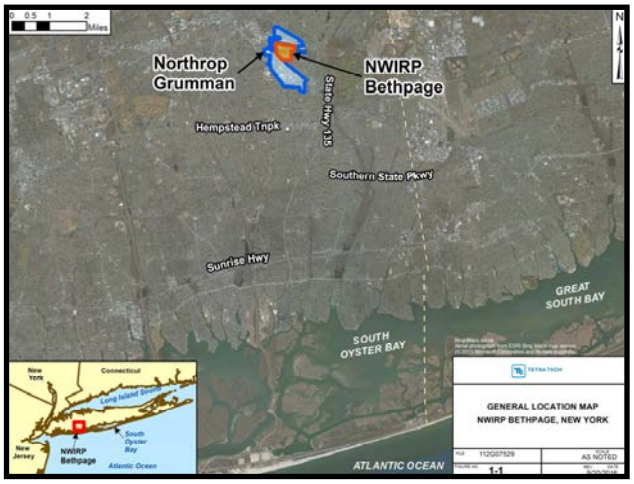
Naval Weapons Industrial Reserve Plant Bethpage
Preliminary Assessment/Site Inspection for Per- and Polyfluoroalkyl Substances

April 2019

The Navy has initiated a comprehensive strategy to address per- and polyfluoroalkyl substances (PFAS) in groundwater at installations across the nation. At the former Naval Weapons Industrial Reserve Plant (NWIRP) Bethpage, a Preliminary Assessment/Site Inspection (PA/SI) is the first step to assess if PFAS in groundwater is a result of past operations. Recent sampling of onsite monitoring wells identified low levels of PFAS in groundwater. As of December 2018, the Navy has completed three of five sampling events planned to evaluate PFAS concentrations in Bethpage groundwater and surface water over an approximate one-year period. The Navy is working with the ***New York State Department of Environmental Conservation (NYSDEC)*** in developing sampling plans, interpreting results, and making decisions on actions if needed to address PFAS and other environmental contaminants at NWIRP Bethpage.

Background

NWIRP Bethpage was a 109-acre government-owned, contractor-operated facility. It was operated by Northrop Grumman (NG) and its predecessors, including Grumman Aircraft Engineering Corporation ([Grumman] and its successor NG) from 1942 until 1996. NWIRP's primary mission was the research prototyping, testing, design engineering, fabrication, and primary assembly of military aircraft.



PFAS-containing material was not likely used at NWIRP Bethpage. However, plating and anodizing operations conducted at Plant 3 and Plant 5 may have used PFAS compounds in a mist-suppression system for a short period of time. These plating operations could have resulted in the release of PFOS to the environment.

PFAS

- PFAS are manmade chemicals that are not naturally found in the environment.
- PFAS is used to repel oil and water. It is used in a variety of industrial and consumer products, such as carpet and clothing treatment and firefighting foams.
- The Department of Defense has used foam to fight aircraft, warship, and fuel fires at many installations.
- ***The U.S. Environmental Protection Agency (EPA) has not established a regulatory level for PFAS in drinking water.***
- ***The EPA has established drinking water lifetime health advisories (LHA) for two PFAS compounds, perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS). The EPA recommends people not use water for drinking or cooking that exceeds 70 parts per trillion (70 nanograms per liter [ng/L]) for PFOA and PFOS individually or the sum of PFOA and PFOS.***

If PFAS was released from past operations at the NWIRP, it could have moved away from the release area with the flow of groundwater. Typically, the highest PFAS concentrations in groundwater are found near the release area with decreasing levels further away from this area. In other words, if a release occurred, we would expect to see a grouping of adjacent or nearby monitoring wells showing higher PFAS concentrations in the groundwater on the NWIRP Bethpage property.

Sampling Results

The Navy sampled 27 monitoring wells in April 2018 and approximately 50 monitoring wells each in September and December 2018. During all three of the sampling events, the Navy also sampled water from recharge basins and the discharge from the Bethpage Community Park (BCP) Operable Unit (OU) 3 Interim Remedial Measures treatment system (BCP treatment system). The following is a summary of the results:

1. ***The majority of groundwater sample results (94%) were less than the EPA LHA of 70 ng/L.***

   - ***Pink Wells***—Indicates wells that exceed the EPA LHA of 70 ng/L. Five wells have sample results that exceed the EPA LHA during one or more sampling event (see figure).

   - For PFOA, the concentrations sitewide ranged from not detected to 99 ng/L. Two of six results from two wells exceeded the EPA LHA.

   - For PFOS, the concentrations sitewide ranged from not detected to 147 ng/L. Both sample results from one well exceeded the EPA LHA.

   - For the sum of PFOA and PFOS, the concentrations ranged from not detected to 191 ng/L. Eight of twelve sample results from five wells exceeded the EPA LHA.

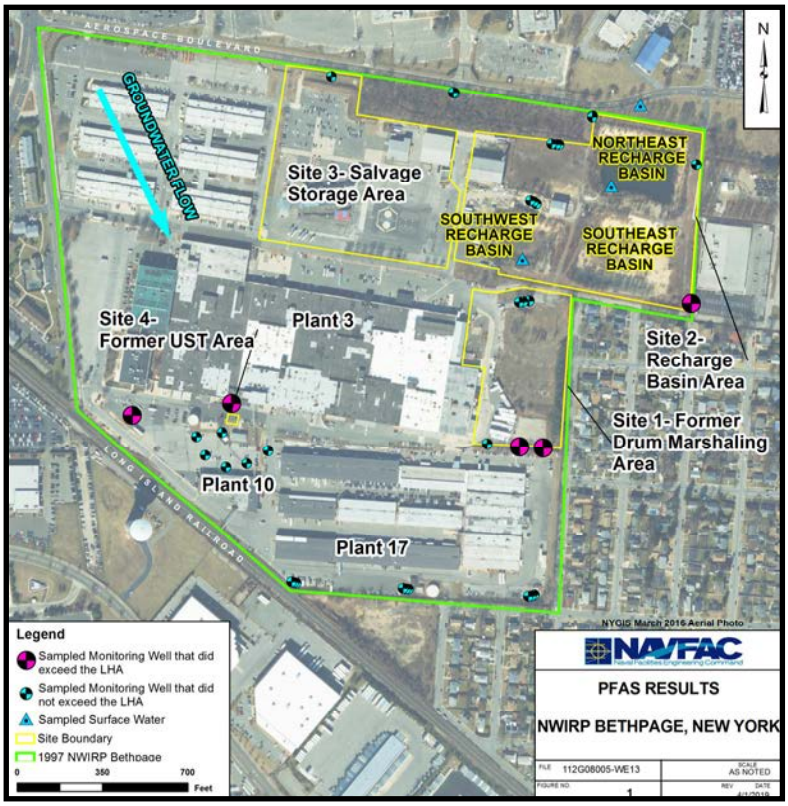
2. Water samples were collected from the North East and South West Recharge Basins and the BCP treatment system discharge. EPA has not established a LHA for surface water.

   - Samples from the recharge basins and the BCP treatment system discharge were collected during periods of no precipitation and periods of precipitation.

   - Northeast Recharge Basin: The sum of PFOA and PFOS results ranged from 4.2 ng/L to 40 ng/L.

   - Southwest Recharge Basin: The sum of PFOA and PFOS results ranged from not detected to 4.5 ng/L.

   - **Discharge - BCP treatment system:** The sum of PFOA and PFOS results ranged from 28 ng/L to 36 ng/L.



Next Steps

- The Navy is awaiting results from the fourth sampling event completed in March 2019. Additional sampling is planned for June 2019.
- The results of all sampling events will be compiled into a draft PA/SI report for regulatory review and shared with the public during the NWIRP Bethpage Restoration Advisory Board meetings.

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) 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, 9742 Maryland Ave, Norfolk VA 23511-3095