

Bristol Wastewater Treatment Facility - CLIMATE VULNERABILITY SUMMARY



Bristol WWTF is located at 2 Plant Street in Bristol, approximately 1,000 feet inland from Bristol Harbor. It treats an average of 2.8 million gallons of wastewater per day, serving approximately 20,700 customers in the community. Additional information is on the back of this summary.



TOP 3 HAZARD MODELING RESULTS



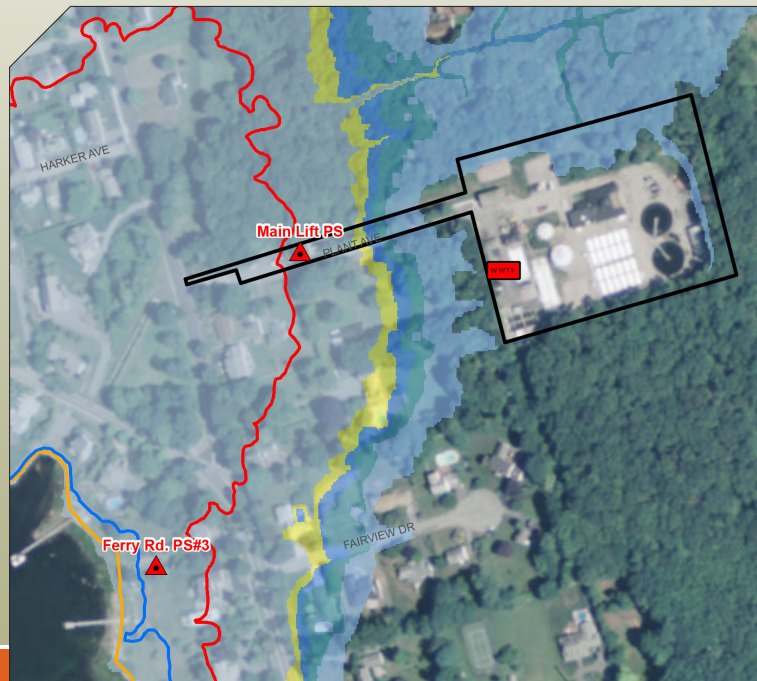
The facility itself will not be inundated during a 100-year storm but the access road will be with a water depth of 5-6 feet at the driveway entrance.



Main Lift Pump Station inundated by 100-year storm.



100-year shoreline is predicted to encroach on the access road unless active protection measures are implemented.



Legend

- Treatment Plant
- Pump Station
- Approx. Parcel Boundary

COASTAL HAZARDS

- 2115 Shoreline
- 2065 Shoreline
- 2040 Shoreline
- 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



CLIMATE CHANGE ADAPTATION MEASURES UNDERWAY

Design and permitting is underway to construct drainage infrastructure on the south side of the property to mitigate local flooding experienced during recent rain events.

BRISTOL, RI - CLIMATE VULNERABILITY SUMMARY

FACILITY SUMMARY	
Owner	Town of Bristol
Operator	Town of Bristol
Facility Address	2 Plant Avenue Bristol, RI 02809
Contact Name	Jose DaSilva, Superintendent
Phone	401.253.8877
Design Flow Capacity	3.8 MGD
Average Daily Flow	2.8 MGD
Receiving Water	Bristol Harbor
Extreme Weather Related SSO Events 2010 - 2014	14 out of 24 events or 58%

<p>The WWTF experiences localized flooding from Tanyard Brook to the north, west, and adjacent wetlands to the south. New drainage infrastructure is planned to mitigate this flooding source.</p>	<p>I&I, combined with limited plant capacity, leads to sewage overflows during wet weather throughout town, which have negative impacts on Bristol Harbor, Narragansett Bay, Kickemuit River, and Mount Hope Bay.</p>
<p>Inflow and/or infiltration into the collection system is of significant concern. WWTF operators note rapid increases in flow from 4 MGD up to 14 MGD during storm events. The treatment facility regulates influent by allowing only one of two 14 MGD screw pumps to operate at any one time.</p>	<p>Sump pumps connected to the Town sewer system are a major cause of the overflows. The Town was ordered by RIDEM and EPA to start a program to remove sump pump discharges from entering the sewer system.</p>

ADAPTIVE STRATEGIES (SEE REPORT FOR COMPLETE LIST)						
SYSTEM	Hardening	Relocating	Readily Repairable/ Replaceable	Redundancy	Bypass	Mitigation Strategy
Main Lift PS (Influent Screw Pumps)					C	Provide alternate route for influent from second screw pump to disinfection and discharge if primary and secondary treatment is flooded.
Disinfection System (Chlorine Contact Tanks)	B					Protect building with flood barriers and elevate critical equipment. Raise contact tank perimeter walls.
Operations Building / Generator	A	C				Protect building with flood barriers and elevate critical equipment. Provide alternative access road to facility from higher ground.
Constitution PS	A	D				Elevate pump station building above flood elevation, or relocate pump station inland.

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