

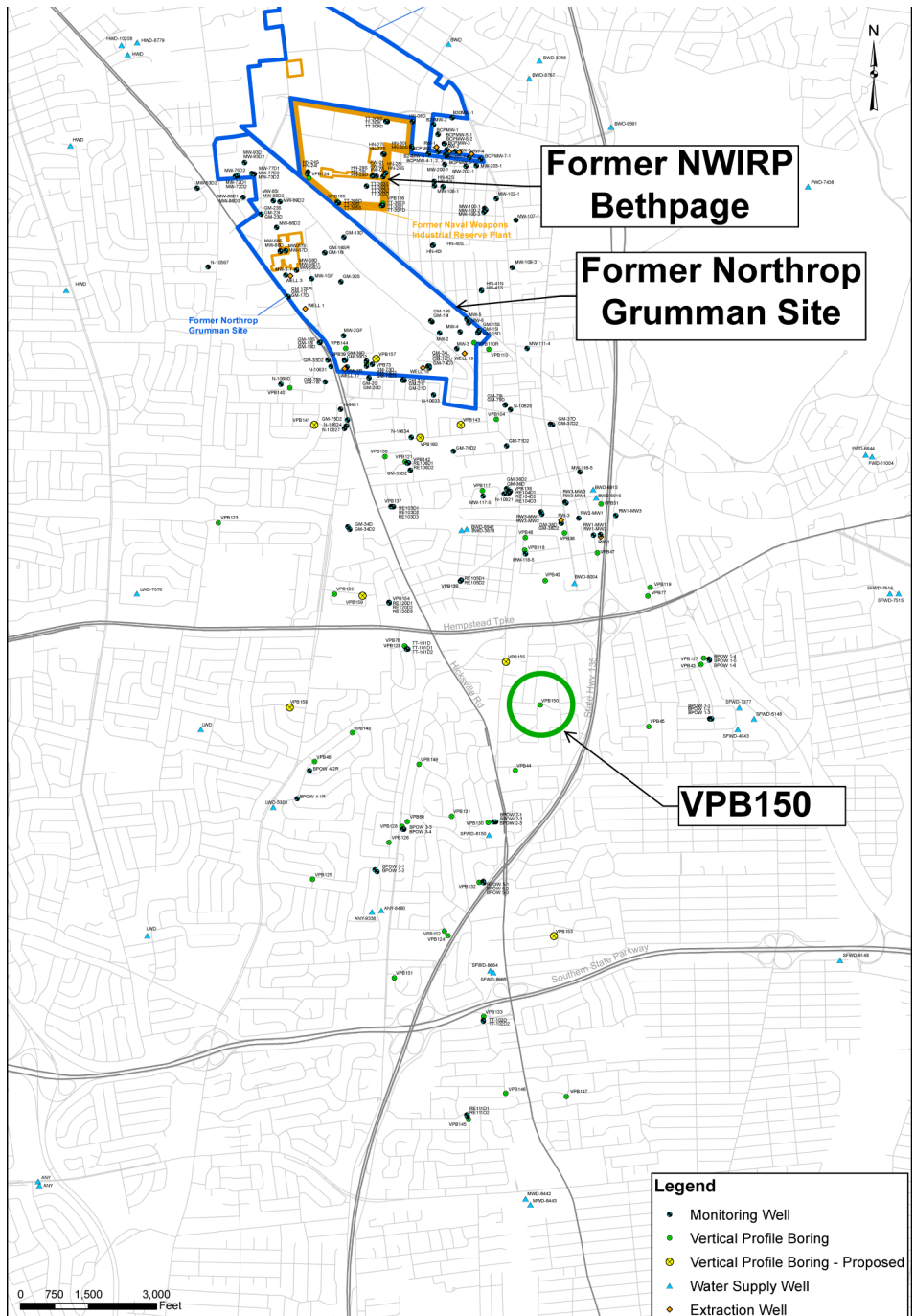
## Vertical Profile Boring Installation Summary

Installed May 2014

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.



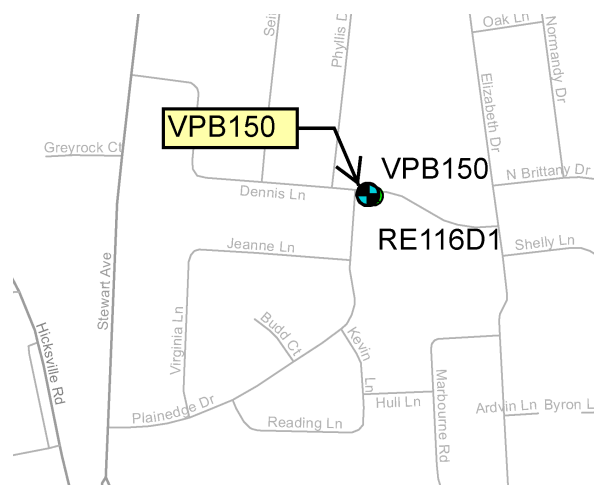
**Please note the VPB investigation is sampling raw groundwater, meaning it has not been treated to remove contaminants. Raw groundwater is not what is distributed by the water districts to the public. All water distributed by the water districts is collected from their own water supply wells, and is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

The VPB150 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.

#### **VPB150 Investigation Summary**

- VPB150 was completed between March 24, 2014 and May 1, 2014;
- The final boring was 968 feet (ft) deep and reached the Raritan Clay below the Magothy Aquifer;
- 40 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.

One permanent well was installed at VPB150 (RE116D) in December 2017 and is 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 ft	ND	ND
98 - 100 ft	0.51	ND
148 - 150 ft	0.94	ND
198 - 200 ft	1.9	0.59
218 - 220 ft	0.48	ND
243 - 245 ft	<b>26</b>	ND
258 - 260 ft	ND	ND
278 - 280 ft	ND	ND
298 - 300 ft	ND	ND
318 - 320 ft	ND	ND
338 - 340 ft	ND	ND
358 - 360 ft	ND	ND
383 - 385 ft	ND	ND
398 - 400 ft	ND	ND
418 - 420 ft	ND	ND
438 - 440 ft	ND	ND
463 - 465 ft	ND	ND
478 - 480 ft	ND	ND
498 - 500 ft	ND	ND
518 - 520 ft	ND	ND
538 - 540 ft	ND	ND
568 - 570 ft	ND	ND
578 - 580 ft	ND	ND
598 - 600 ft	ND	ND
618 - 620 ft	ND	ND
638 - 640 ft	ND	ND
658 - 660 ft	ND	ND
678 - 680 ft	ND	ND
698 - 700 ft	ND	ND
738 - 740 ft	ND	ND
758 - 760 ft	ND	ND
778 - 780 ft	ND	ND
798 - 800 ft	ND	ND
818 - 820 ft	ND	ND
838 - 840 ft	ND	ND
858 - 860 ft	ND	ND
878 - 880 ft	ND	ND
908 - 910 ft	ND	ND
923 - 925 ft	ND	ND
938 - 940 ft	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.