

Hockessin Groundwater Site National Priorities List Proposal (NPL)



U.S. Environmental Protection Agency, Region 3

February 13, 2018

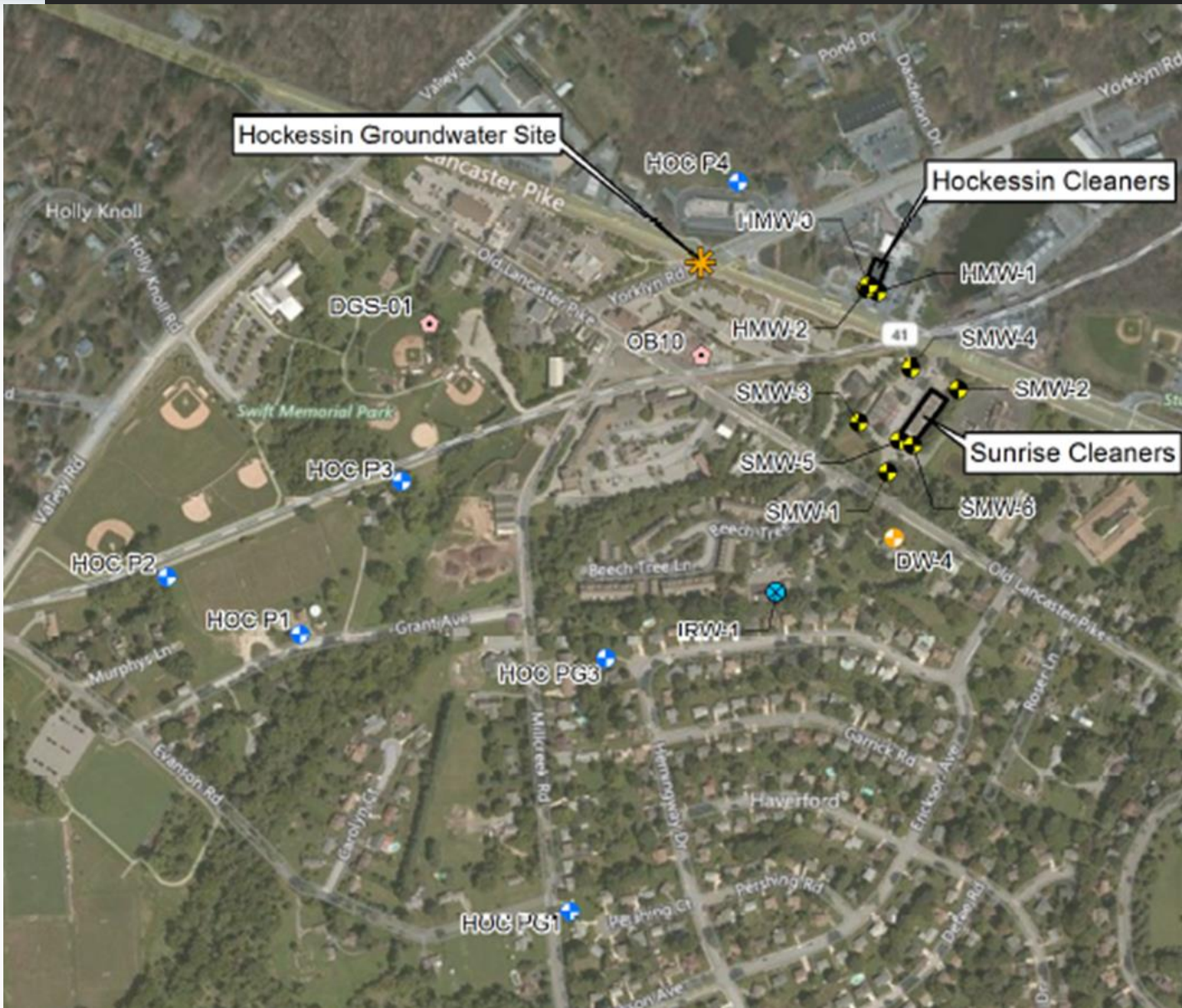
By: Connor O'Loughlin, Alexander Mandell, Randy Sturgeon



Purpose of the Meeting:

- Discuss EPA's proposal of the Hockessin Groundwater Site to the National Priorities List (NPL).

What is being considered for listing?



- The NPL listing addresses the groundwater contamination.



What are the contaminants?

- Tetrachloroethene (aka perchloroethene or PCE)
 - Used in dry cleaning
 - No longer used at two local dry cleaners
- Trichloroethene (TCE)
 - Used as a spot cleaner in dry cleaning
 - Not or no longer used at two local dry cleaners
 - From degradation of PCE

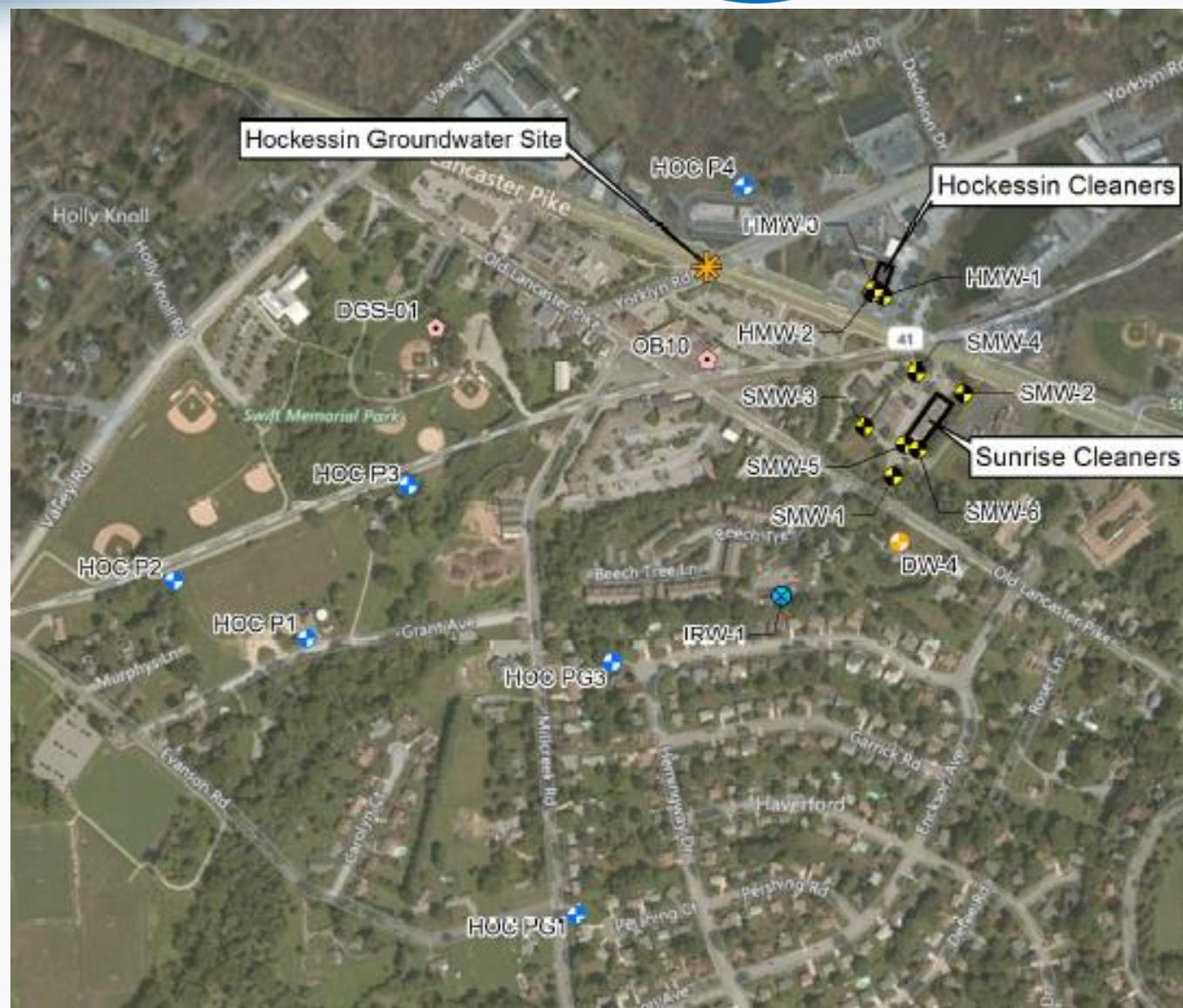


Agenda:

- History and Site conditions
- NPL listing process
- Next steps

History and Site Description

- Located in Hockessin, DE.
- Site encompasses 150 acres along the main section of Route 41.
- The site consists of mixed residential, and commercial properties.





Site Description (cont.)

- Artesian Water Company has six impacted public wells.
- Three residential, and one irrigation wells are impacted. Carbon system were installed on three residential wells by DNREC.
- Primary contaminants of concern: volatile organic compounds (VOCs) including tetrachloroethene (PCE) and trichloroethene (TCE).
- Artesian Water Company reported the presence of low levels of contaminants in the untreated/raw groundwater from several of its public supply wells since 2001.

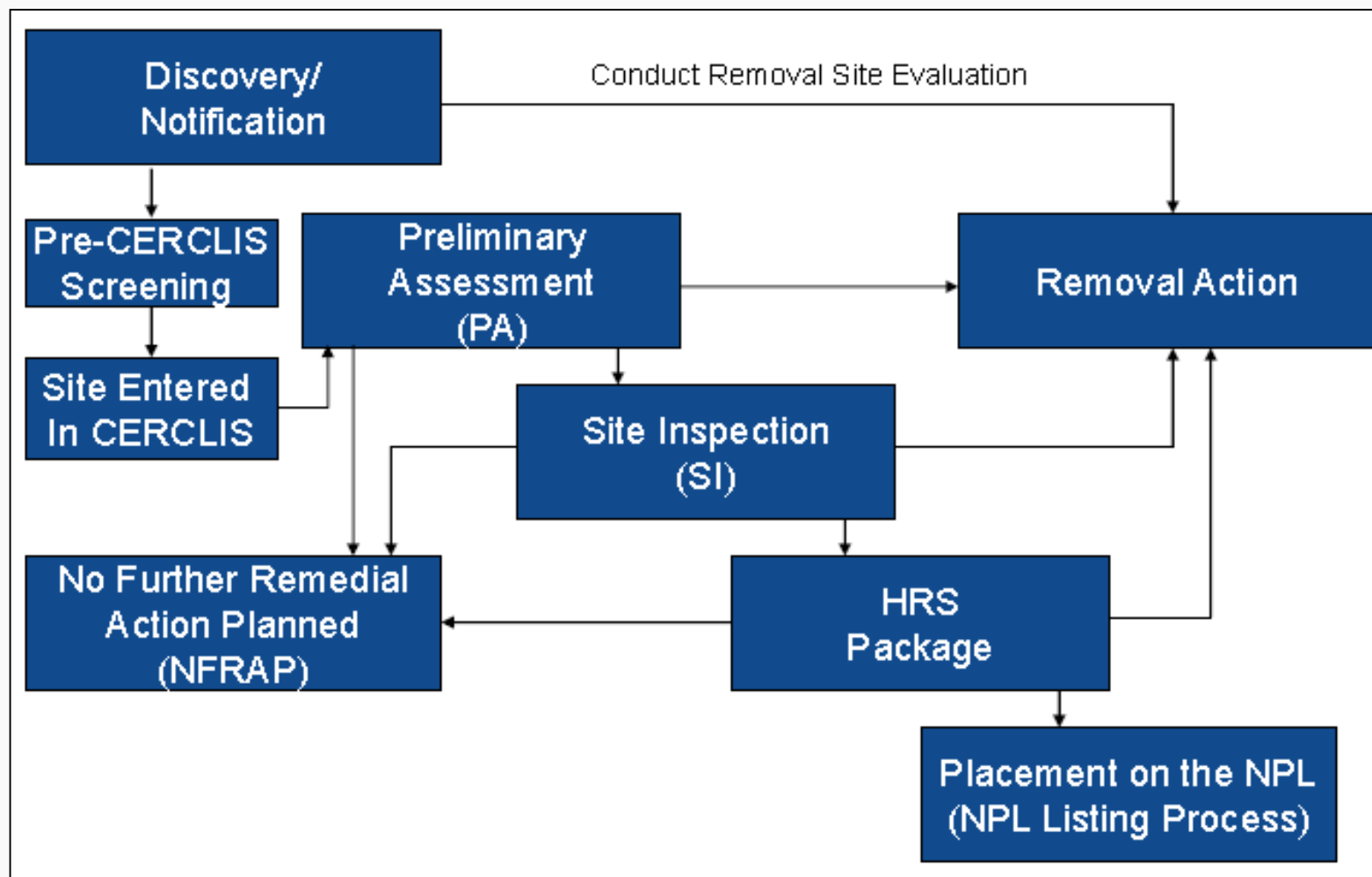


Regulatory Responses

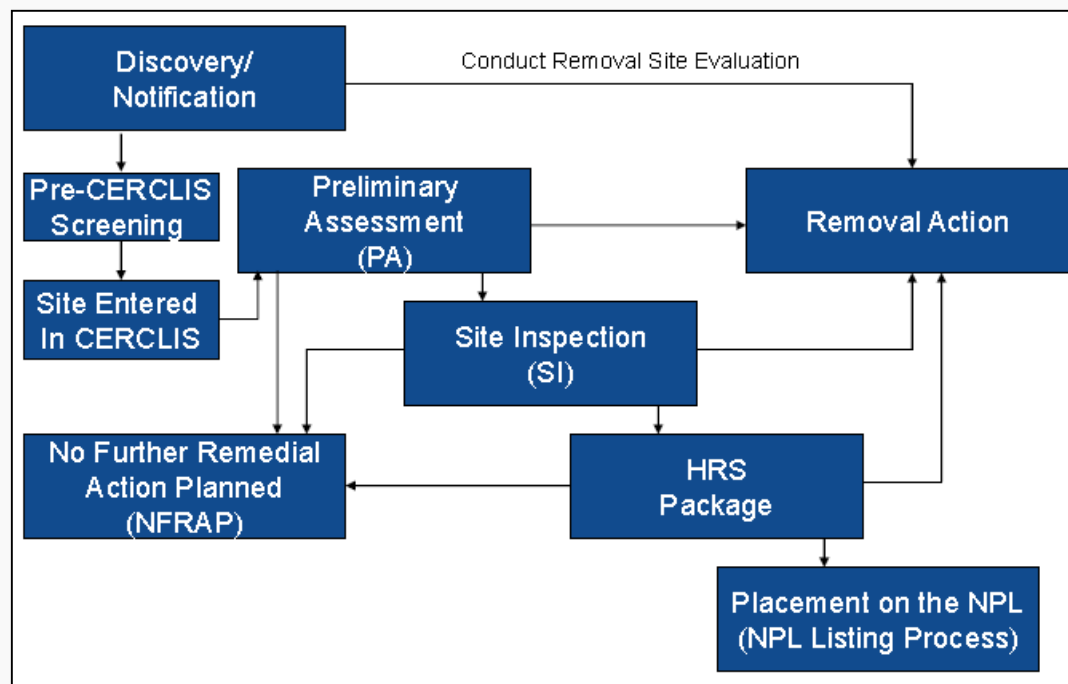
- DNREC requested EPA's assistance with the investigation of the site.
- EPA will lead the next phase of the investigation and potential future cleanup efforts once the site is listed.
- Since 2008, the public drinking water supplied by Artesian to the town has been treated to remove the contaminants and continues to meet Federal and State Safe Drinking Water Act standards.



Site Assessment Process



Preliminary Assessment (PA)



2005 - EPA provided funding to DNREC to conduct a preliminary assessment (PA) to investigate the contamination in the area and to identify potential sources of the contaminants.



Expanded Site Inspection (ESI)

2005 - EPA reviews DNREC's Preliminary Assessment and agrees that additional investigation should be conducted at potential sites identified by DNREC.

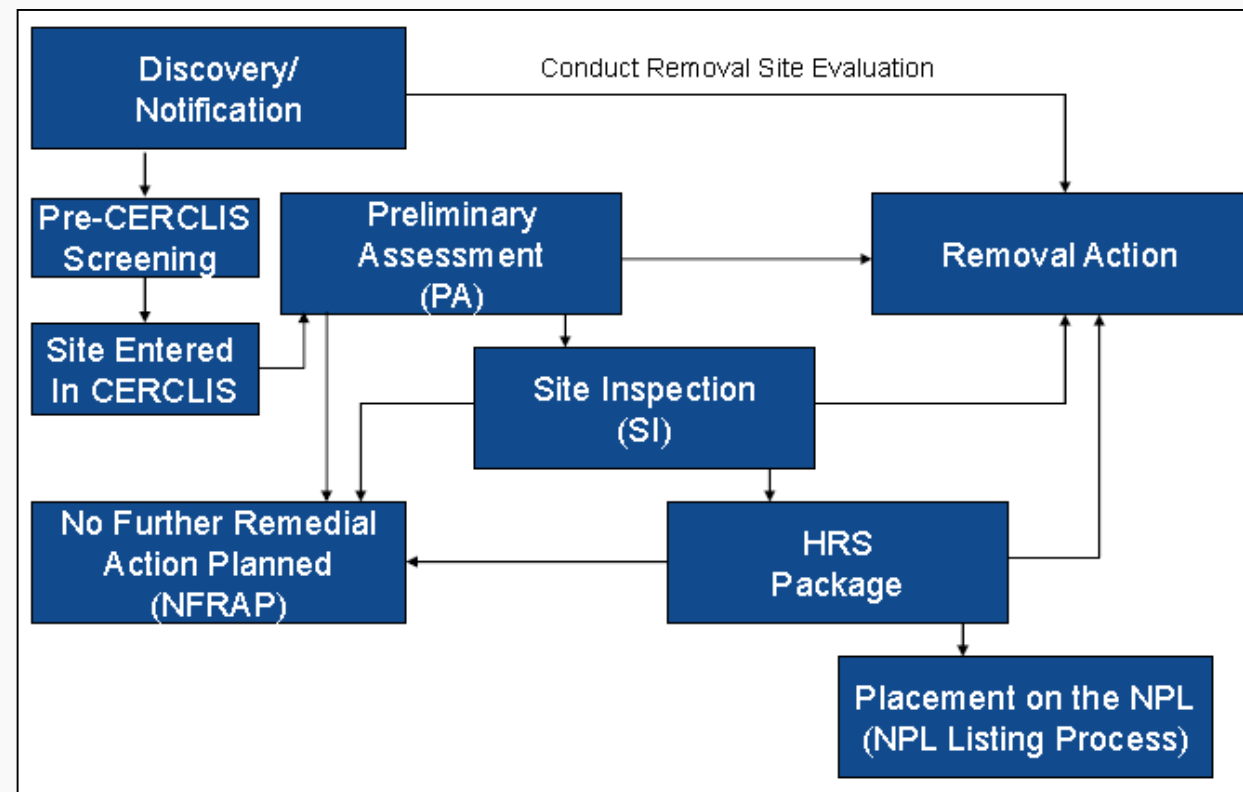
2014-2015 – DNREC and DPH conducted private well survey and sampling.

2016 - EPA funds the ESI and started the Expanded Site Inspection in 2016.

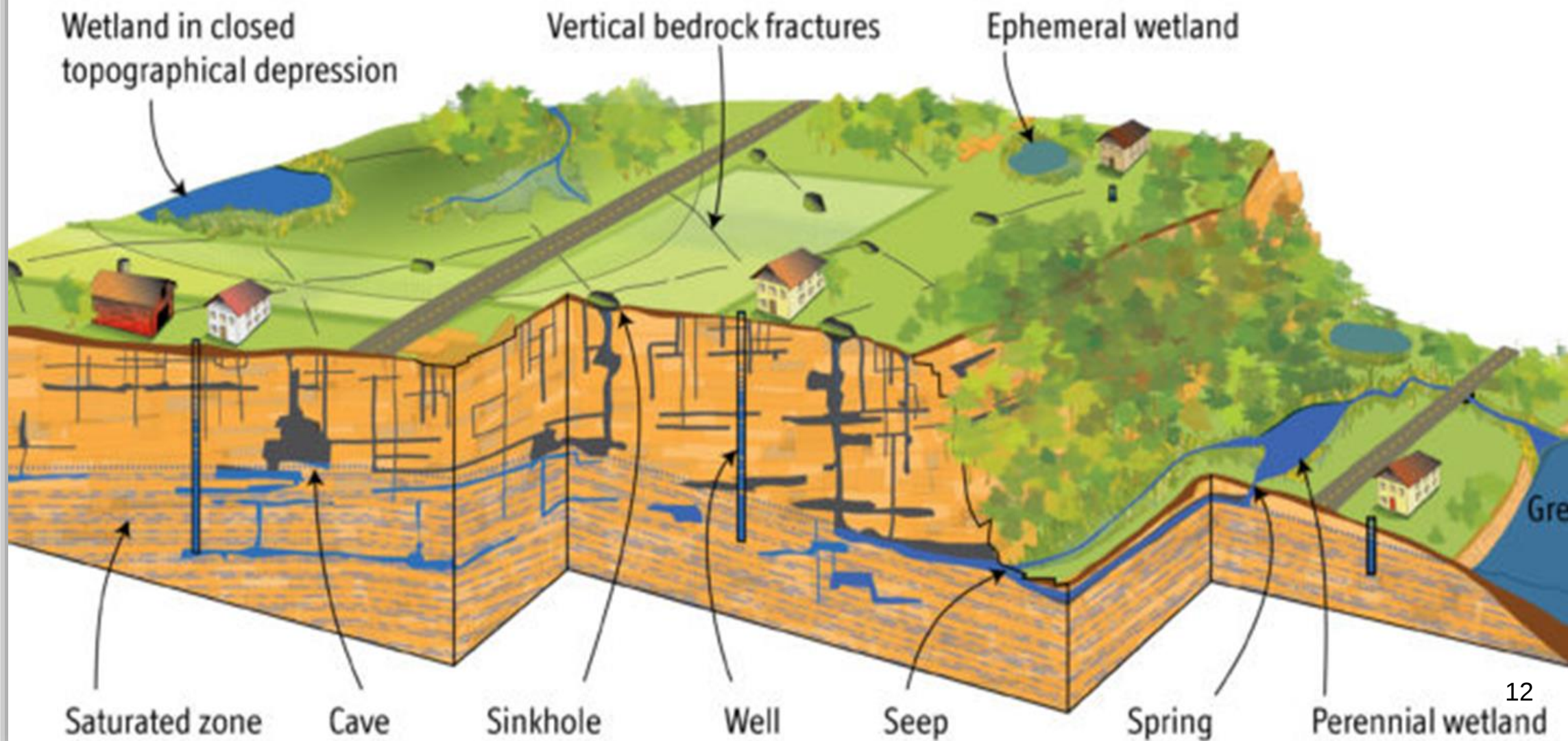
2016 –EPA started a Vapor Intrusion/Removal Assessment.

2017 – Vapor Intrusion Assessment/Groundwater Sampling.

2006-2016 – DNREC investigates potential sites, and enters VCP agreements with owners of the 2 dry cleaning sites.



Typical Karst Environment

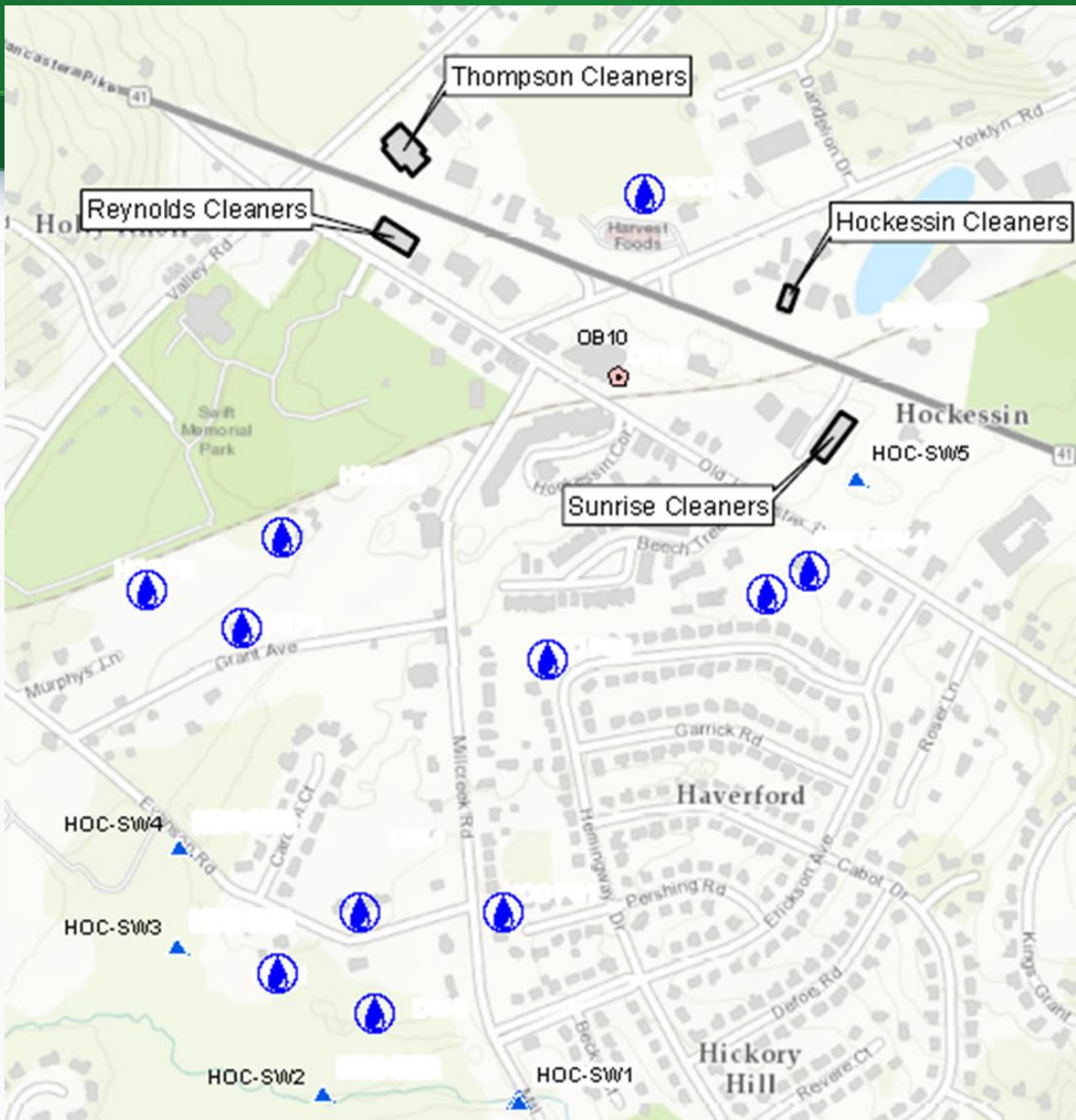




EPA Removal Assessment:

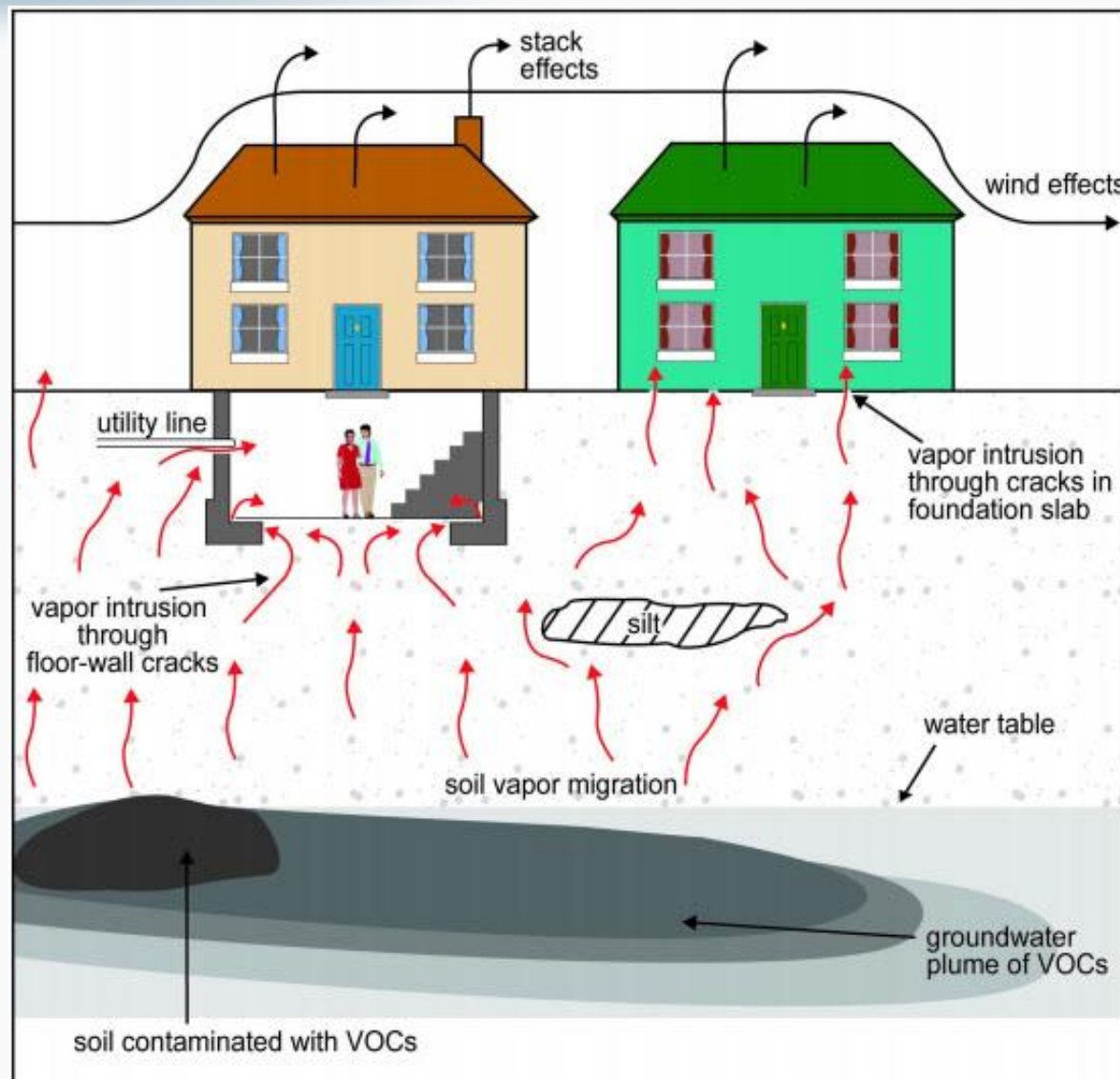
- In September 2016-2017:
 - Sampled soil vapor from 32 shallow sampling locations to assess Vapor Intrusion (VI) risks.
 - Collected two rounds of groundwater samples to assess the impacts to the shallow and deeper groundwater aquifer.
 - Sampled nine locations in streams and lakes to assess if contaminated from groundwater.
- In February 2017: Sampled eight indoor sub-slab vapor samples from daycares, homes, and a public building to determine the VI risks in areas above the groundwater contamination.
- In April and September 2017: Sampled groundwater to continue to assess the impacts to the shallow and deeper groundwater aquifer.

Hockessin, DE



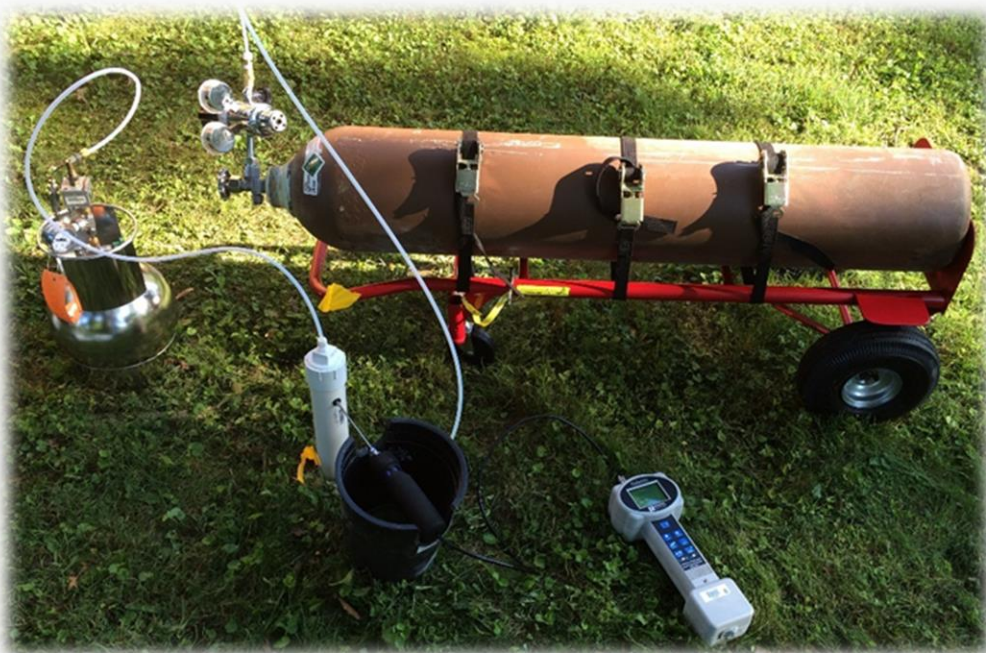
Groundwater and Surface Water Sample Locations

Vapor Intrusion



Site Activities:



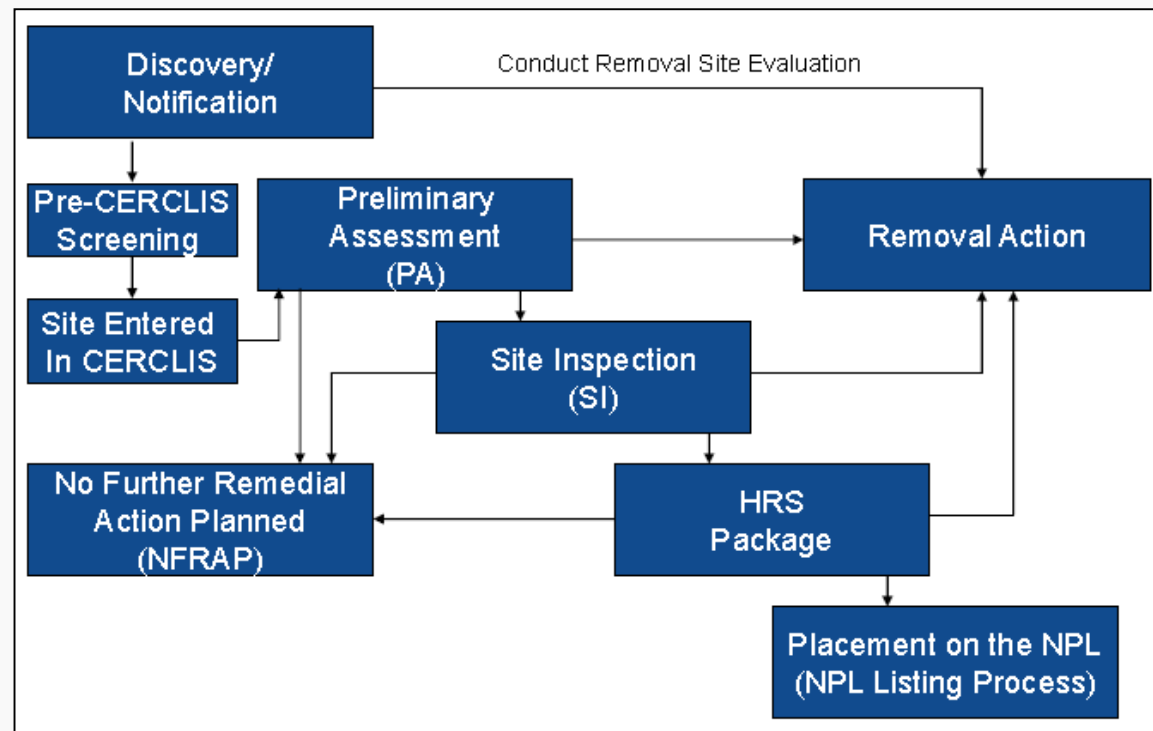




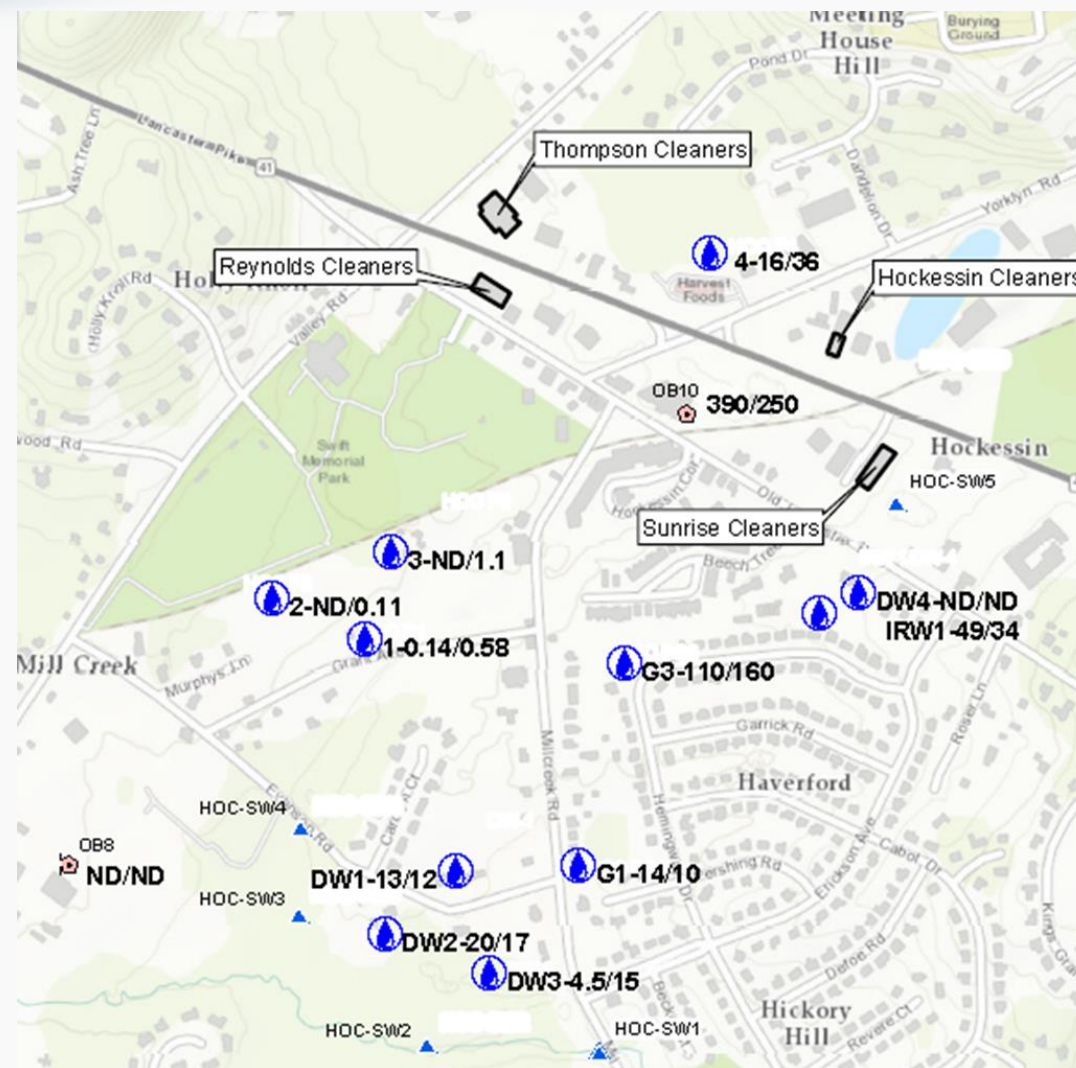
Contamination and Potential Sources - NPL Listing

- Based on groundwater and soil vapor sampling, two groundwater sources and plumes have been identified.
- Two dry cleaning facilities have been identified
- Full extent of the groundwater plumes will be explored if the Site is added to the National Priorities List
- **The public drinking water provided by Artesian from its 6 wells is treated at the Hockessin water treatment plant to meet Federal and State Drinking Water Standards to less than 1 ppb PCE.**

Hazard Ranking Process (HRS)



The NPL, or “Superfund” listing process is currently ongoing.





Hazard Ranking System (HRS) Factors and Process

- EPA uses a scoring system called the HRS to evaluate relative risks to human health and the environment posed by contaminated sites.
- This site scored above the threshold, meaning it is eligible to be placed on the National Priorities List (NPL or Superfund).



Current Situation / Next Steps

- The drinking water supplied by Artesian Water Company continues to meet Federal and State Safe Drinking Water Act standards, as shared annually in its water quality reports.
- End of 60-day public comment period on March 19, 2018
- EPA decides whether to list the site and then EPA will publish a formal notice to the Federal Register
- Once listed on the NPL, EPA will lead the clean-up effort.



What Happens if the Site is Listed on the NPL?

Randy Sturgeon
EPA Remedial Project Manager

Life of a Superfund Cleanup



- Who will conduct additional studies?
 - Polluter? EPA?
- Remedial Investigation
 - Nature and extent.
 - What is the contamination?
 - Where did it go?
- Risk Assessment
 - Does the site need cleanup?
 - Is the contamination hurting human health or the environment now?
 - What about the future?



Life of a Superfund Cleanup

- Feasibility Study
 - Evaluate different ways to clean up the site.
 - Compare to Nine Criteria.
 - Compare to each other.
- Proposed Plan
 - EPA's proposal of what it thinks is best way to clean up the site.
 - Public comments on what EPA thinks and other alternatives.



Life of a Superfund Cleanup

- Record of Decision (ROD)
 - Documents EPA's decision about method of cleanup.
 - Takes Delaware's view into account.
 - Written response to public comments.
- Who will implement the cleanup?
 - Polluter?
 - EPA?
 - Both?



Life of a Superfund Cleanup

- Remedial Design
 - Detailed drawings and specifications.
- Remedial Action
 - Implement design.
- Operation and Maintenance
- Deletion from NPL



Throughout Life of a Superfund Cleanup as Appropriate

- Removal action
 - Use when something has to happen now to protect human health or the environment.
- Reuse
 - EPA fosters safe use or reuse of land.
- Community Involvement



How Can I Get Involved?

Alex Mandell

EPA Community Involvement Coordinator



Community Outreach:

- A fact sheet and brochure available.

HOCKESSIN GROUNDWATER SITE

Hockessin, New Castle, DE. AUGUST 2016

Community Update





EPA To Conduct Environmental Sampling In The Hockessin Community

- Beginning in August 2016, the U.S. Environmental Protection Agency (EPA), will be conducting environmental sampling for the Hockessin Groundwater Site located near the intersection of Lancaster Pike and Yorklyn Road.
- EPA will be performing an assessment of soil vapor and groundwater in an area of Hockessin believed to be contaminated with a dry cleaner solvent known as Perchloroethylene (PCE). The assessment will help to define the presence of PCE existing as a vapor in the unsaturated zone and if this soil vapor has the potential to migrate into homes, thus presenting health concerns. This phenomenon is known as vapor intrusion or VI.
- To learn more about soil vapor and vapor intrusion visit: <https://www.epa.gov/vaporintrusion/what-vapor-intrusion>



Above: An EPA contractor is shown performing a soil vapor assessment using a Geoprobe Drill Rig.

What You May Notice

- EPA personnel and contractors
- Geoprobe drill rig
- Utility markings
- Support equipment trucks
- Safety cones
- Potential traffic control personnel

Brief Background

Since 2005, the Delaware Department of Natural Resources and Environmental Control (DNREC), has been investigating the presence of PCE in the groundwater impacting the six municipal drinking water wells located in Hockessin, DE. These municipal wells, which are operated by the Artesian Water Company, supply drinking water to the local community. The drinking water supply is being treated and currently meets Delaware water quality standards. Current efforts by the EPA will help further delineate the groundwater contamination plume and identify potential VI problems.

Next Steps

Depending on the results of the soil vapor assessment, further steps may be needed to prevent vapor intrusion. These results should be available in approximately 60 days.

Questions? Contact us!

Rich Rupert
EPA On-Scene Coordinator
215-814-3463
rupert.richard@epa.gov

Alexander Mandell
EPA Community Involvement Coordinator
215-814-5517
mandell.alexander@epa.gov

U.S. Environmental Protection Agency, Region 3
1650 Arch Street, Philadelphia, PA.
Serving Delaware, Maryland, Pennsylvania, Virginia, West Virginia, and the District of Columbia

Community Update



HOCKESSIN Groundwater SITE



January 2017



Community Outreach continued:

- Copies of the Preliminary Assessment and EPA investigation documents are available for viewing upon request. Feel free to contact us!
- If the site is listed to the NPL, EPA will develop a formal Community Involvement Plan, as well as informative and meaningful outreach materials to keep the community up-to-date and involved.
- Hockessin Websites:

Removal

<https://response.epa.gov/hockessingroundwater>

Remedial

<https://www.epa.gov/superfund/hockessingroundwater>



How You Can Get Involved:

- Public Comment Period is open until March 19, 2018.
- Comments can be submitted one of two ways:
- www.regulations.gov.
 - Enter Docket #**EPA-HQ-OLEM-2017-0604**
- Comments can also be submitted by mail:
US EPA Docket Center
NPL Notice of Proposed Hockessin Groundwater Site
Docket ID # EPA-HQ-OLEM-2017-0604
Mail Code 28221T
Pennsylvania Ave. NW
Washington, D.C. 20460



How You Can Get Involved continued:

- Community Involvement Plan (CIP)
- Technical Assistance Grant (TAG) Program
- Technical Assistance Services for Communities (TASC) Program
- Superfund Community Advisory Group (CAG)

Contacts

Connor O'Loughlin

Site Assessment Manager
EPA Region 3
215-814-3304

Oloughlin.connor@epa.gov

Alex Mandell

Community Involvement
Coordinator
EPA Region 3
215-814-5517

mandell.alexander@epa.gov

Randy Sturgeon

Remedial Project Manager
EPA Region 3
215-814-3227

Sturgeon.Randy@epa.gov

Timothy Ratsep

Administrator
DNREC Site Investigation and
Restoration Section
302-395-2600

Timothy.Ratsep@state.de.us

Christina Wirtz

Outreach Ombudsman
DNREC Division of Waste and
Hazardous Substances
302-395-2500

Christina.Wirtz@state.de.us

Paul Will

Environmental Program
Manager
DNREC's Site Investigation &
Restoration Section
302-395-2600

Paul.Will@state.de.us

Karl Markiewicz

Toxicologist (ATSDR)
EPA Region 3
215-814-3149

kvm4@cdc.gov



