Quonset Point Wastewater Treatment Facility - CLIMATE VULNERABILITY SUMMARY

Quonset Point WWTF is located at 150 Zarbo Avenue in North Kingstown. It treats an average of 0.49 million gallons of wastewater per day, serving approximately 10,000 commercial and industrial customers in the Quonset Business Park. New connections are expected to contribute up 200,000 gpd over the next 5 years. Additional information is on the back of this summary.

WOODARD &CURRAN

TOP 4 HAZARD MODELING RESULTS

1 Coastal Flood Hazards

WWTF inundation by storm surge at the 100-year return period with a water depth of 1-5 feet throughout the site.

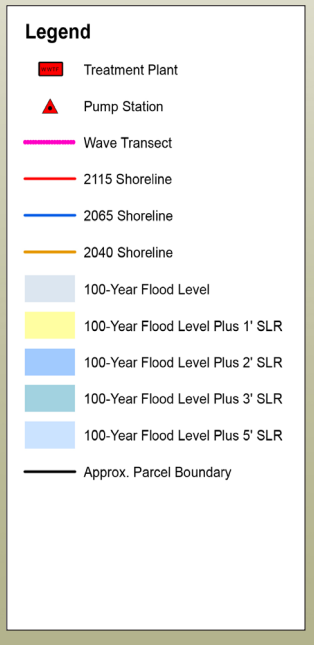
2 Significant Wave Height for 100-year Event

Davisville Pier PS and Burlingham PS would be inundated by storm surge at the 100-year return period with water depths at 3± feet. Davisville PS would also be inundated.

3-4 feet at the shoreward structures.

4 Shoreline Change

100-year shoreline is predicted to be more than 1,200 feet inland of the WWTF unless active protection measures are implemented.



COMPLETED CLIMATE CHANGE ADAPTATION MEASURES

All sections of the WWTF were built to withstand FEMA mapped 100-year peak flood levels.

QUONSET POINT, RI - CLIMATE VULNERABILITY SUMMARY

FACILITY SUMMARY

Owner	Quonset Development Corporation
Operator	Quonset Development Corporation
Facility Address	150 Zarbo Avenue North Kingstown, RI 02852
Contact Name	Dennis Colberg, Superintendent
Phone	401.294.6342
Design Flow Capacity	1.78 MGD
Average Daily Flow	0.49 MGD
Receiving Water	Narragansett Bay West Passage
Extreme Weather Related SSO Events 2010 - 2014	None reported

Many of the treatment process components are protected by elevated tank walls and many of the facility entryways are elevated several feet above the ground. The sludge pump building has a stop-log system installed for a higher level of protection. Although these protective measures may allow the facility to successfully function during a natural hazard event, it would likely be unsafe for personnel to be onsite during such conditions.

Pumping systems around the site are located below grade and would be vulnerable if water were to pass through the entryways.

The louvers supporting the aging generator system are elevated but are on the bayside of the building and may be vulnerable to wave action or run-up during a major storm event.

Spare pumps and generators are stored on-site and additional stand-by equipment is available through other QDC departments.

ADAPTIVE STRATEGIES (SEE REPORT FOR COMPLETE LIST)

SYSTEM	Hardening	Redundancy	Mitigation Strategy
Influent Pump Station (Submersibles)	A		Protect facility entrances with flood barriers. Extend perimeter walls upward.
Preliminary Treatment (Grinder / Screening / Grit Removal)	A		Protect facility entrances with flood barriers. Pumps may be temporarily augmented. Replace sludge pumps with submersibles.
Primary Clarifiers (Rectangular)	A	B	Protect facility entrances with flood barriers. Pumps may be temporarily augmented.
Disinfection System (Chlorine Contact Tanks)	A		Protect facility entrances with flood barriers.
Generator	A		Protect facility entrances with flood barriers and relocate building penetrations for louvers.

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