

# East Greenwich Wastewater Treatment Facility - CLIMATE VULNERABILITY SUMMARY



East Greenwich WWTF is located at 21 Crompton Avenue in East Greenwich. It treats an average of 0.8 million gallons of wastewater per day, serving approximately 6,000 customers in the community. Additional information is on the back of this summary.



## TOP 3 HAZARD MODELING RESULTS

Coastal Flood Hazard

Most of the facility would be inundated by storm surge at the 100-year return period.

Significant Wave Height for 100-year Event

5 feet at the existing shoreline during 100-year event.

Shoreline Change

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**

- Wave Transect
- 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



## COMPLETED CLIMATE CHANGE ADAPTATION MEASURES

The plant's influent pump station and tertiary treatment systems were recently upgraded with dry-mounted submersible pumps.

# EAST GREENWICH, RI - CLIMATE VULNERABILITY SUMMARY

FACILITY SUMMARY	
<b>Owner</b>	Town of East Greenwich
<b>Operator</b>	Town of East Greenwich
<b>Facility Address</b>	21 Crompton Avenue East Greenwich, RI 02818
<b>Contact Name</b>	Shawn O'Neill, Superintendent
<b>Phone</b>	401.886.8619
<b>Design Flow Capacity</b>	1.7 MGD
<b>Average Daily Flow</b>	0.8 MGD
<b>Receiving Water</b>	Greenwich Cove
<b>Extreme Weather Related SSO Events 2010 - 2014</b>	1 out of 22 events or 5%

The facility arrangement is unusual in that while the access roads that surround the facility are at a relatively low elevation, many of the process components are operated from elevated locations within a main building on the site, protecting them from flood hazards.

The Cedar Heights pump station is adjacent to a small stream, which could potentially hinder access to the site during significant rain events, due to the lack of a paved access road and the low access bridge crossing the stream.

The main facility and pump stations have permanent pumping redundancy and back-up power systems although operators identified a need for a new generator to improve standby power capabilities at the plant and pump stations.

ADAPTIVE STRATEGIES (SEE REPORT FOR COMPLETE LIST)					
SYSTEM	Hardening	Relocating	Readily Repairable/ Replaceable	Redundancy	Mitigation Strategy
Influent Pump Station (Dry-Pit Submersibles)	A				Protect facility entrances with flood barriers.
Primary Clarifiers	A		B	B	Protect facility entrances with flood barriers. Store replacement drive components on-site. Pumps may be temporarily augmented.
Disinfection System (UV)	A	A			Elevate disinfection equipment and relocate electrical equipment (transformer) to higher elevation.
Operations Building	A				Protect facility entrances into critical areas (generator room) with flood barriers.
Cedar Heights PS	A				Elevate electrical equipment above grade.

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