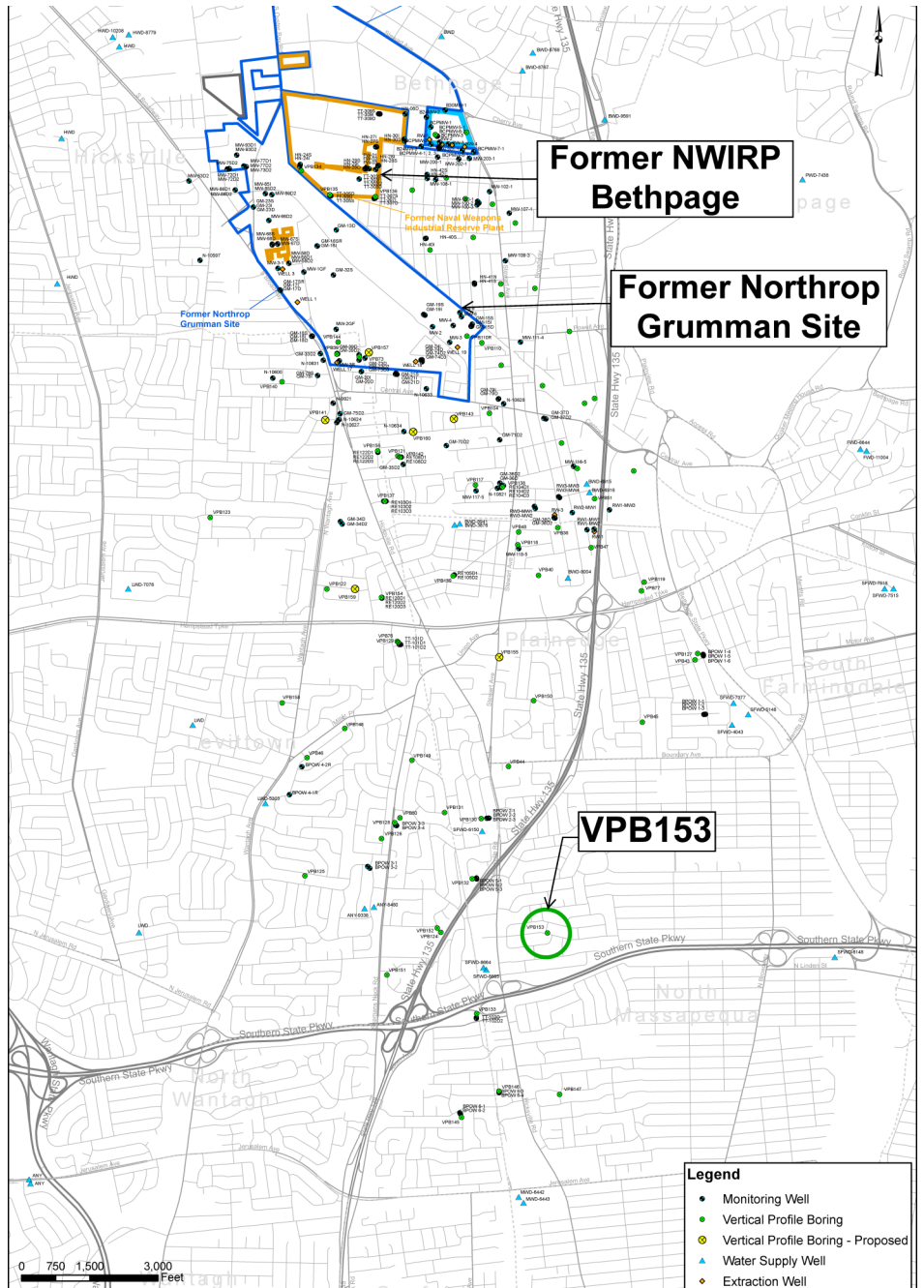


Vertical Profile Boring Installation Summary
Installed December 2014

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.

Vertical Profile Boring Installation Summary

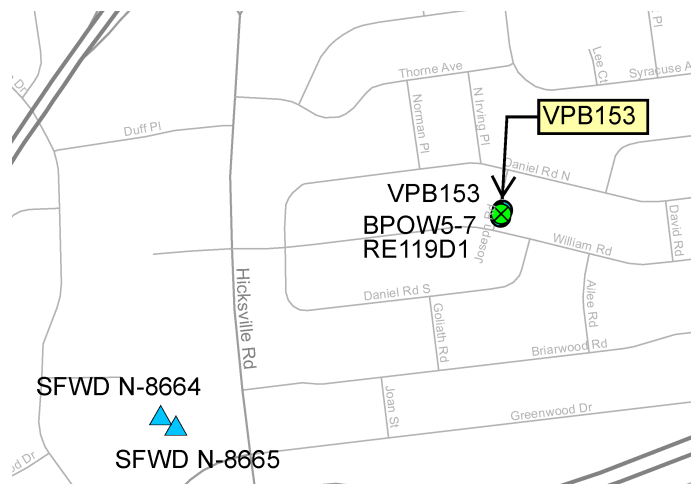
Installed December 2014

The VPB153 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.

VPB153 Investigation Summary

- VPB153 was completed between November 4, 2014 and December 17, 2014;
- The final boring was 1010 feet (ft) deep and reached the Raritan clay below the Magothy;
- 36 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.

Two permanent wells were installed at VPB153 (RE119D1 and BPOW5-7) between May and June, 2015 and will be monitored quarterly as part of either the Navy's Environmental Restoration Program or Northrop Grumman's Operable Unit 2 groundwater monitoring program. Results of monitoring will be discussed at the RAB meetings and will be available on-line at the information repository.



Depth interval (ft bgs)	TCE (ug/L)	PCE (ug/L)
58 - 60 ft	ND	ND
98 - 100 ft	ND	ND
148 - 150 ft	ND	ND
198 - 200 ft	21	0.98
218 - 220 ft	53	1.6
238 - 240 ft	51	ND
258 - 260 ft	4.8	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
378 - 380 ft	ND	ND
403 - 405 ft	ND	ND
418 - 420 ft	ND	ND
438 - 440 ft	ND	ND
458 - 460 ft	ND	ND
483 - 485 ft	ND	ND
498 - 500 ft	ND	ND
518 - 520 ft	ND	ND
538 - 540 ft	ND	ND
578 - 580 ft	ND	ND
603 - 605 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
718 - 720 ft	ND	ND
738 - 740 ft	2.8	ND
798 - 800 ft	ND	ND
818 - 820 ft	ND	ND
838 - 840 ft	ND	ND
878 - 880 ft	ND	ND
898 - 900 ft	ND	ND
918 - 920 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 (516)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.