

Smithfield Wastewater Treatment Facility - CLIMATE VULNERABILITY SUMMARY



The Smithfield WWTF is located at 20 Esmond Mill Drive in Smithfield. It treats an average of 3.5 million gallons of wastewater per day, serving approximately 14,000 customers in Smithfield. Additional information is on the back of this summary.



Woonasquatucket River

TOP 2 HAZARD MODELING RESULTS



Partial inundation of the WWTF at the 100-year level plus 2 feet, with a water depth of 5 feet in the access road

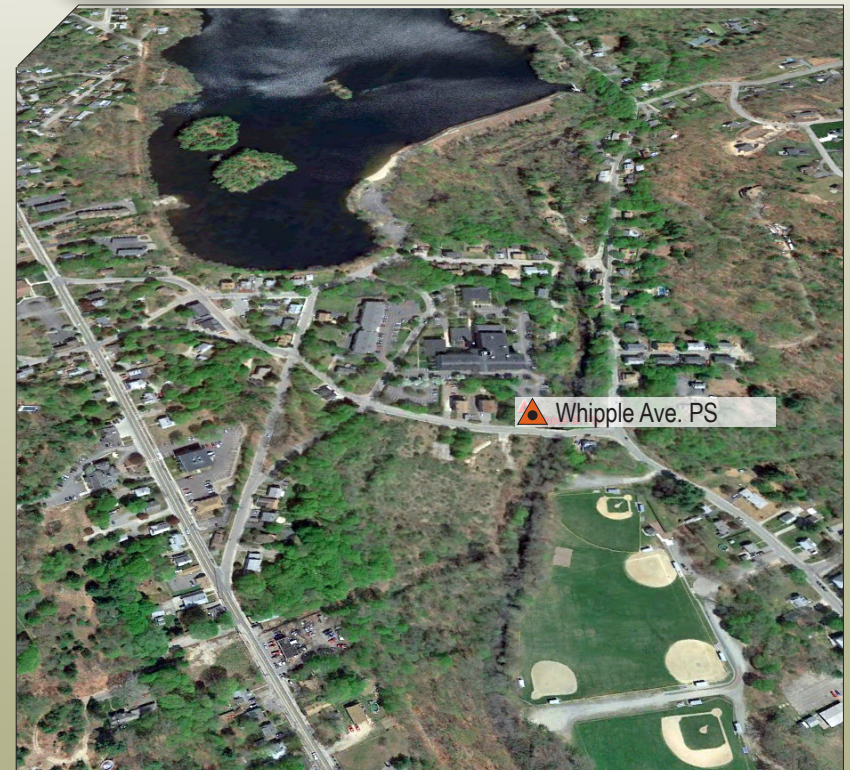


Inundation of the Whipple Ave. PS and Camp Street PS at the 100-year level plus 2 feet



Legend

- Treatment Plant
- ▲ Pump Station
- Approx. Parcel Boundary
- 100-Year Flood Level plus 2 ft
- 100-Year Flood Level plus 3 ft



▲ Whipple Ave. PS

SMITHFIELD, RI - CLIMATE VULNERABILITY SUMMARY

FACILITY SUMMARY	
Owner	Town of Smithfield
Operator	Veolia Water
Facility Address	20 Esmond Mill Drive Smithfield, RI 02917
Contact Name	Karen Goffe, Superintendent
Phone	401.231.1506
Design Flow Capacity	3.5 MGD
Average Daily Flow	1.4 MGD
Receiving Water	Woonasquatucket River
Extreme Weather Related SSO Events 2010 - 2014	1 out of 10 events or 10%

The March 2010 storms caused multiple operational failures with the collection and treatment systems, including:

- Inundation of the Whipple Ave. PS and Camp Street PS
- Capacity shortfalls with the Roger Williams Drive PS and the Farnum Pike PS, which required augmentation with vacuum trucks
- Inundation of the WWTF access road, which necessitated access via a property easement
- Inundation of the disinfection system

ADAPTIVE STRATEGIES (SEE REPORT FOR COMPLETE LIST)				
SYSTEM	Hardening	Readily Repairable/ Replaceable	Redundancy	Mitigation Strategy
Primary Clarifiers (Rectangular)	B	B	B	Protect facility entrances with flood barriers. Extend tank perimeter wall upward. Store replacement drive components on site. Pumps may be temporarily augmented. Replace sludge pumps with submersibles.
Intermediate Pump Station	A			Protect facility entrances with flood barriers.
Operations/Administration Building	A			Protect facility entrances with flood barriers.
Whipple Avenue PS	A			Protect facility entrances with flood barriers.
Camp Street PS	A			Protect facility entrances with flood barriers.

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