

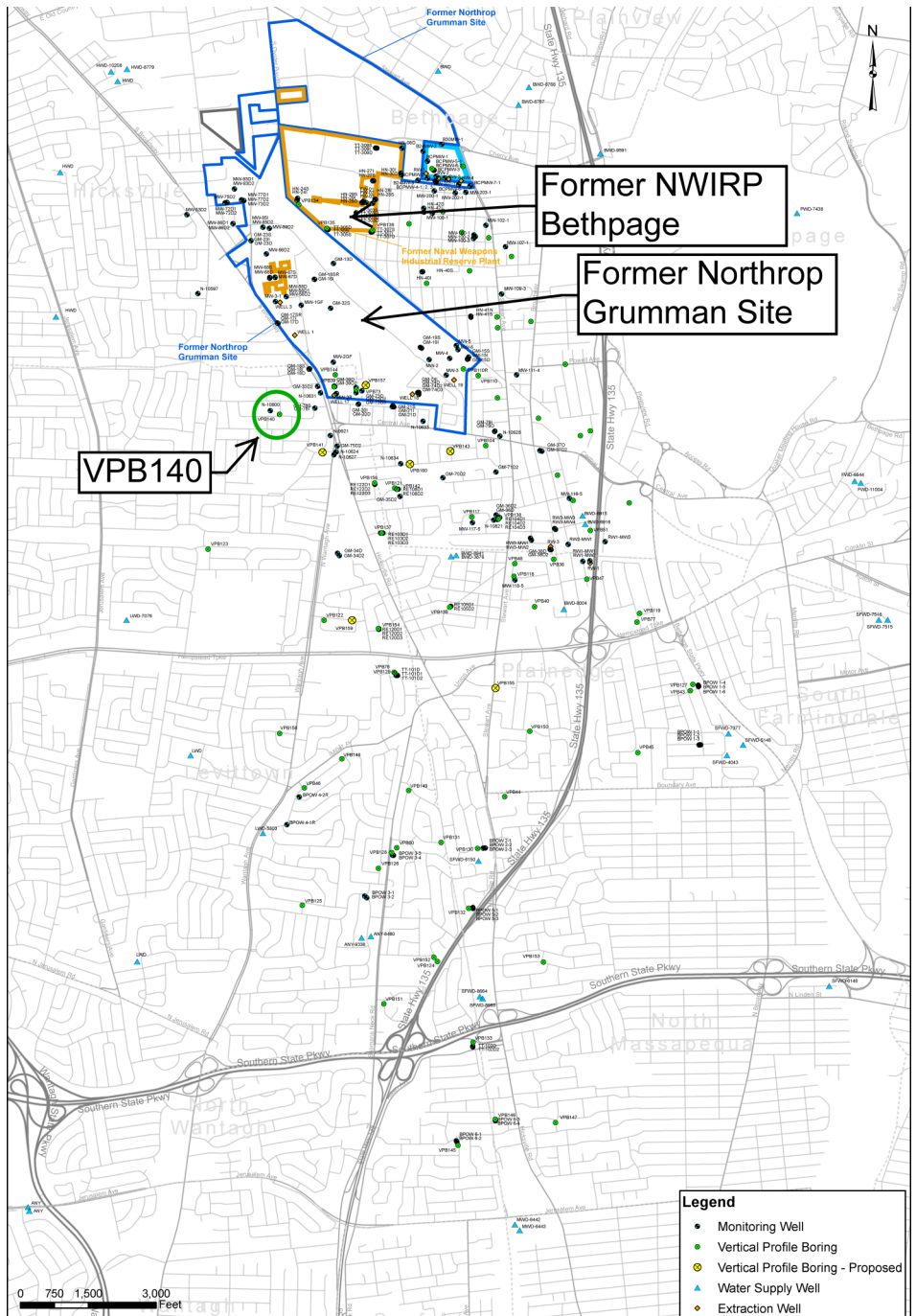
Vertical Profile Boring Installation Summary

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.



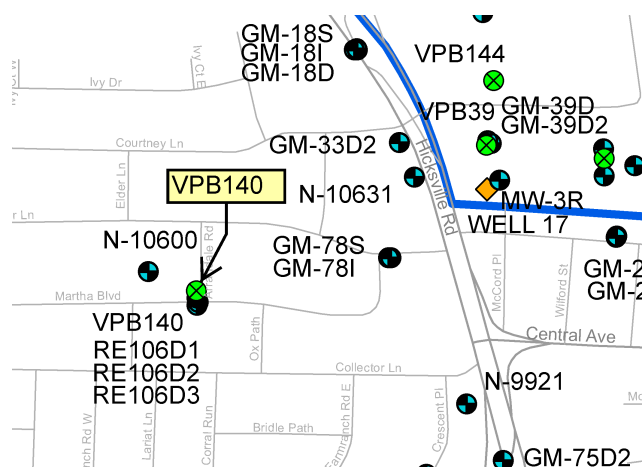
Please note the VPB investigation is sampling raw groundwater, meaning it has not been treated to remove contaminants. Raw groundwater is not what is distributed by the water districts to the public. All water distributed by the water districts is collected from their own water supply wells, and is regularly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

The VPB140 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.

VPB140 Investigation Summary

- VPB140 was completed between April 1, 2014 and May 8, 2014;
- The final boring was 881 feet (ft) deep and reached the Raritan clay below the Magothy Aquifer;
- 34 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 VPB140 (RE106D1, RE106D2 and RE106D3) between September and November, 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 ft	ND	ND
100 - 102 ft	0.28	ND
150 - 152 ft	ND	ND
200 - 202 ft	ND	ND
220 - 222 ft	2.4	ND
245 - 247 ft	17	2.5
260 - 262 ft	1.2	ND
280 - 282 ft	4.3	1.2
305 - 307 ft	0.40	ND
320 - 322 ft	5.8	1.1
340 - 342 ft	3.1	0.41
360 - 362 ft	8.3	1.1
380 - 382 ft	0.78	ND
400 - 402 ft	5.6	1.1
420 - 422 ft	1.8	ND
440 - 442 ft	26	4.3
460 - 462 ft	7.3	0.84
485 - 487 ft	120	18
500 - 502 ft	19	17
520 - 522 ft	19	49
540 - 542 ft	ND	ND
560 - 562 ft	0.56	2.4
565 - 567 ft	0.41	1.0
585 - 587 ft	ND	ND
600 - 602 ft	ND	ND
640 - 642 ft	ND	ND
680 - 682 ft	ND	ND
700 - 702 ft	ND	ND
720 - 722 ft	ND	ND
745 - 747 ft	ND	ND
760 - 762 ft	ND	ND
785 - 787 ft	ND	ND
800 - 802 ft	ND	ND
840 - 842 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.