AMENDED RECORD of DECISION

SITE No. 130003A & 130003B | DECEMBER 2019 | NYSDEC REGION 1

Remedy Selected for Full Hydraulic Containment of the Navy Grumman Groundwater Plume

Northrop Grumman Bethpage Facility and Naval Weapons Industrial Reserve Plant Sites
Bethpage, NY

New York State Superfund Program | Bethpage, Town of Oyster Bay, New York

WHERE TO FIND INFORMATION

Project documents are available at the following location(s) to help the public stay informed.

Bethpage Public Library
47 Powell Avenue
(516) 931-3907

NYSDEC Region 1 Office
50 Circle Road
Stony Brook, NY 11790-3409
(631) 444-0200

WHO TO CONTACT @

Comments and questions are always welcome
and should be directed as follows:

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FOR INFORMATION ON THE NORTHROP GRUMMAN AND NWIRP SITE REMEDIATION PROGRAM:
http://www.dec.ny.gov/chemical/35727.html

Notice of Availability: Record of Decision

The New York State Department of Environmental Conservation (DEC) has issued the Amended Record of Decision (AROD) to address contamination related to the Navy Grumman groundwater plume associated with the Northrop Grumman Bethpage Facility and Naval Weapons Industrial Reserve Plant (NWIRP) sites located in the town of Oyster Bay in Bethpage, Nassau County.

The AROD presents the remedy selected to address contamination related to the site and why the remedy was chosen. The AROD is a comprehensive plan to contain and clean up the groundwater plume and hold the responsible parties U.S. Navy and Northrop Grumman, accountable for its implementation. In addition, the AROD includes a Responsiveness Summary that addresses public comments received about the proposal. The estimated cost to implement the remedy is $585 million.

On Monday, June 10, 2019, DEC held a public meeting presenting the Proposed Amended Record of Decision for the sites. The comments received at this meeting and during the public comment period (May 23, 2019 through July 8, 2019), along with the administrative record, were considered in preparing the final AROD for the site.

Access the AROD and other project documents online through the DECinfo Locator: https://www.dec.ny.gov/data/DecDocs/130003A/ or https://www.dec.ny.gov/data/DecDocs/130003B/.

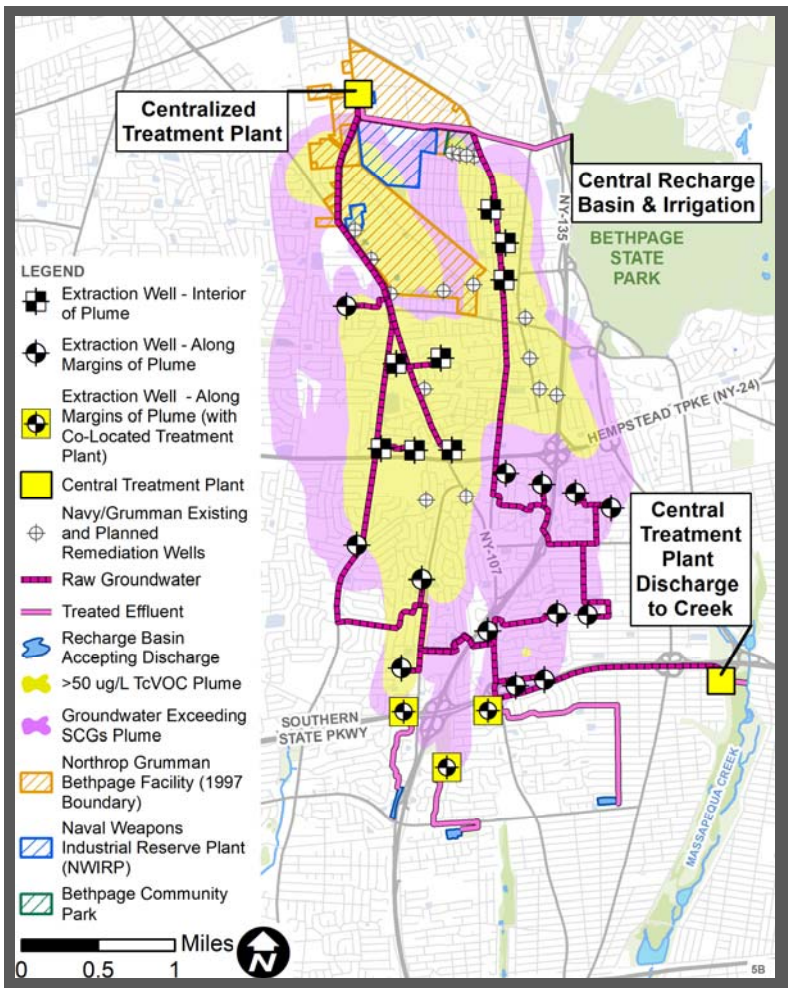
Documents also are available at the location(s) identified in the left-hand column under "Where to find information."

Amended Remedy

The amended remedy for the site is the construction, long-term operation, and maintenance of a full containment and treatment system that can effectively halt the further spread of contaminants.

The amended remedy supplements the existing remedies and includes:

- Completion of the design necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program;
- Installation of 24 groundwater extraction wells - eight in the interior of the Navy Grumman groundwater plume (black and white square symbols in the figure to the right) and 16 along the margins of the plume (black and white circular symbols) – to prevent continued migration of the Navy Grumman groundwater plume. In total, the extraction wells would withdraw approximately 12,100 gallons per minute (17.5 million gallons per day) of contaminated water from the aquifer. The actual number, location, depth, and pumping rates for the extraction wells would be determined during the remedial design;
- The extracted groundwater will be treated at one of five groundwater treatment plants using air stripping technology. Advanced oxidation process (AOP) technology will be used for 1,4-dioxane removal, if necessary, based on data acquired during the remedial design;
- Following treatment: water will either be returned to the aquifer system using a constructed recharge basin near Bethpage State Park or existing recharge basins near the Southern State Parkway; beneficially re-used for irrigation purposes at Bethpage State Park; and/or beneficially re-used to augment surface water flow in Massapequa Creek;



Amended Remedy Concept Figure

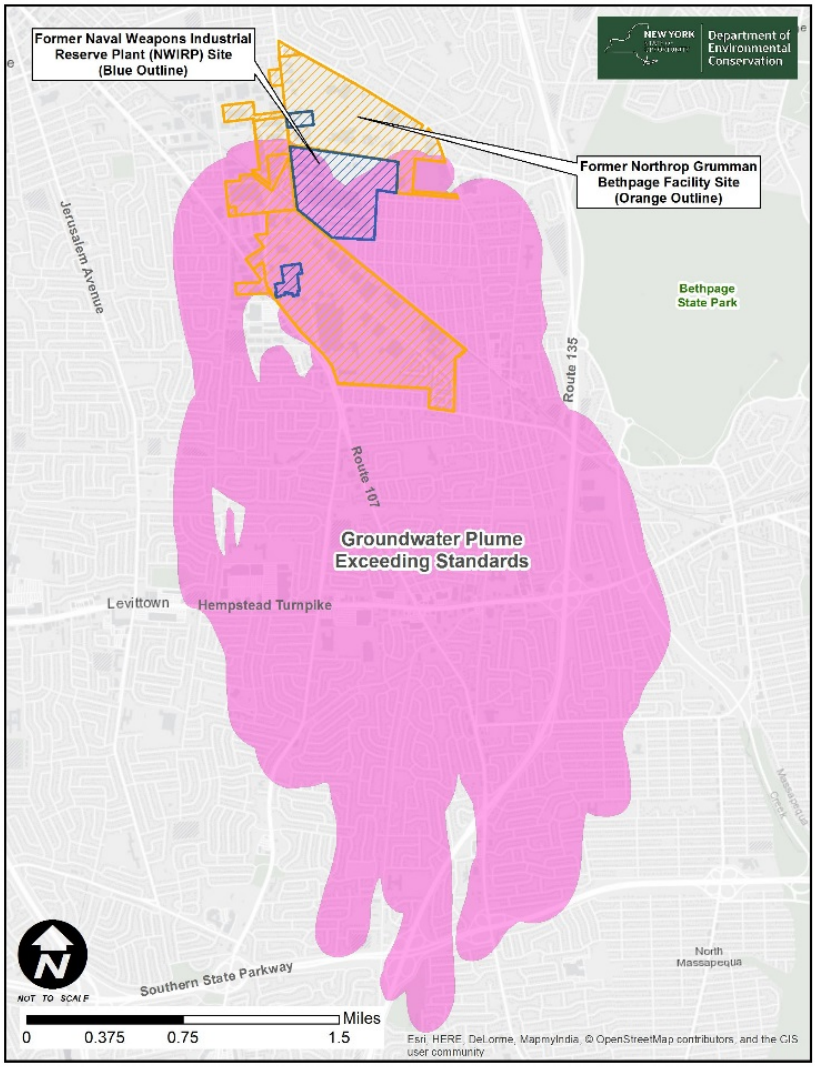
- To convey water from the extraction wells to the treatment plants and from the treatment plants to the discharge locations, approximately 124,000 feet (23.5 miles) of underground conveyance piping will be installed (pink lines originating from extraction wells on the figure above); and
- A Site Management Plan (SMP) will be implemented for long-term operation and maintenance of the remedial systems.

DEC developed the amended remedy after reviewing the detailed investigation of the site and evaluating the remedial options in the "Feasibility Study." The amended remedy was selected to achieve the following goals:

1) Stop further migration of the Navy Grumman groundwater plume;
2) Prevent contamination from reaching un-impacted drinking water wells and reduce concentrations in currently impacted wells;
3) Reduce the volume and contaminant concentrations in the Navy Grumman groundwater plume;
4) Protect the Long Island aquifer and the region's water resources by returning treated water to the aquifer system; and
5) Reduce the timeframe for cleaning up the Navy Grumman groundwater plume.

Summary of the New Expanded Investigation

Since discovery of the Navy Grumman groundwater plume in the 1970s, investigation activities have demonstrated that past practices contaminated groundwater with chlorinated solvents and that the extent of the groundwater plume has expanded. The investigation results indicate that the primary contaminant of concern in the groundwater plume is the chlorinated solvent trichloroethene (TCE).



Location and Extent of Navy Grumman Groundwater Plume

There are 11 public water supply wells that have been impacted by the groundwater contamination originating from the Northrop Grumman and NWIRP sites, and 16 public water supply wells that are threatened by the Navy Grumman groundwater plume. The 11 impacted public water supply wells have treatment for TCE and related compounds that allows for continued use of these wells for drinking water purposes.

In February 2017, DEC initiated an expanded and expedited investigation to develop an up-to-date understanding of the groundwater plume and an engineering analysis to evaluate alternatives to address the Navy Grumman groundwater plume. To complete this investigation and engineering evaluation, DEC partnered with the United States Geological Survey (USGS) and issued a work assignment to the engineering firm Henningson, Durham, & Richardson Architecture & Engineering, P.C. (HDR). The investigation indicates that the Navy Grumman groundwater plume extends approximately 4.3 miles south toward the Southern State Parkway and to depths of 900 feet beneath the ground surface. At its widest point, the plume is approximately 2.1 miles wide. The investigation has also confirmed that while there are two on-site groundwater containment systems and one off-site groundwater extraction and treatment system operating and removing significant amounts of groundwater contamination, the Navy Grumman groundwater plume continues to migrate to the south-southeast. This southward migration of the plume is causing contaminant concentrations to increase in off-site groundwater and threatens downgradient groundwater and surface water resources.

Background and Site Description

The Northrop Grumman Bethpage Facility and NWIRP sites are in the hamlet of Bethpage, town of Oyster Bay, New York (see site location map above), and have been associated with the aerospace industry since approximately the 1930s. Activities performed at these facilities occurred on an approximately 600-acre area until manufacturing ceased in 1996. Past disposal practices have contaminated both on- and off-site groundwater in the U.S. EPA-designated Long Island Sole Source Aquifer system. With off-site migration, the Navy Grumman groundwater plume now underlies a nearly seven-square-mile, heavily developed commercial and residential area in Nassau County.

Additional site details, including environmental and health assessment summaries, are available on DEC's Environmental Site Remediation Database (by entering the Site ID, 130003A or 130003B) at:

http://www.dec.ny.gov/cfmx/extapps/derexternal/index.cfm?pageid=3

State Superfund Program

New York's State Superfund Program (SSF) identifies and characterizes suspected inactive hazardous waste disposal sites. Sites that pose a significant threat to public health and/or the environment go through a process of investigation, evaluation, clean up, and monitoring.

DEC attempts to identify parties responsible for site contamination and require cleanup before committing State funds.

For more information about the SSF, visit:

http://www.dec.ny.gov/chemical/8439.html

Next Steps

With the issuance of the AROD, DEC will commence accelerated negotiations with the responsible parties for implementation of the selected remedy. If the responsible parties fail to agree to implement the remedy, DEC will implement the remedy and subsequently pursue cost-recovery from the responsible parties. Regardless of which entity implements the remedy, it is estimated that a timeframe of approximately five years will be necessary to fully design and build the system infrastructure, given the size of the plume and scope of the project. However, the design and construction timeframe will be accelerated to the greatest extent practicable while maintaining adherence to design and construction best practices. Additionally, DEC expects that the remedial program can be divided into specific components that will allow some phases of the project to begin earlier than other phases. This will allow cleanup of the Navy Grumman groundwater plume to begin well before the five-years indicated in the AROD.

NYSDEC will keep the public informed throughout the investigation and cleanup of the site.

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https://www.dec.ny.gov/chemical/61092.html