

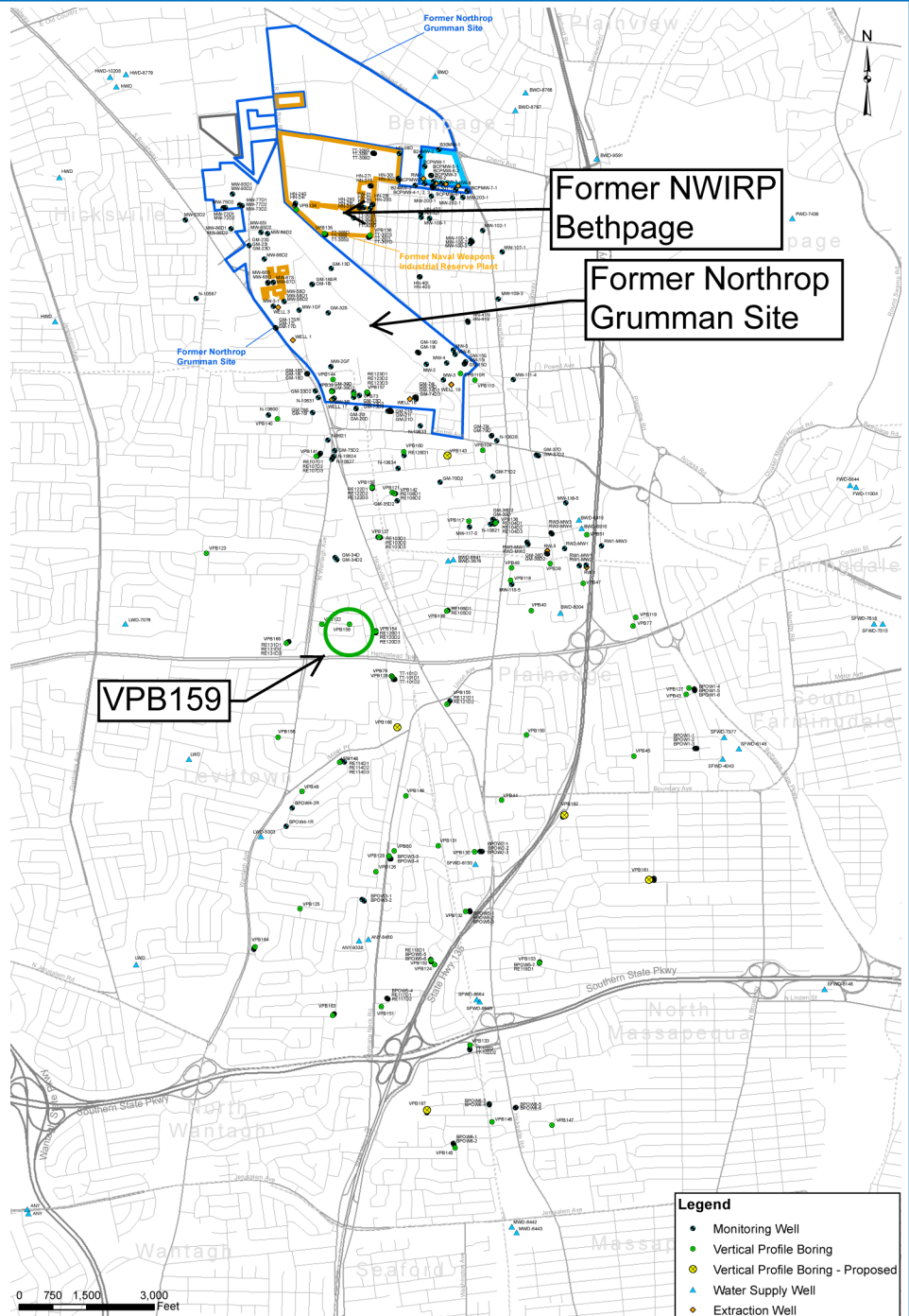
Vertical Profile Boring Installation Summary

Installed July 2015

Historic storage and/or disposal practices at the former **Naval Weapons Industrial Reserve Plant Bethpage (NWIRP Bethpage)** and adjacent former Northrop Grumman properties resulted in groundwater contamination in the local area. Over the last several decades, **volatile organic compounds (VOCs)** that originated from these facilities have moved into the groundwater and off-property with the groundwater flow. The contamination has generally moved to the south while sinking downward to greater depths.

The Navy estimates the VOC contamination covers approximately 3,000 acres, but it is not distributed evenly throughout the area. Instead of a single, contiguous plume, there are multiple widely dispersed plumes or "fingers", meaning VOCs are present in the groundwater at different concentrations and different depths in different areas.

The Navy is conducting a groundwater investigation that includes the installation of **vertical profile borings (VPB)** to gather more information on the location, depth, and concentration of contaminants in the groundwater plume. Installation of a VPB involves drilling a deep hole (up to approximately 1,000 feet below ground surface [bgs]) and taking samples of the groundwater at various depths. One to three permanent monitoring wells are typically installed adjacent to the VPB hole, and the depth of the well(s) is determined based on the results of the sampling conducted during the VPB installation.



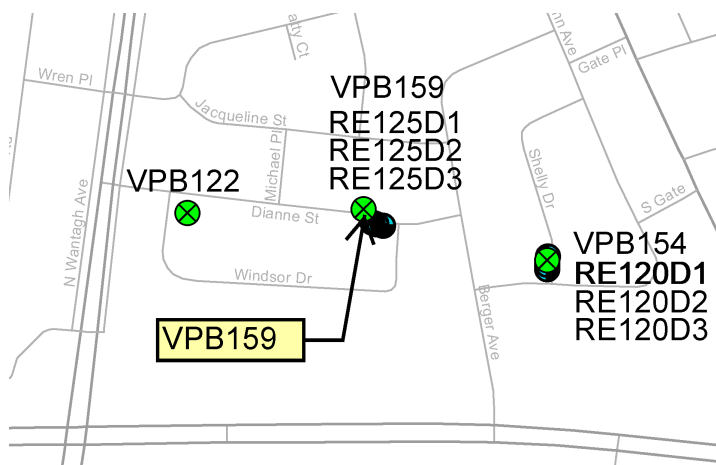
Please note the VPB investigation is sampling raw groundwater, meaning it has not been treated to remove contaminants. Raw groundwater is not what is distributed by the water districts to the public. All water distributed by the water districts is collected from their own water supply wells, and is regularly tested and treated by the districts to ensure a safe water supply.

The VPB159 investigation focused on **Trichloroethene (TCE)** and **Tetrachloroethene (PCE)**, which are two primary VOCs in the NWIRP Bethpage groundwater contamination. The groundwater results were compared with **Maximum Contaminant Levels (MCLs)**, which are used by the New York State Department of Health for determining when water is safe for distribution. The MCL for both TCE and PCE is 5 micrograms per liter (ug/L) or parts per billion.

VPB159 Investigation Summary

- VPB159 was completed between June 18, 2015 and July 16, 2015;
- The final boring was 915 feet (ft) deep and reached the Raritan Clay below the Magothy Aquifer;
- 38 groundwater screening samples were collected at different depths;
- The table contains TCE and PCE levels; **bolding** indicates an exceedance of the NYSDEC MCL. ND denotes there were no detections in the sample.

Three permanent wells were installed at VPB159 (RE125D1, RE125D2 and RE125D3) between August and October, 2016 and are monitored as part of the Navy's Environmental Restoration Program. Results of monitoring will be discussed at the RAB meetings and will be available on-line at the information repository website for review.



Depth Interval (ft bgs)	TCE (ug/L)	PCE (ug/L)
58-60	ND	ND
103-105	ND	ND
148-150	ND	ND
203-205	170	5.5
218-220	100	3.4
238-240	140	3.9
258-260	25	ND
278-280	120	8.8
298-300	18	1.5
318-320	130	14
338-340	210	9.8
358-360	49	7.6
378-380	ND	ND
403-405	20	0.46
418-420	2.5	ND
438-440	190	2.5
458-460	310	7.0
478-480	140	3.1
503-505	330	2.8
518-520	2.8	ND
543-545	200	3.0
558-560	640	15
588-590	450	11
598-600	120	3.0
618-620	130	4.3
638-640	11	ND
658-660	1.4	ND
678-680	74	3.1
698-700	99	ND
718-720	ND	ND
738-740	ND	ND
758-760	ND	ND
778-780	ND	ND
798-800	ND	ND
818-820	ND	ND
838-840	ND	ND
858-860	ND	ND
883-885	ND	ND

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 (514)931-3907.

Additional information on the NWIRP Bethpage Environmental Restoration Program is available online at <http://go.usa.gov/DyXF> or by contacting: Public Affairs, NAVFAC Mid-Atlantic, 9324 Virginia Ave, Norfolk VA 23511-3095, 757-341-1411.