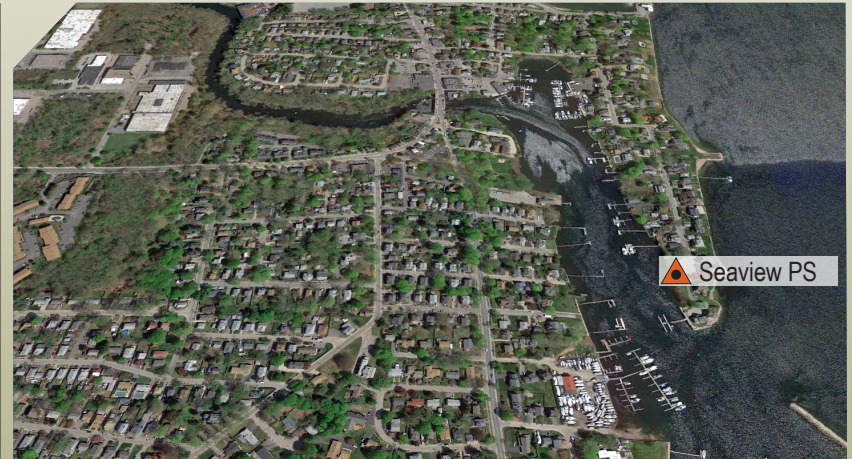


Seaview PS inundation at 100-year level. Mayflower PS inundation at 100-year level plus 1 foot.



Legend

- Treatment Plant
- Pump Station
- Approx. Parcel Boundary
- 100-Year Flood Level
- 100-Year Flood Level Plus 1' SLR
- 100-Year Flood Level Plus 2' SLR
- 100-Year Flood Level Plus 3' SLR
- 100-Year Flood Level Plus 5' SLR



COMPLETED CLIMATE CHANGE ADAPTATION MEASURES

A permanent emergency generator was installed for the aeration blowers in 2014. Other recent mitigation efforts include flood proofing all pump stations and their respective generators that are located in the floodplain.

CRANSTON, RI - CLIMATE VULNERABILITY SUMMARY

FACILITY SUMMARY	
Owner	City of Cranston
Operator	Veolia Water
Facility Address	140 Pettaconsett Avenue Cranston, RI 02920
Contact Name	Earl Salisbury, Superintendent
Phone	401.467.7210
Design Flow Capacity	20.2 MGD
Average Daily Flow	13.2 MGD
Receiving Water	Pawtuxet River
Extreme Weather Related SSO Events 2010 - 2014	3 out of 17 events or 18%

The Cranston WWTF has an extensive underground pipe gallery system. Equipment previously stored in the flood-vulnerable basements and pipe galleries have been moved to the higher points within the pipe gallery system.

The vast majority of concern with the Cranston process is with the collection system where multiple pump stations have experienced either flooding or flows exceeding the PS capacity.

ADAPTIVE STRATEGIES (SEE REPORT FOR COMPLETE LIST)					
SYSTEM	Hardening	Relocating	Readily Repairable/ Replaceable	Redundancy	Mitigation Strategy
Primary Clarifiers	A		B	B	Protect pipe gallery with flood barriers. Store replacement drive components on site. Pumps may be temporarily augmented.
Disinfection System (Chlorine Contact Tanks)	A	B			Elevate critical equipment or relocate critical equipment and tanks to elevated location.
Solids Handling	A				Protect building with flood barriers.
Pontiac Avenue PS	A				Protect building with flood barriers. Elevate generator equipment.
Randall PS	A				Protect building with flood barriers. Elevate generator equipment.

A = < \$50,000 B = \$50,000 to \$250,000 C = \$250,000 - \$1,000,000 D = > \$1,000,000