



# Georgetown North Groundwater Superfund Site

## *Community Update*



**August 15, 2023**

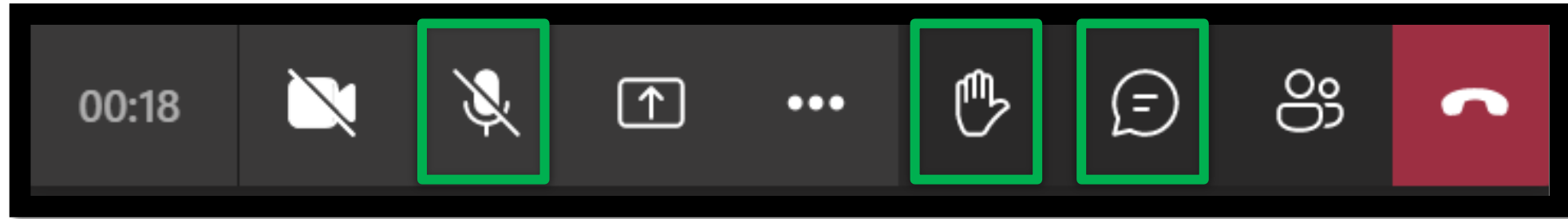
# Objectives

- Meet your Environmental Protection Agency (EPA) Site team and EPA partners
- Better understand the Superfund process and the environmental issues impacting your community
- Update you on the ongoing Remedial Investigation and future work
- Know how to get involved and stay informed

# Ground Rules

- We will have a Question & Answer (Q&A) session at the end of the presentation. Please refrain from asking questions until the Q&A.
- We will also be available after the presentation for one-on-one discussions.
- Please be respectful and enjoy the meeting!

# Teams Controls



Unmute mic

Raise  
hand

Chat  
box

**For callers on the phone line:  
Press \*5 to raise your hand  
Press \*6 to unmute**

# Agenda

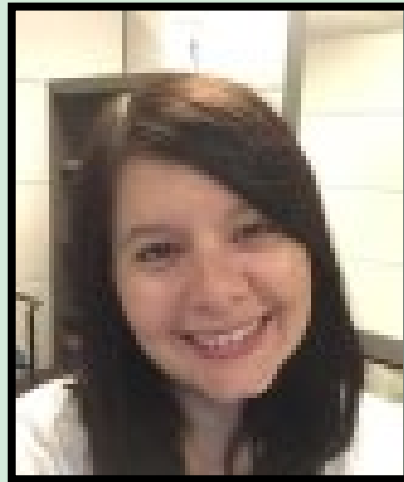
- Meet the Team
- Superfund Process
- About the Site
  - Site Overview and History
  - Remedial Investigation
- Community Involvement Resources
- Question & Answer Session

# Meet the EPA Site Team



Karla Guerrero

Remedial Project Manager



Emlyn Velez-Rosa

Remedial Project Manager



Nancy Cruz

Community Involvement  
Coordinator

# Meet our Delaware State Partners:



**Rick Galloway**

Department of  
Natural Resources and  
Environmental Control  
(DNREC)



**James Hanes**

Delaware Department of  
Health and Social Services  
(DHSS)



# The Superfund Process



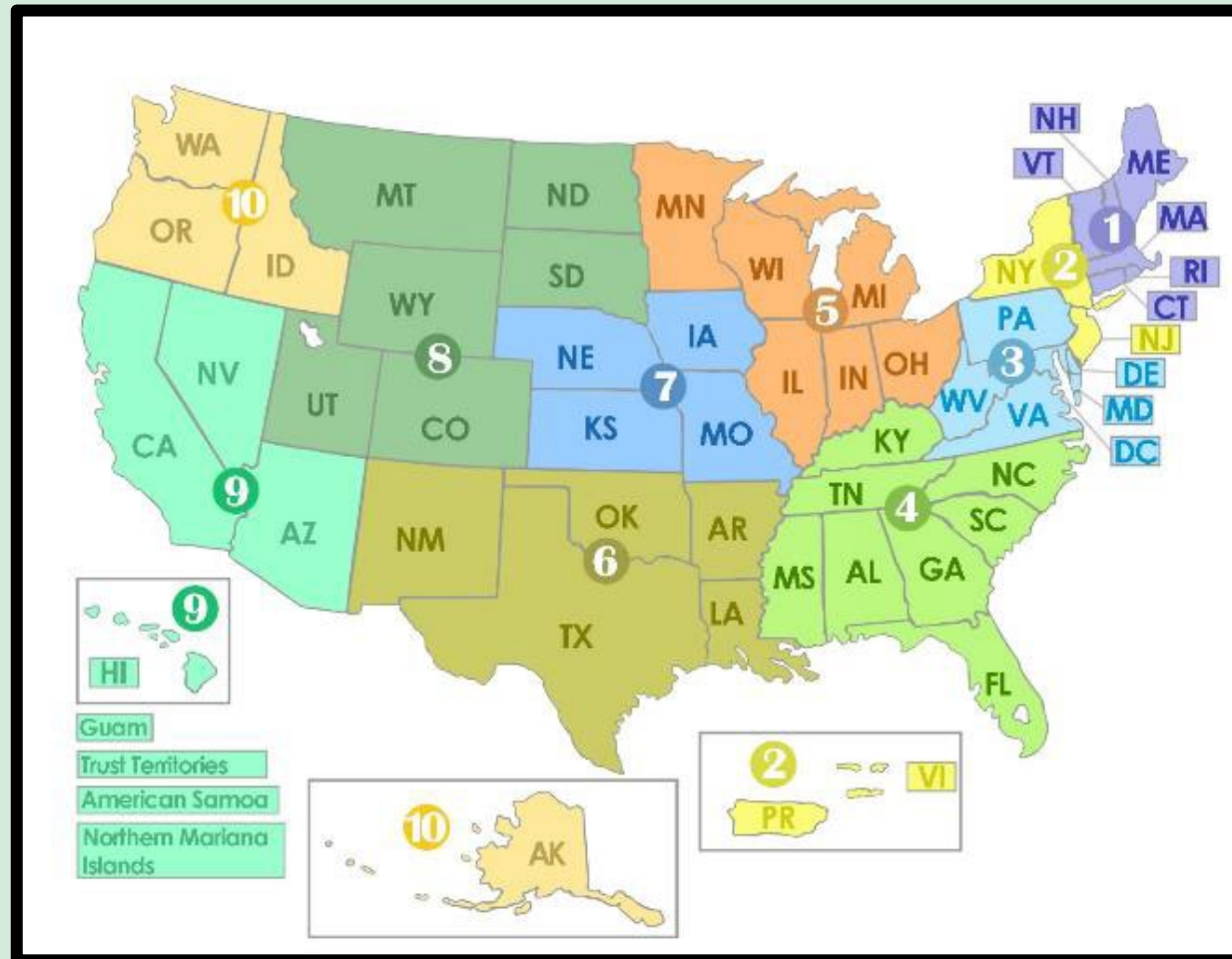
# What is Superfund?

- Congress established the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) in 1980
- CERCLA is informally called Superfund
- EPA's Superfund program is responsible for cleaning up some of the nation's most contaminated land and responding to environmental emergencies, oil spills and natural disasters

# Goals of Superfund

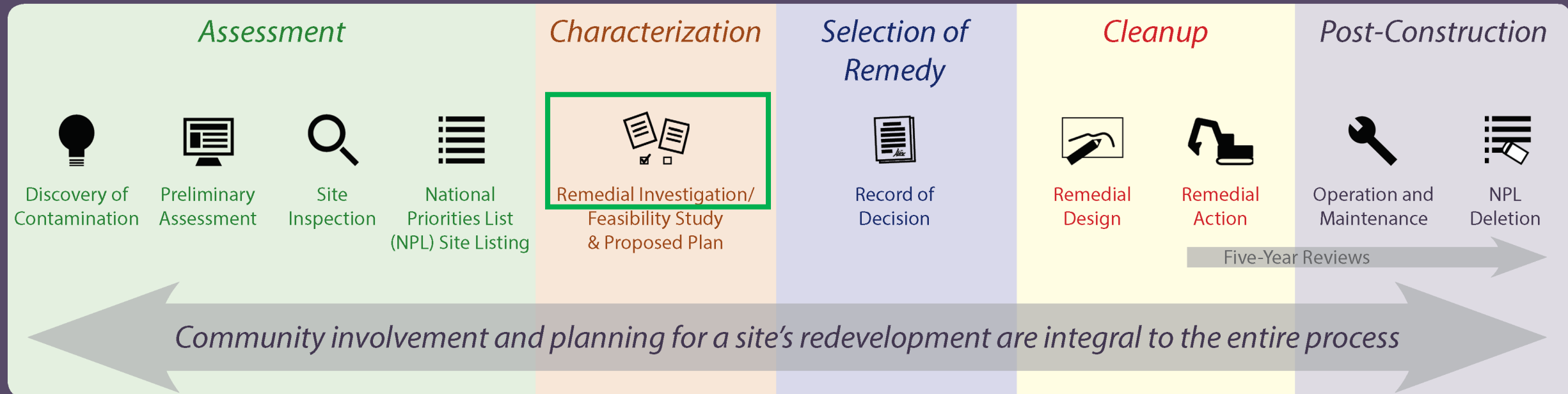
- Protect human health and the environment by cleaning up contaminated sites
- Make responsible parties pay for cleanup work
- Involve communities in the Superfund process
- Return Superfund sites to productive use

# Who Manages Superfund?



# Superfund Remedial Process

## THE SUPERFUND REMEDIAL PROCESS





# About the Site

# Site History

- **1985:** City's water authority reported contaminants in the untreated water  
Delaware investigates potential sources of groundwater contamination
- **2015:** Delaware Natural Resources and Environmental Control (DNREC) brings in EPA
- **2019:** EPA initiates a Site Inspection (SI)
- **2020:** The SI concluded the site poses a risk and would require long-term cleanup
- **2021:** EPA initiates an additional Expanded SI
- **2022:** Site proposed to the NPL in **March 2022** and listed in **September 2022**

# Georgetown's Drinking Water

- Georgetown uses three groundwater wells as the primary source of drinking water. Two of the three public wells have PCE contamination exceeding the state and federal maximum contaminant levels. One additional industrial well has also been impacted due to historical operations at the dry cleaners.
- Georgetown has an **air stripper** water treatment system in place and the treated water currently **meets State and Federal Safe Drinking Water Act standards**.



# Site Description



- Mixed-use area consisting of homes and commercial buildings in Georgetown, DE
- Subsurface soil and groundwater contamination at the Site is attributed to historical operations at two former dry cleaners
- Contaminated with the solvent tetrachloroethylene (PCE) and its breakdown products



# Contaminants of Potential Concern

- Volatile organic chemicals (VOCs) are liquid or solid chemicals that can easily evaporate into gases
- VOCs can get into the environment through industrial dumping, leaks, spills
- PCE and TCE can increase your risk for cancer if swallowed or breathed in large amounts over a long period of time. At very high levels, they can cause damage to the nervous and immune systems and to the kidneys and liver

**Please note the community is connected to public water which is successfully treated and meets relevant standards**

## Chlorinated Volatile Organic Compounds (CVOCs) including:

Tetrachloroethylene\* (PCE)

trichloroethene (TCE)

1,1-dichloroethene

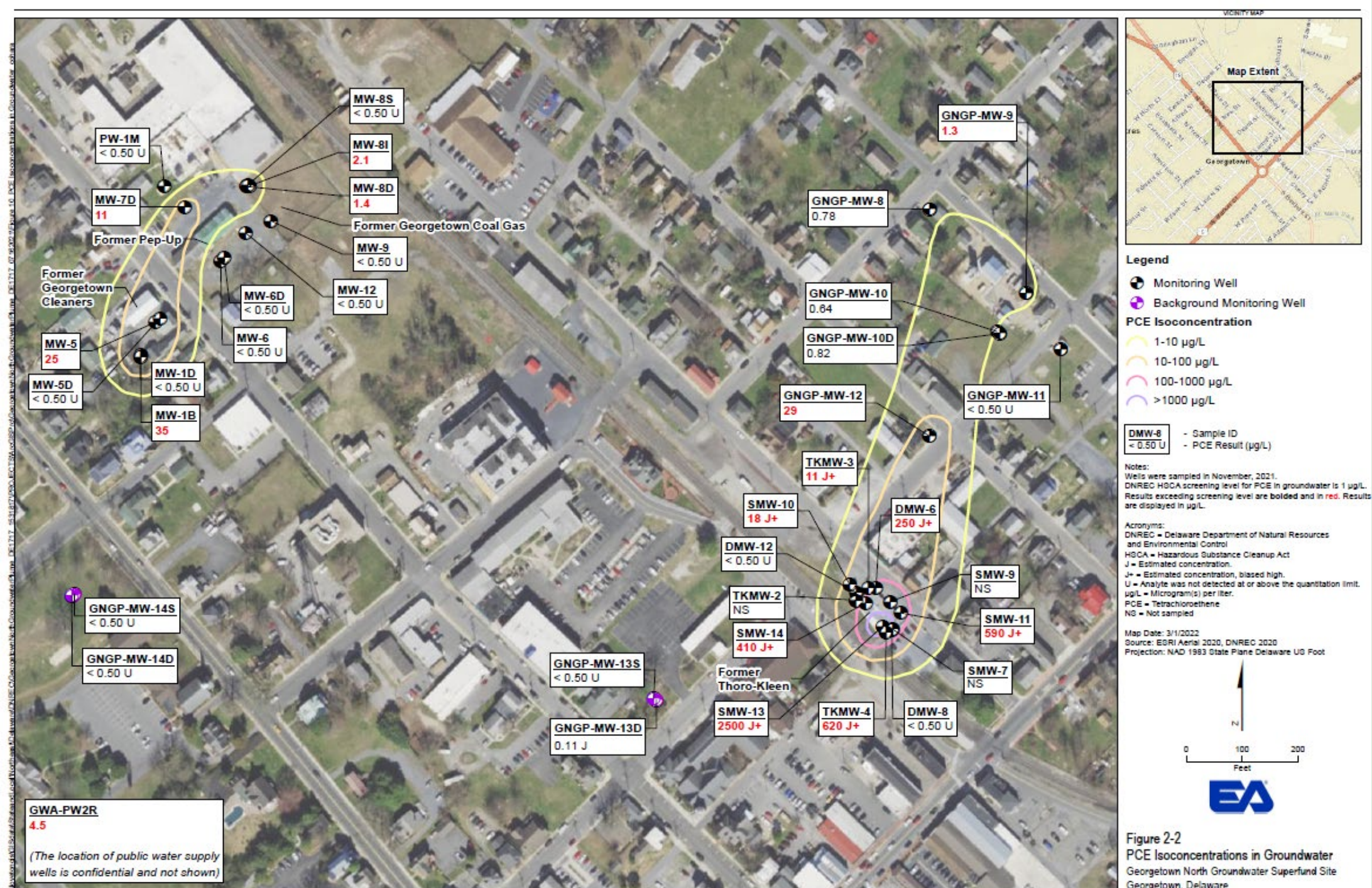
cis-1,2-dichloroethene

trans-1,2-dichloroethene

vinyl chloride

\*Other names include perchloroethylene, PCE, PERC, tetrachloroethene, and perchlor.

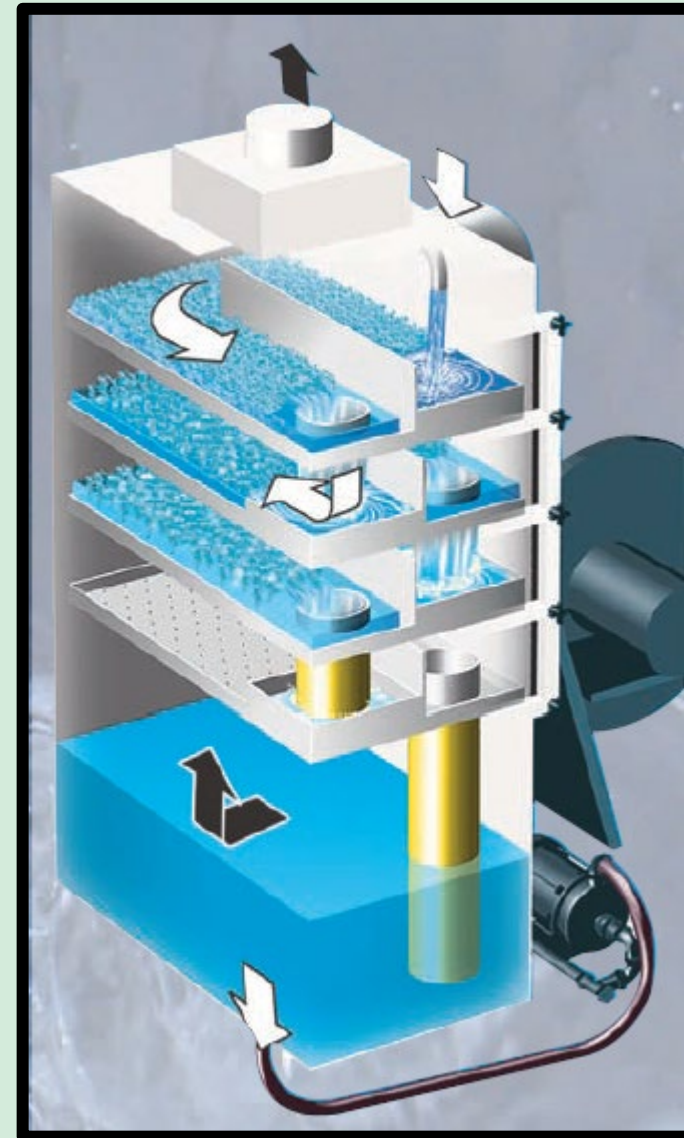






# Air Stripping

- Air stripping is the process of moving air through contaminated water in an aboveground treatment system to remove VOCs
- An air stripper forces air through contaminated water and evaporates VOCs from the water
- VOCs are then vented to the outside or first treated via carbon if concentrations in air stream require treatment



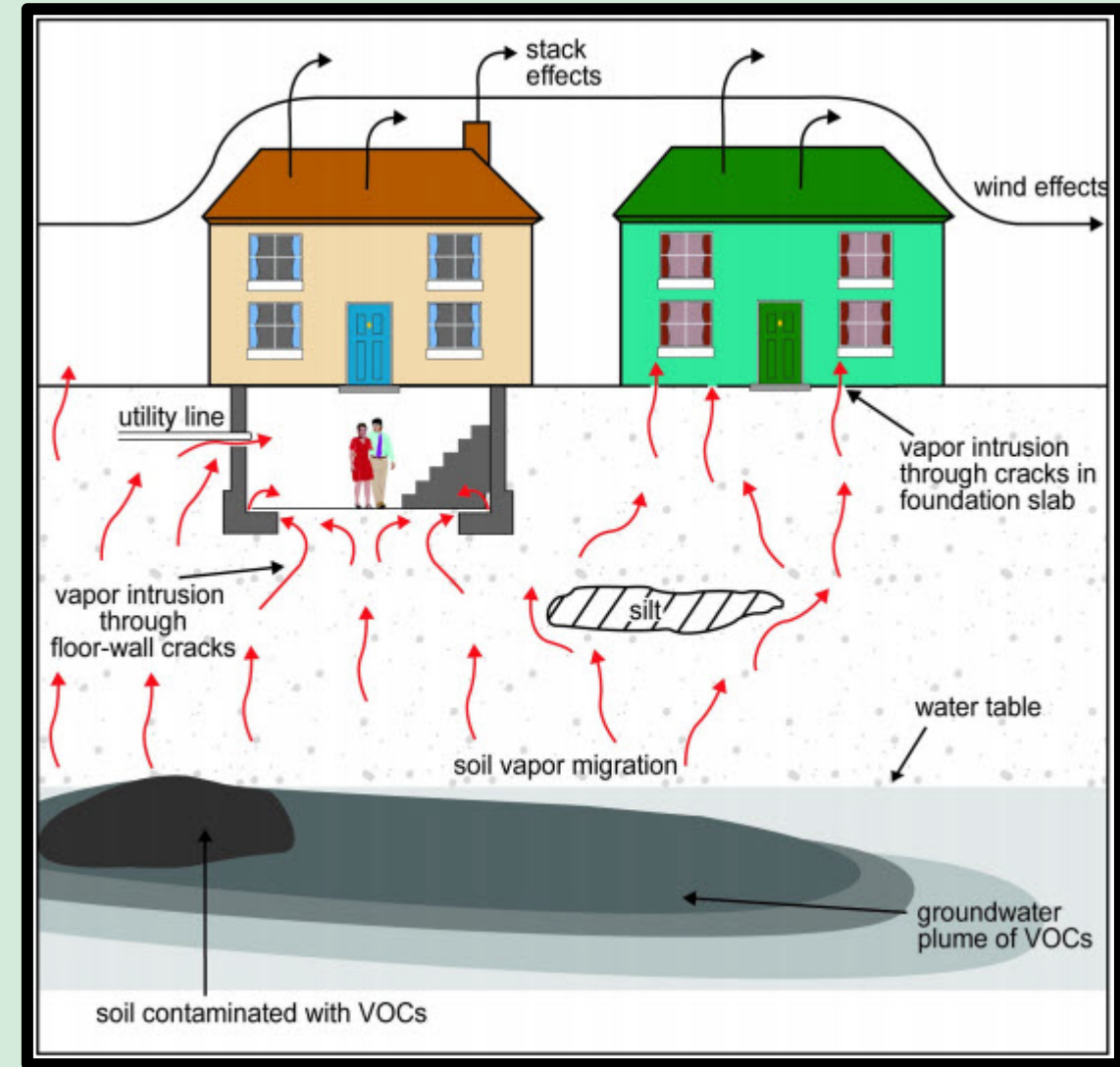
# Georgetown's Air Stripper





# Vapor Intrusion (VI)

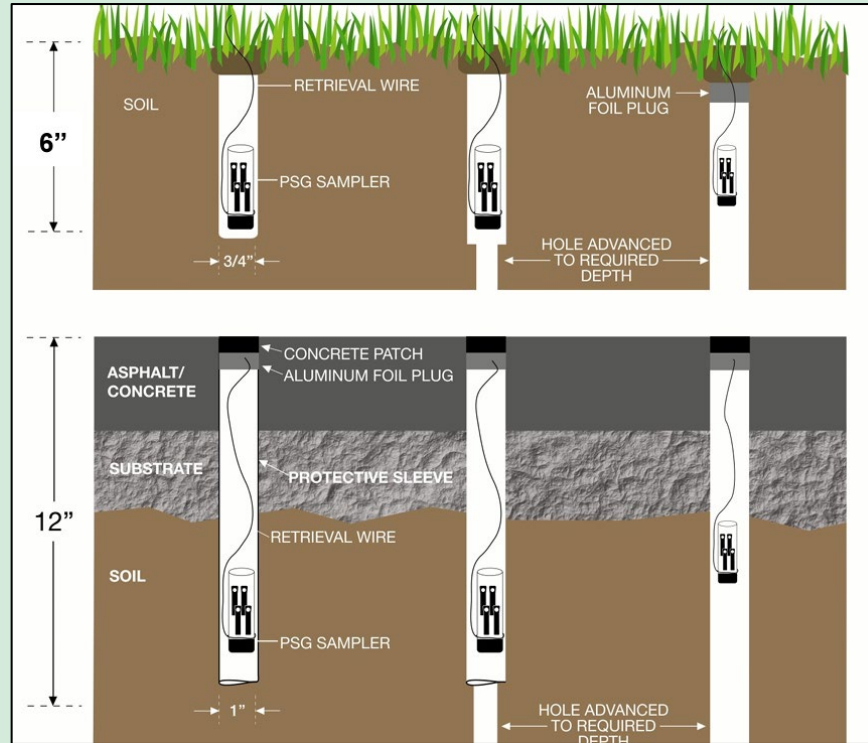
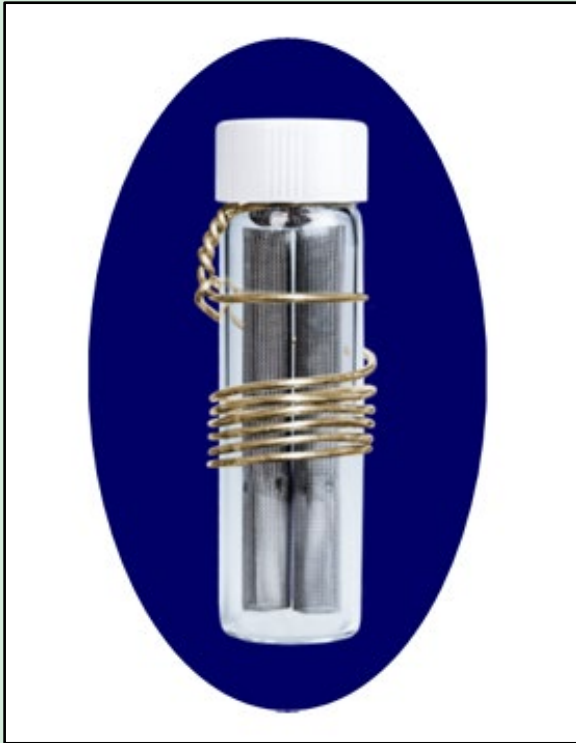
- Vapor intrusion is the process by which VOCs move, in gaseous form, from an underground contamination source, through the soil, into the indoor air of a building
- Soil vapor or soil gas is the gas found in the pore spaces between soil particles
- Contaminated groundwater or soil usually results in a vapor intrusion investigation



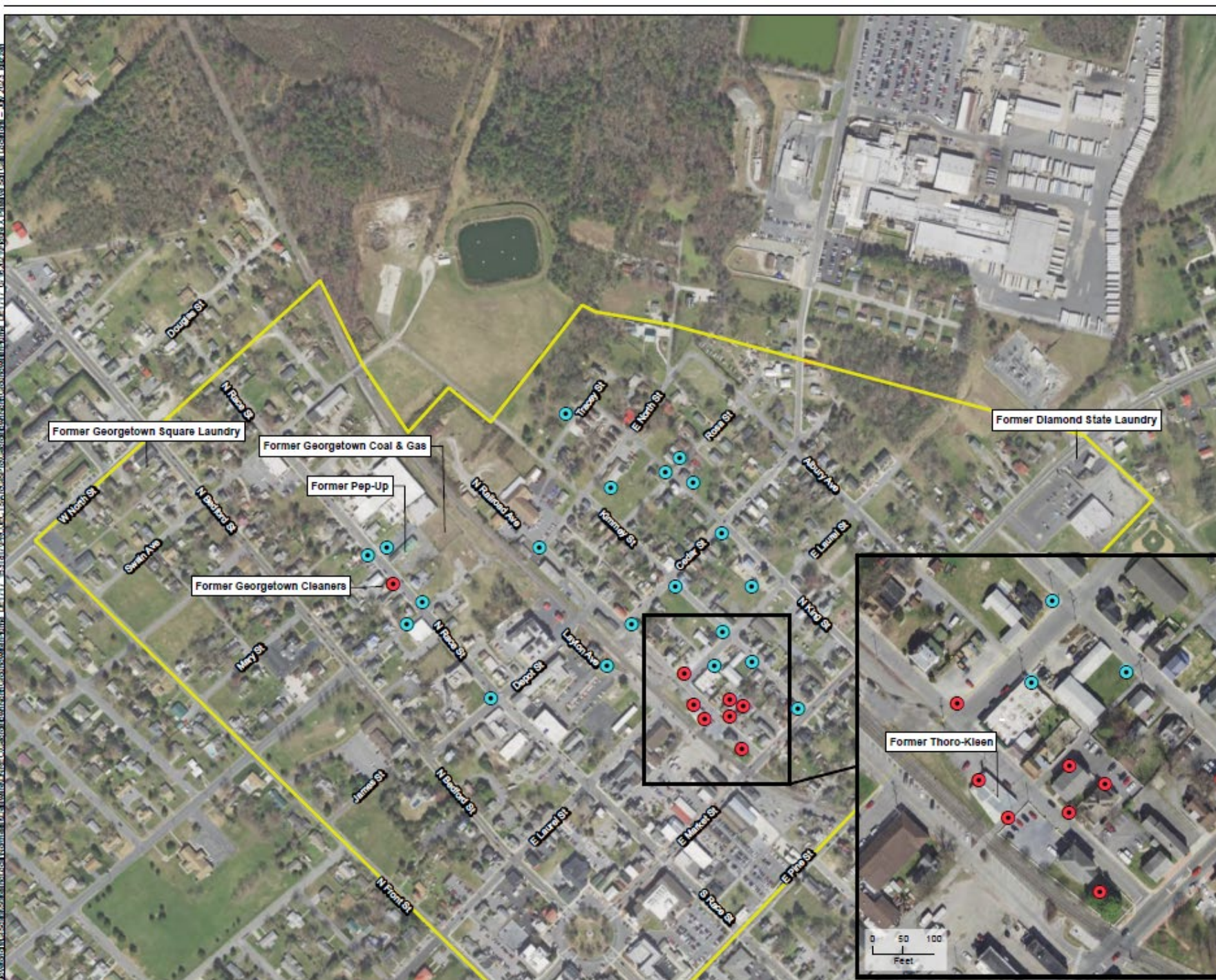


# Remedial Investigation

# Passive Soil Gas Investigation- July 17th



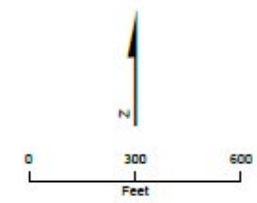




- Legend**
- Non-Detect (Site-Related Contaminants of Concern)
  - Detections (Site-Related Contaminants of Concern)
  - Georgetown North Groundwater Site Area

**Notes:**  
 Site-related contaminants of concern include tetrachloroethene, trichloroethene, cis-1,2-dichloroethene, trans-1,2-dichloroethene, and 1,1-dichloroethene

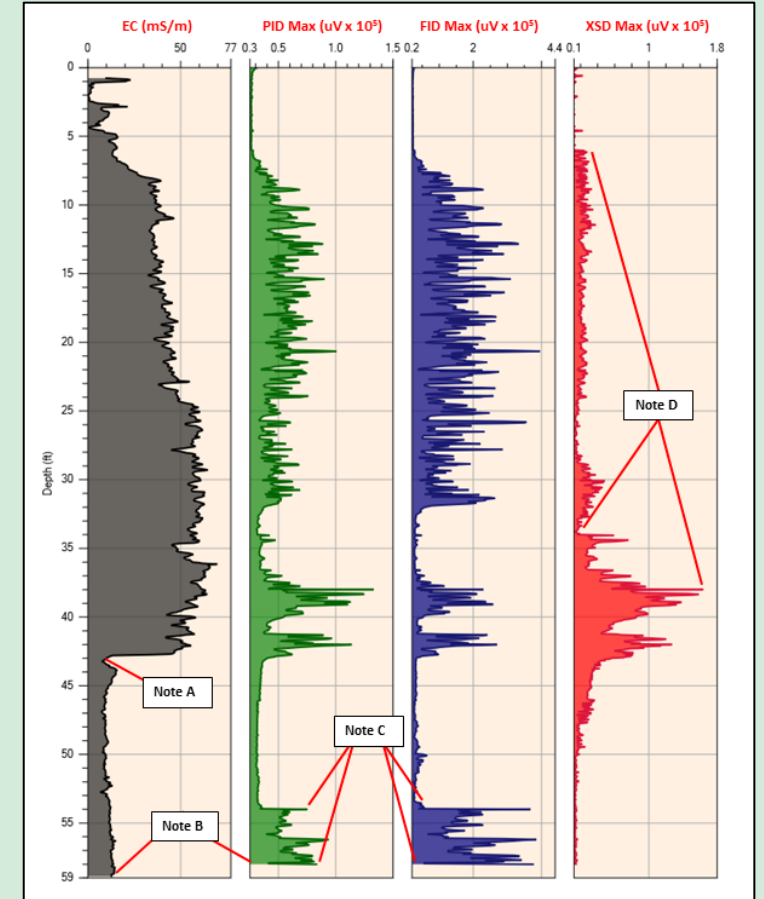
Map Date: 8/14/2023  
 Source: ESRI Aerial 2020  
 Projection: NAD 1983 State Plane Delaware US Foot



**Passive Soil Gas Analytical Results for Site-Related Contaminants of Concern – July 2023**  
 Georgetown North Groundwater Superfund Site  
 Georgetown, Delaware



# Membrane-Interface Probe-Hydraulic Profiling Tool (MiHPT) Investigation- August 14th

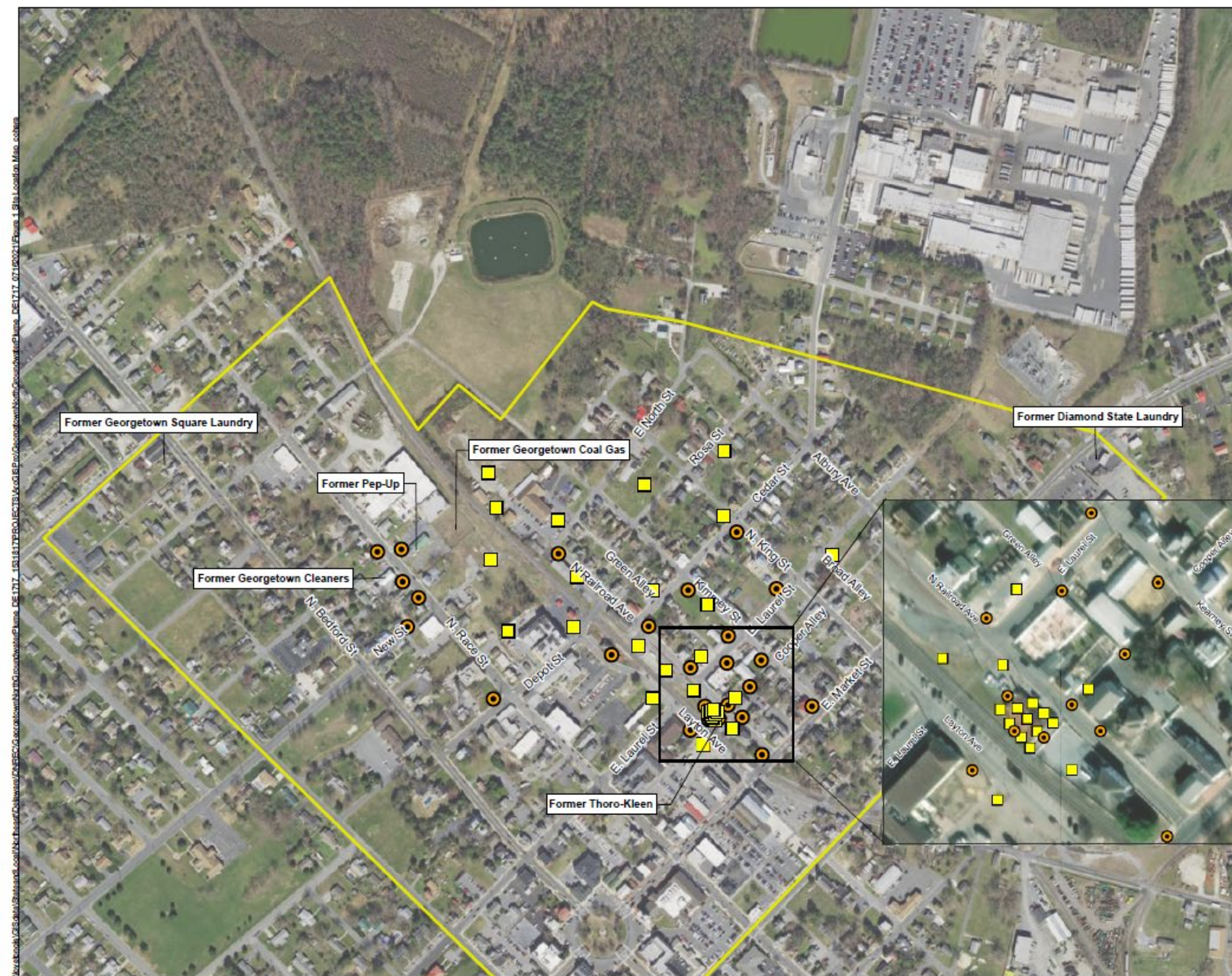





# Georgetown's MiHPT Investigation- August 14th







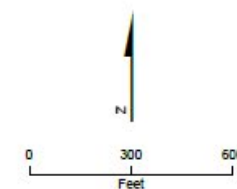
**Legend**

-  Georgetown North Groundwater Site Area  
 MiHPT Locations  
 Passive Soil Gas Locations

Note:  
Proposed initial passive soil gas sample locations  
are approximate and are subject to offset/  
omission based on field conditions.

Proposed initial MiHPT locations are approximate and are subject to offset/omission based on field conditions, real-time screening results, and

Map Date: 6/14/2023  
Source: ESRI Aerial 2020  
Projection: NAD 1983 State Plane Delaware US Foot



**Figure 5-2**  
**Proposed Initial Passive Soil Gas**  
**and MiHPT Locations**  
Georgetown North Groundwater Superfund Site  
Georgetown, Delaware



# Vapor Intrusion Investigation- Fall/Winter





# Community Involvement

*Resources and Opportunities*

# Community Resources and Opportunities

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

**For more information on community resources please visit:**

<https://www.epa.gov/superfund/superfund-community-involvement>



**[www.epa.gov/superfund/  
georgetowngroundwater](http://www.epa.gov/superfund/georgetowngroundwater)**

## **Questions? Contact Us**

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