

# Operable Unit (OU) 2 Treatment System Overview

## NWIRP Bethpage

The primary mission of the **Naval Weapons Industrial Reserve Plant (NWIRP) Bethpage** was to research, design, build and test military aircraft in support of our national defense.

The facility operated from 1943 to 1996.



The 2003 Navy's Record of Decision (ROD) identified a series of actions that are needed to protect human health and the environment from contaminated groundwater. These actions include:

- Legal Restrictions on Groundwater Use
- Groundwater Monitoring and Hotspot Treatment
- Public Water Supply Protection Program

## Why?

## Contaminated Groundwater

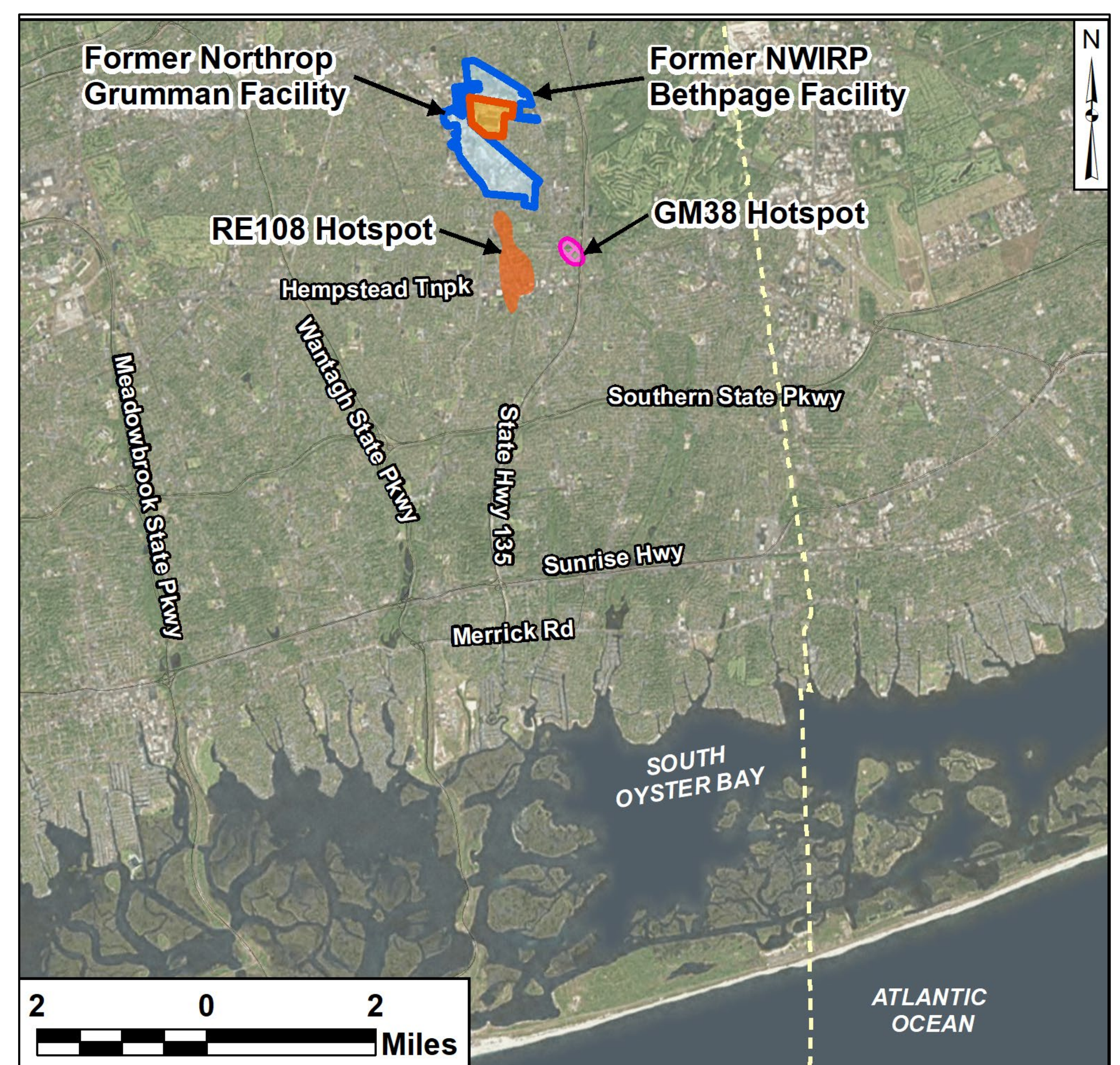
The Navy, with regulator concurrence, issued its federal cleanup and management plan to address Operable Unit 2 (OU2) groundwater contamination resulting, at least in part, from the NWIRP operations.

The Navy has identified two groundwater hotspots to be addressed under the OU2 ROD:

### GM38 Treatment System (In Place)

- Started operation in 2009
- Treated more than 4 billion gallons of water to drinking water standards
- Treated water is discharged to a stormwater basin located on Arthur Avenue

### RE108 Treatment System (Planned Action)



## Terminology Explained

### **VOCs**

Volatile organic compounds (VOCs) are compounds that easily become vapors or gases. VOCs were used historically as solvents and degreasers at NWIRP Bethpage and other area industrial and commercial facilities. VOCs are also common in many household products (i.e., nail polish remover, laundry detergents, and paints).

### **Hotspot**

The OU2 ROD Hotspots are areas with groundwater that contains greater than 1 part per million (ppm) of VOCs.

### **Plume**

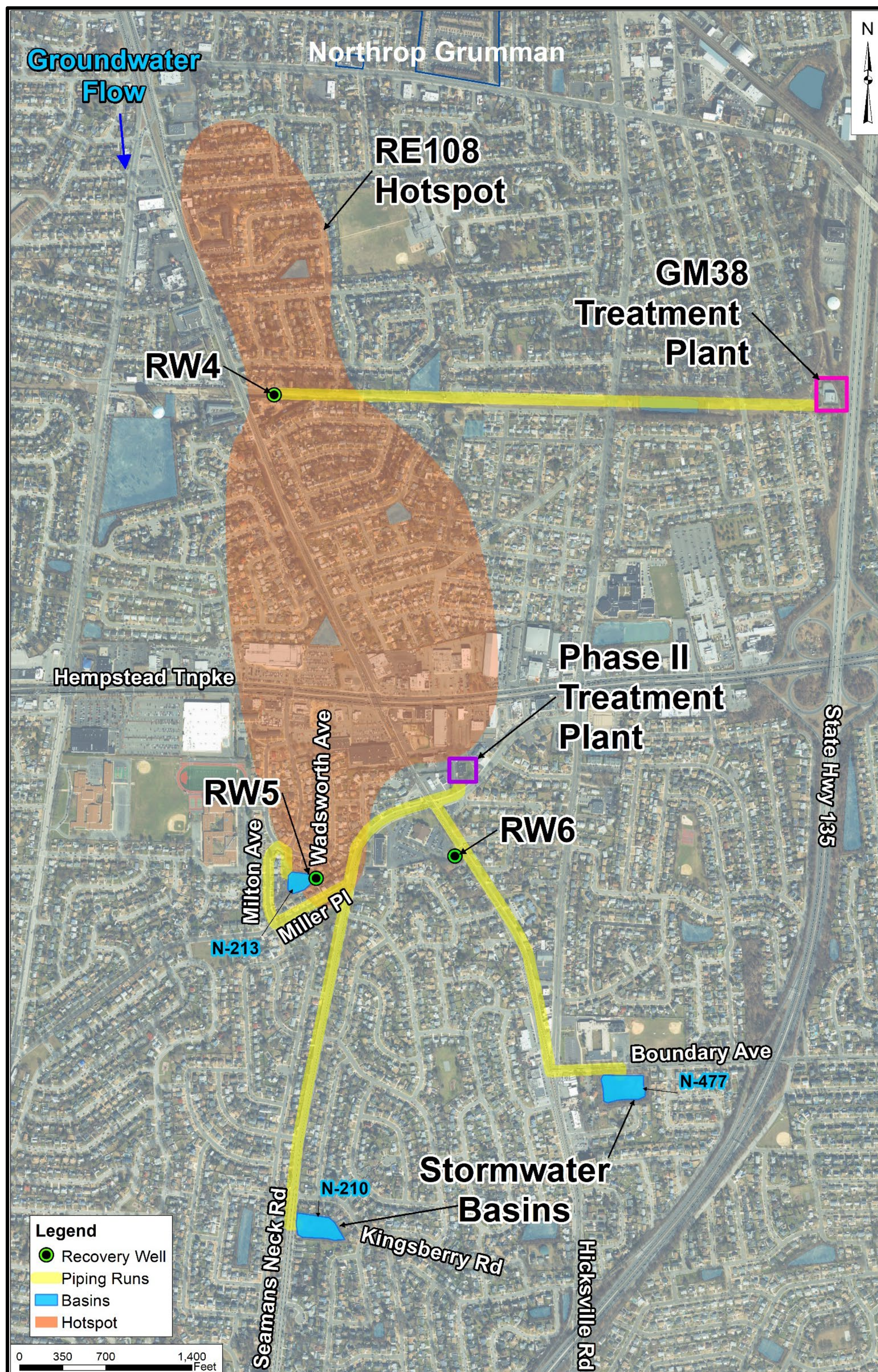
A body of impacted water within a groundwater aquifer. For the NWIRP Bethpage plume, the primary contaminants are VOCs.

### **Recovery Well**

A recovery well is a steel pipe installed to approximately 650 to 750 feet deep. A pump will be installed in each well to extract contaminated groundwater.



# RE108 Area Treatment System Overview



## Phase I

- Addresses the northern area of the RE108 Hotspot
- Recovery well (RW4) will be used to extract groundwater; construction in progress
- Water will be treated at GM38 Treatment System
- GM38 Treatment System is being upgraded

## Phase II

- Will treat contaminated groundwater not captured by Phase I
- Four new recovery wells will be installed in underground concrete vaults
- Two wells will be installed at each of the two locations (RW5 and RW6)
- 8 to 12 inch diameter piping runs will be installed in trenches approximately 4 to 6 feet deep
- New Treatment Plant, approximately 80 feet by 120 feet, to be built at 11 Union Avenue
- The Navy is working to acquire property for these new recovery wells and associated pipeline construction





RE108 Area Hotspot Treatment System



## Drilling near the intersection of Milton Avenue and Miller Place

- Drilling inside the basin to install two groundwater recovery wells (12 inch steel pipe) to approximately 750 feet deep
- Drill rig and support vehicles present for approximately 3 to 4 months
- Traffic management plan will be implemented

## Drilling activities are anticipated to start Spring 2020

- At the start of the process, heavy equipment will be setup in the basin
- Work crews and trucks will need to enter/exit the basin daily
- Drilling operations will be limited to 8 am to 5 pm (M-F) except when specific operations require an extended work day
- Residents will be notified approximately 2 to 4 weeks prior to drilling

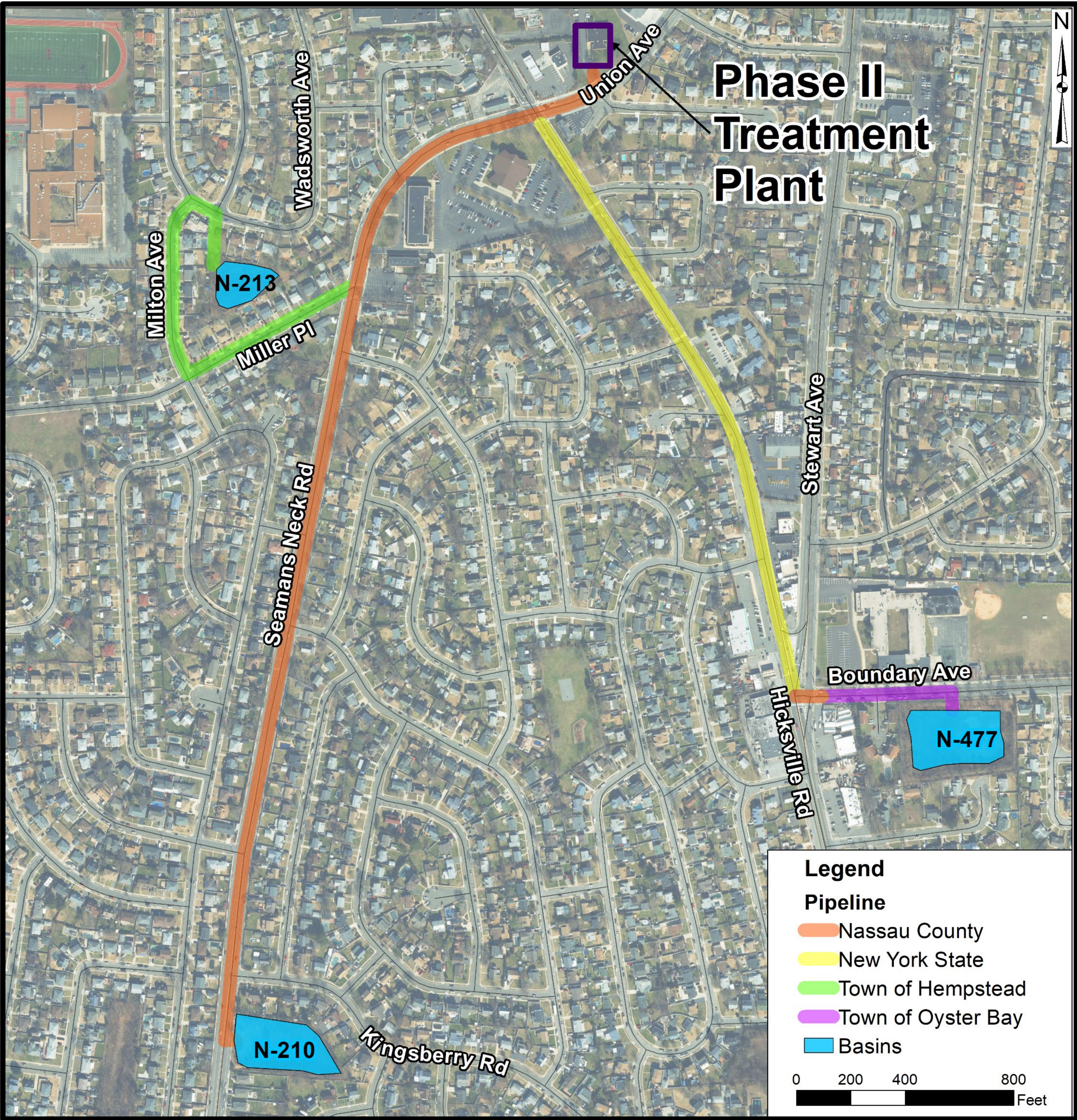


Stormwater Basin N-213 Near the Intersection of Milton Avenue and Miller Place



Piping

Stormwater Basin N-213



RE108 Area Hotspot Treatment System

Pipeline construction from N-213 to Seamans Neck Road

- Pipeline will carry contaminated groundwater to treatment plant
- Pipeline route is in town roads under Milton Avenue, Miller Place, and Wadsworth Avenue
- Piping installed in trenches in the road right-of-way approximately 4 to 6 feet deep
- Piping will be installed in sections
- Traffic management plan will be implemented
- Pipeline construction anticipated to start 2021

Advanced notice will be provided to residents

Anticipated disruptions:

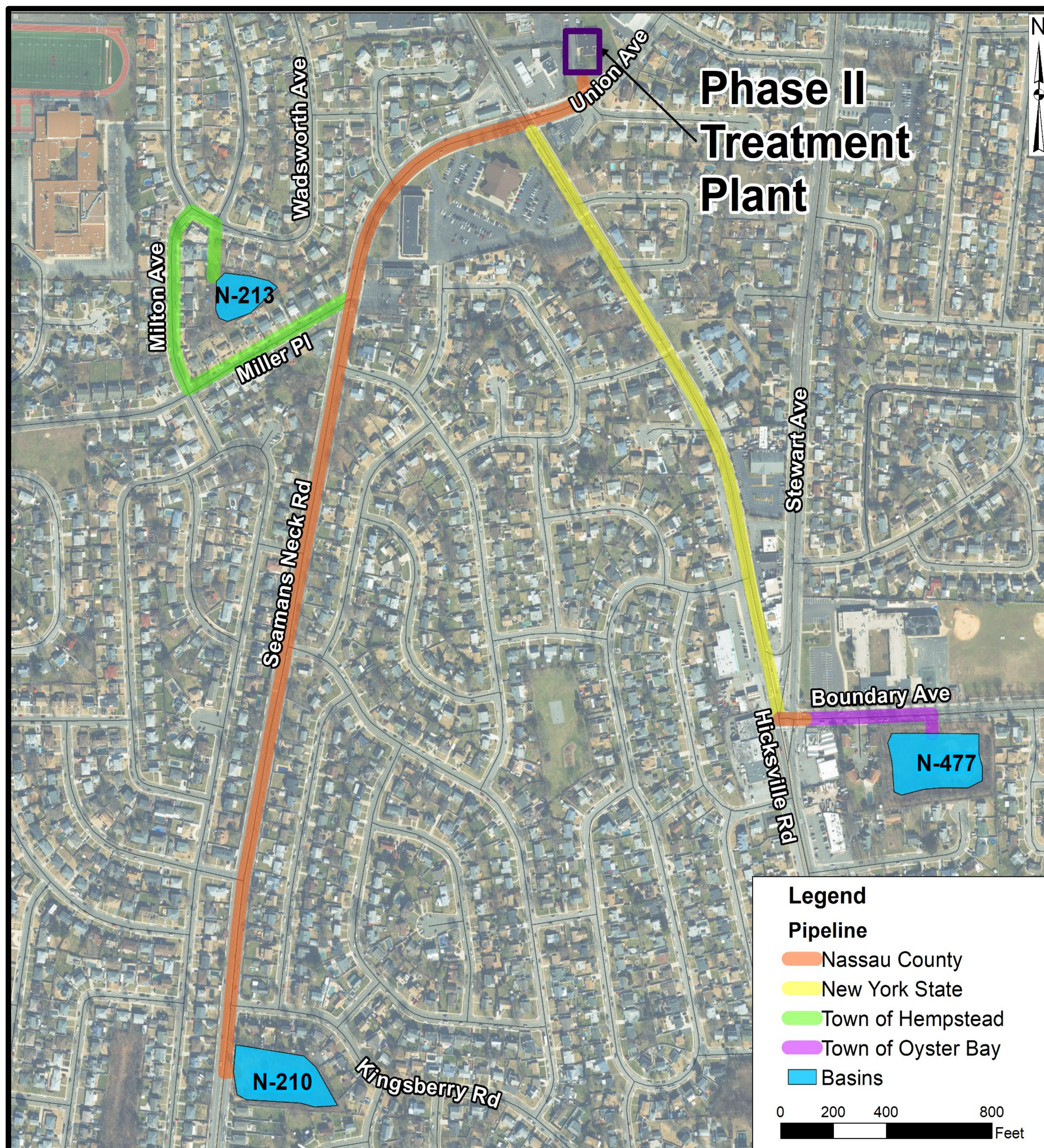
- Temporary blocking of driveways
- Temporary relocation of vehicles off the street for less than one day
- Temporary road closures



Stormwater Basin N-213 near the Intersection of Milton Avenue and Miller Place



# Construction Stormwater Basin N-210



RE108 Area Hotspot Treatment System

## Construction near the intersection of Seamans Neck Road and Kingsberry Road

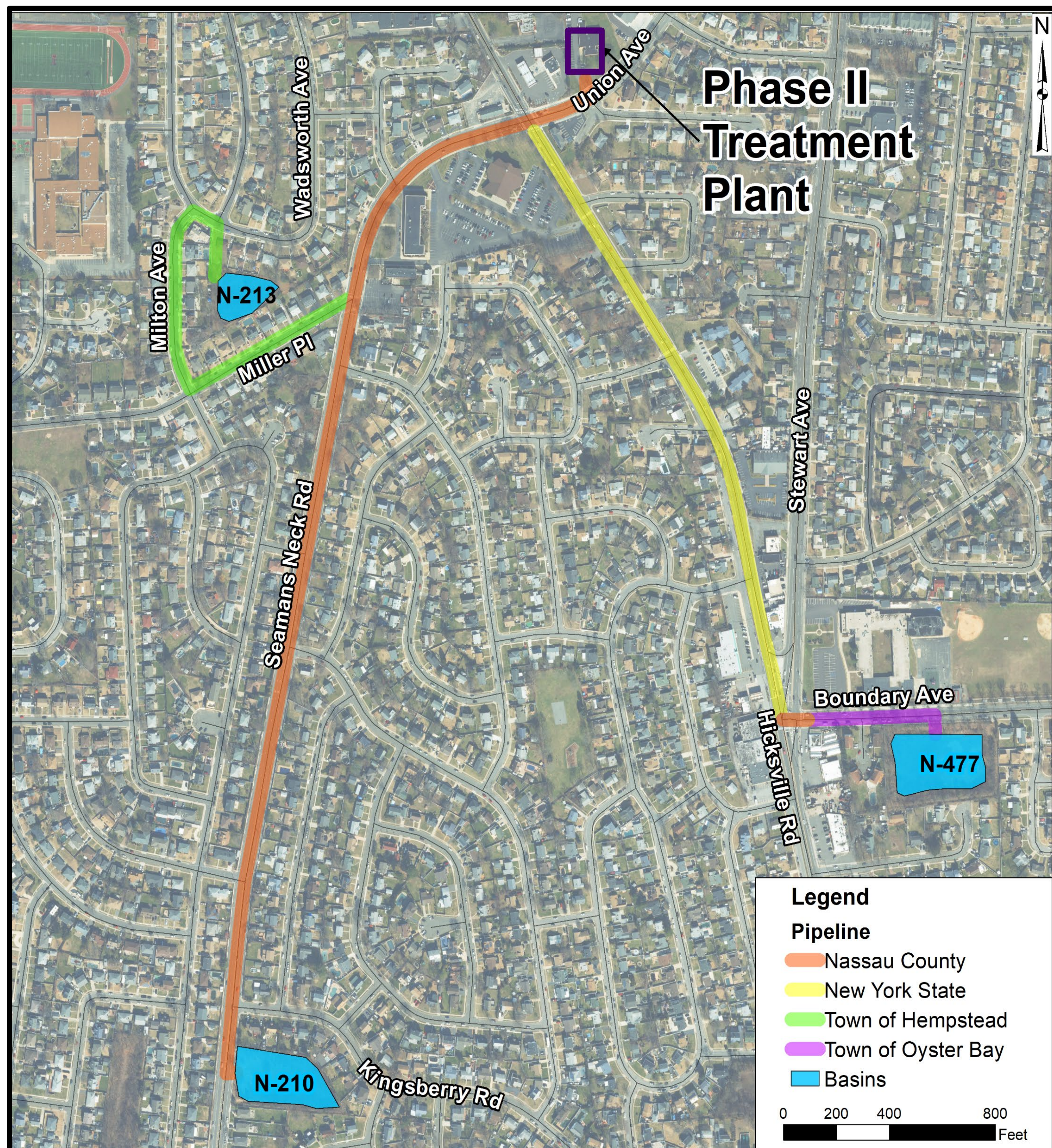
- Construction of a small concrete structure to receive clean water from the new treatment plant
- Periodic maintenance on the stormwater basin to ensure performance
- Basin water levels will be monitored to prevent flooding
- Traffic management plan will be implemented
- Construction anticipated to start in Spring 2021
- Advanced notice will be provided to residents



Stormwater Basin N-210 near the Intersection of Seamans Neck Road and Kingsberry Road



# Construction Stormwater Basin N-477



RE108 Area Hotspot Treatment System

## Construction near the intersection of Boundary Avenue and Hicksville Road

- Construction of a small concrete structure to receive clean water from the new treatment plant
- Periodic maintenance on the stormwater basin to ensure performance
- Basin water levels will be monitored to prevent flooding
- Traffic management plan will be implemented
- Construction anticipated to start in Spring 2021
- Advanced notice will be provided to residents



Stormwater Basin N-477 near the Intersection of Boundary Avenue and Hicksville Road



## Spring 2020

N-210 Drilling activities anticipated to start

## 2021

N-213 Pipeline construction anticipated to start

## Spring 2021

N-210 and N-477 Construction anticipated to start

## 2022

RE108 Area Hotspot Treatment to Start Operation

### FOR MORE INFORMATION

Copies of all official environmental program documents are available for review at an information repository located at Bethpage Public Library, 47 Powell Avenue, Bethpage, NY 11714, (516) 931-3907.

Additional information on the NWIRP Bethpage Environmental Restoration Program (ERP) and participation in Restoration Advisory Board (RAB) is available online at

<http://go.usa.gov/DyXF>



For more information on the NWIRP Bethpage ERP, please contact: Public Affairs Officer, NAVFAC Mid-Atlantic,

**9324 Virginia Ave, Norfolk VA 23511-3095**

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# **WELCOME NAVY OPEN HOUSE**

**December 12, 2019  
7:00 P.M. to 9:00 P.M.**

**RE108 Phase II Groundwater  
Plume Restoration  
Planned Activities for use of  
Nassau County  
Stormwater Basins**