

Naval Research Laboratory – Chesapeake Bay Detachment Restoration Advisory Board Meeting

May 18, 2021

5:00 - 7:00 p.m.

Agenda

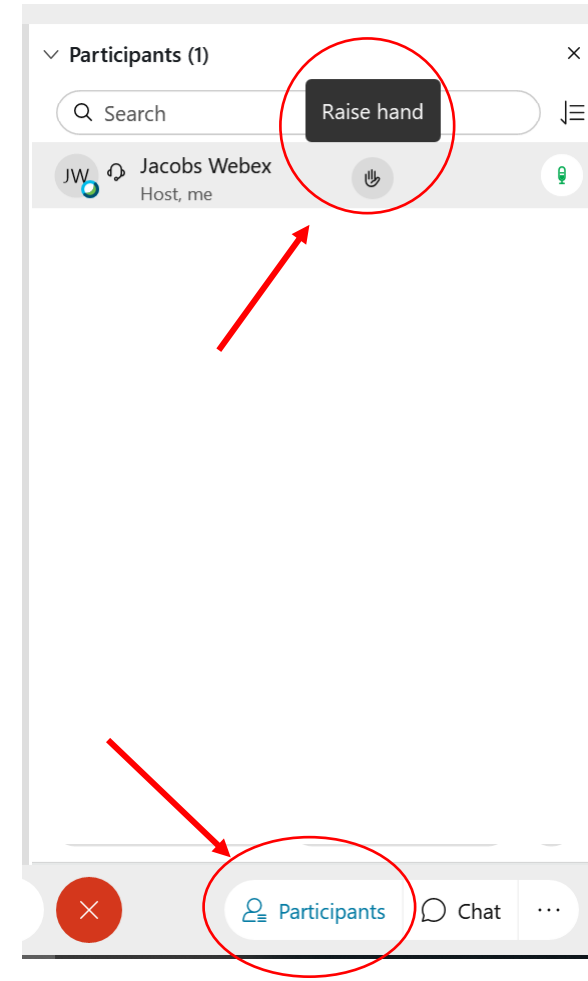
- **Welcome and Introductions**
- **Virtual Meeting Logistics**
- **Review and Approve Dec. 2020 Training Meeting Minutes**
- **Community Involvement Update**
- **Technical Assistance for RAB Support**
- **Questions & Comments from RAB members**
- **Status Update: Planned, On-going, and Completed Activities**
- **Site 10 – Site Inspection Update**
- **Questions & Comments from RAB**
- **Questions & Comments from Public**
- **Future Meeting Planning and Adjournment**

Virtual Meeting Logistics

Amy Brand - Jacobs

Webex Basics – Computer Access Participants

- Video – Turn OFF except for slide presentation (to preserve bandwidth)
- Participants - On the lower right, click “participants” to open panel
- Chat box – On the lower right, click on Chat and enter questions/comments in chat box
- Raise hand to be called on to speak
 - Scroll over your name in the participant list and click on hand symbol
- Mute/Unmute (all muted to start)
 - Host will unmute individuals
- Trouble? Call or text 352-246-5246



Webex Basics – Telephone Access Participants

- Video – Turn OFF except for slide presentation (saves bandwidth)
- Dial *3 to raise hand to be called on to speak
- Host will unmute individual after seeing raised hand
- You will then receive a prompt to dial *6 on the phone to unmute yourself
- Trouble? Call or text 352-246-5246

Previous RAB Training Meeting Minutes December 2020

Amy Brand - Jacobs

Previous Meeting Minutes (December 2020)

- The December 2020 RAB training minutes were distributed to the RAB via email in May 2021.
- Action Items
 - Greg Morris: Re-send written response to comments on 12/2019 minutes to Ryan Mayer
 - Ryan Mayer: Circulate RAB Charter approval signoff sheet
 - Ryan Mayer: Forward CIP to RAB members after regulator review
 - Ryan Mayer: Follow-up on boat site in Chesapeake Beach
- Comments from RAB members?

Community Involvement Update

Amy Brand - Jacobs

Community Involvement Plan (CIP)

- Describes how the Navy will communicate with the public during environmental restoration and how community members can be involved.
- Based on community input – questionnaires and interviews
 - What do people know about environmental restoration at the site? What do they want to know?
 - What are the best ways for people to get that information and be involved?
- Content
 - Overview of the Community Involvement Plan
 - Facility Description and Site History
 - Community Overview
 - Community Involvement Program



Community Input and Results

- Community Input
 - Questionnaire and interviews in August-September 2019, nine participants
- Summary of Results
 - Most aware of environmental investigations but many not aware until off-base groundwater sampling
 - Specific interests:
 - Protect Chesapeake Bay
 - Address shallow wells and protect people
 - Start a RAB
 - Ensure the Navy implements a thorough and sound process

Community Involvement Update

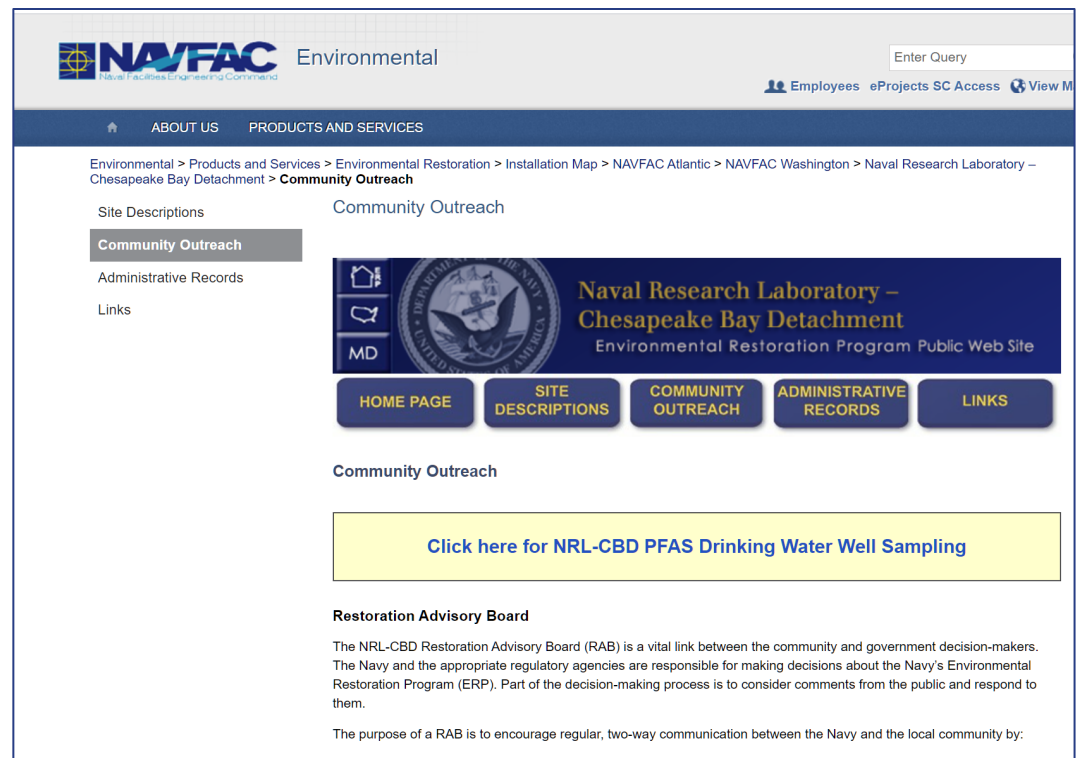
- Community Involvement Activities
 - Many activities required by CERCLA law
 - Establish this RAB
 - Maintain a mailing list for notifications
 - Maintain a website
 - Distribute fact sheets as needed
- CIP Status
 - MDE reviewed the CIP and provided comments
 - Navy addressed MDE comments and CIP released in March 2021
 - CIP posted to the website and in-progress to the Administrative Record



Website Update

<https://go.usa.gov/xQFuV> (case sensitive)

- Website has been updated with new information on the Site Description and Community Outreach tabs
- RAB information and minutes
- Searchable Administrative Record



Technical Assistance for RAB

Ryan Mayer – Navy Co-Chair

Kevin Britt – Community Co-Chair

Technical Assistance for Public Participation (TAPP)

- **What is TAPP?**

- TAPP provides RABs with independent technical assistance that contributes to community members' ability to provide advice to decision makers by improving their understanding of cleanup activities at a site.
- Specifically, the TAPP program helps RAB members better understand the scientific and engineering issues underlying environmental cleanup activities.

1st Step - Define a Project

- RAB members define a project to better understand the environmental restoration program.

Two most common types:

- Training / Education on a particular technical issue.
 - Interpretation of Technical Documents produced by the installation's restoration contractor.
- For more information contact Community Co-Chair
 - Kevin Britt: kev3125@yahoo.com

TAPP Funding

- How do we apply for TAPP funding?
 - The RAB must agree and certify by majority to apply for TAPP.
 - Once the RAB members formally submit an application, DoD reviews the TAPP project to ensure it meets eligibility requirements.
 - RAB members can use TAPP funding for support with activities such as reviewing human health risks, assessing technology, interpreting technical documents, and participating in relative risk evaluations.

Questions and Comments



Open to RAB Members

Status Update on Completed, Ongoing, and Planned Activities

Ryan Mayer – NAVFAC Washington

Completed Activities

Completed Activities

- Site 10 PFAS sampling data received and validated
- Bldg. 76 Disposal Area Site Assessment sampling data received and validated
- Community Involvement Plan



Ongoing Activities

Ongoing Activities

- Sites 3, 4, and 5 Remedial Investigation Uniform Federal Policy-Sampling and Analysis Plan (UFP-SAP)
- Draft Bldg. 76 Site Assessment Report
- Site 10 PFAS Site Inspection (SI) Report



Planned Activities

Planned Activities

- MRS 001 Pre-Feasibility Study UFP-SAP
- Sites 3, 4, 5 Remedial Investigation fieldwork (planned for summer 2021)
- Site 9 Expanded Site Inspection SAP Addendum



Site 10 (Fire Testing Area) Site Inspection Update

Ryan Mayer – NAVFAC Washington

Andy Bogdanski - Jacobs

Presentation Overview

- What are PFAS and sources of PFAS
- CERCLA and Navy PFAS Policy
- Site 10 Site Inspection Results
- Future phases of investigation

Per- and Polyfluoroalkyl Substances (PFAS)

- Chemicals of emerging concern
- Widely found in the environment
 - Aqueous film-forming foam (AFFF)
 - Nonstick cookware
 - Cleaning products
 - Cosmetics
 - Paints and varnishes
 - Water resistant clothing



Sources of PFAS at Military Installations



Firefighter Training



Fire Suppression Systems



Incident Response

- At military installations, historic firefighter training and fire suppression using AFFF are primary sources of PFAS in the environment.

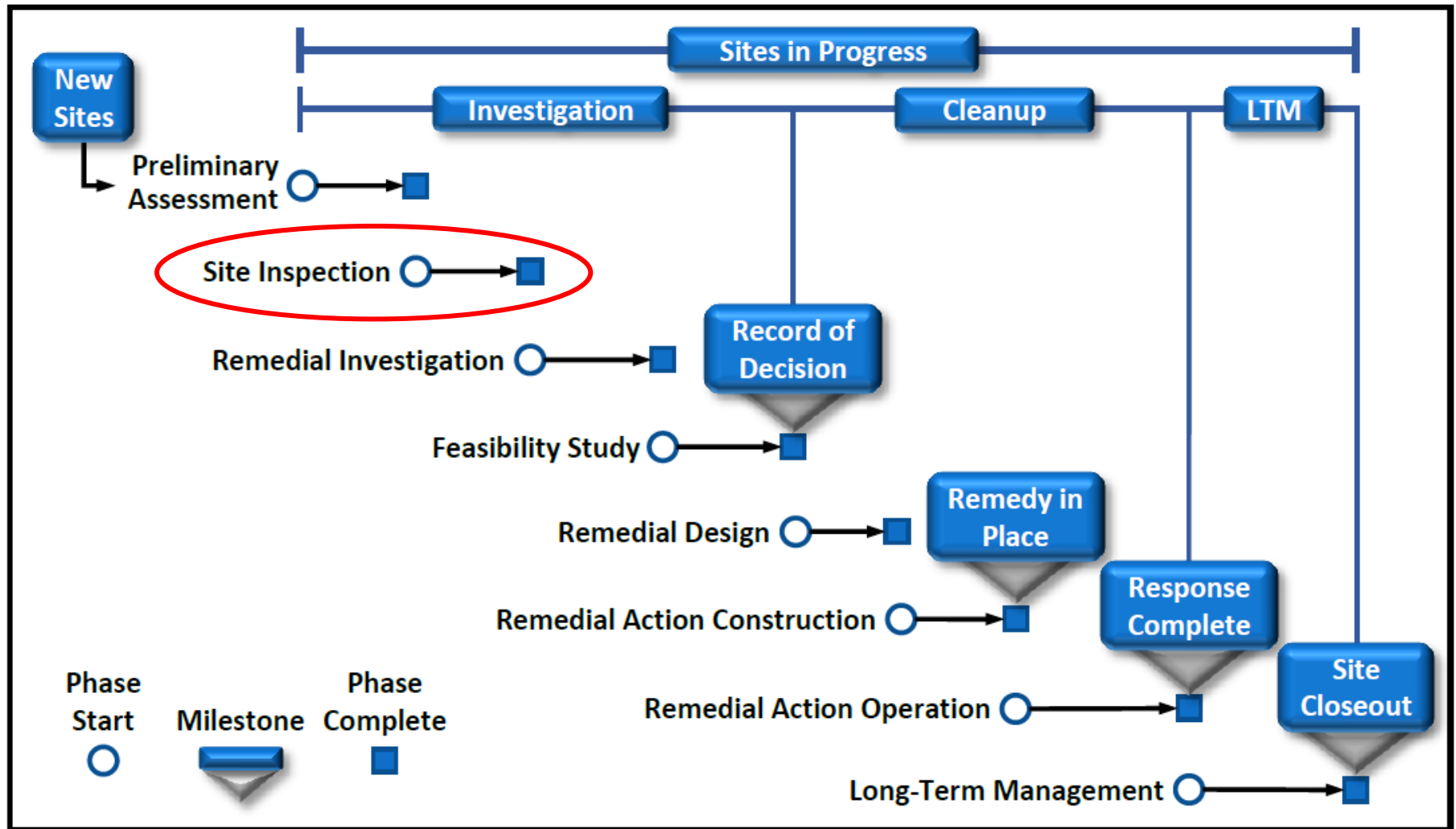
What are PFAS?

- Environmentally persistent and bioaccumulate
- Includes thousands of compounds
- Navy guidance to use the approved USEPA analytical Method 537.1 which can detect 18 compounds
- USEPA human health screening levels are available for 3 compounds
 - Perfluorooctane sulfonate (PFOS)
 - Perfluorooctanoic acid (PFOA)
 - Perfluorobutanesulfonic acid (PFBS)
- Research continues and will likely result in an increase of:
 - PFAS with analytical methods
 - Analytical methods for environmental media
 - PFAS with screening levels

CERCLA and Navy PFAS Policy

- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)
 - Legislation that guides the process used by the Environmental Restoration Program (ERP)
 - October 2014 DASN(E) Memo
 - “...identify all known and suspected sites where PFOS and/or PFOA may have been released on active and BRAC installations.”
 - Brought potential PFAS sites into the ERP

Overview of the CERCLA Process



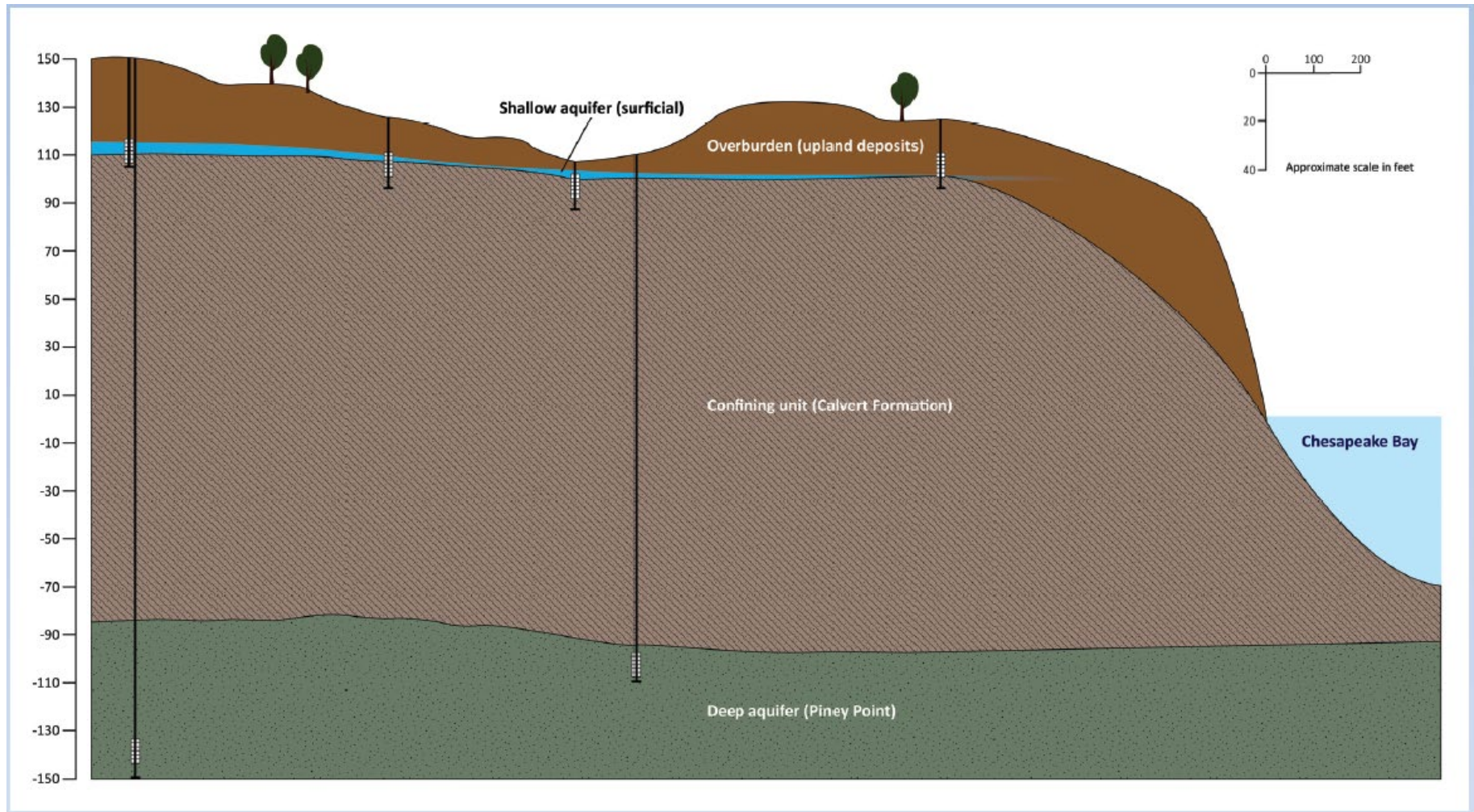
Site 10 – Location and Layout



Site 10 – Site Inspection

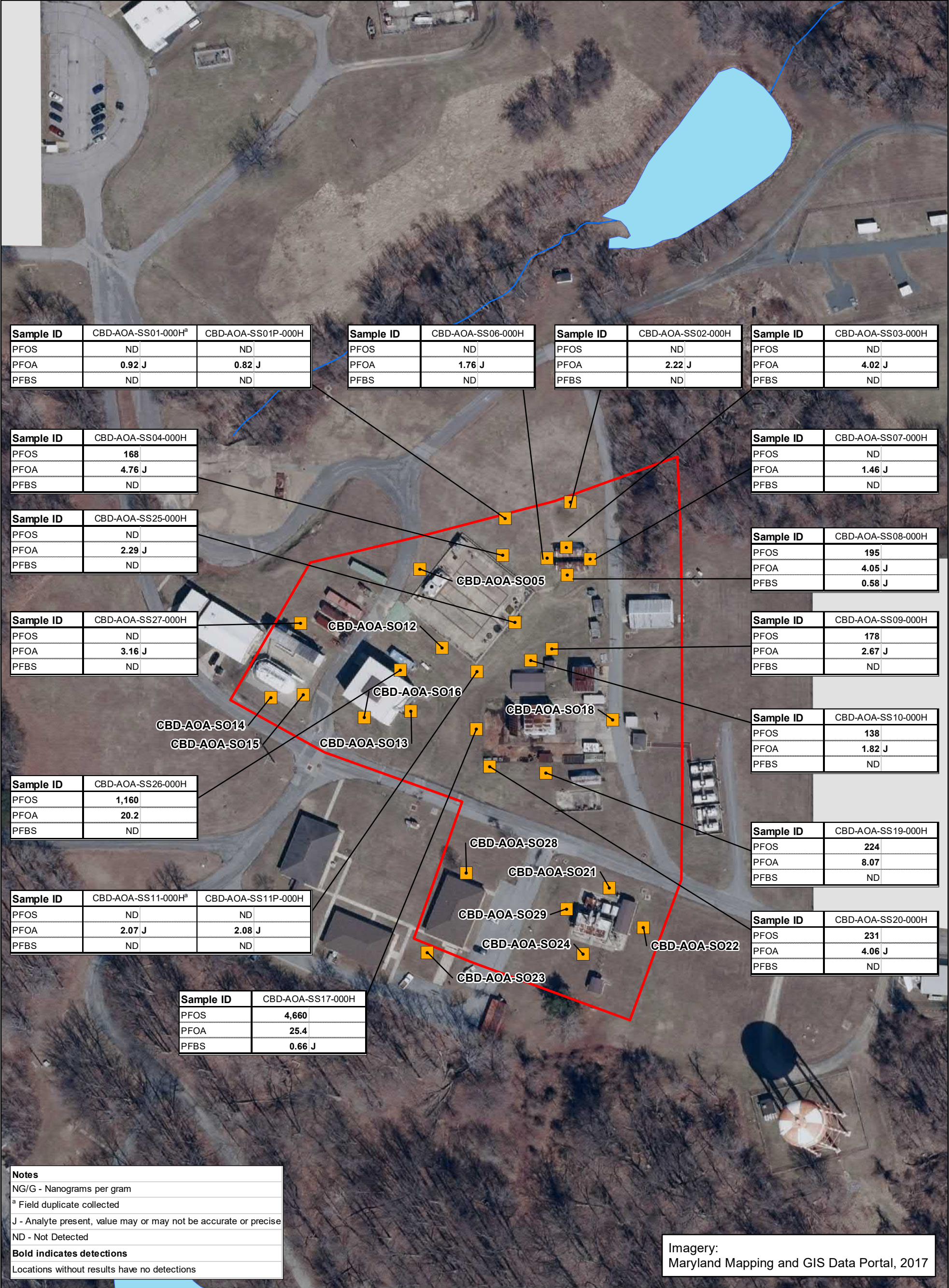
- Answers the question “Are PFAS present in environmental media associated with Site 10?”
- Focuses on media most likely affected by migration pathways
- Collected samples on base from:
 - Soil (surface and subsurface) samples
 - Groundwater samples (surficial aquifer and Piney Point aquifer)
 - Surface water, and
 - Sediment samples

Conceptual Site Model



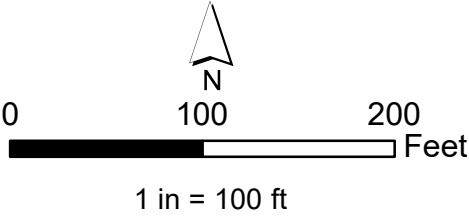
Site 10 Site Inspection Results

- Fieldwork completed in October 2020
- Final validated data received January 2021
- Detections of PFOS, PFOA, and/or PFBS in surface and subsurface soil, groundwater, surface water, and sediment
- All media except sediment had concentrations above applicable screening levels



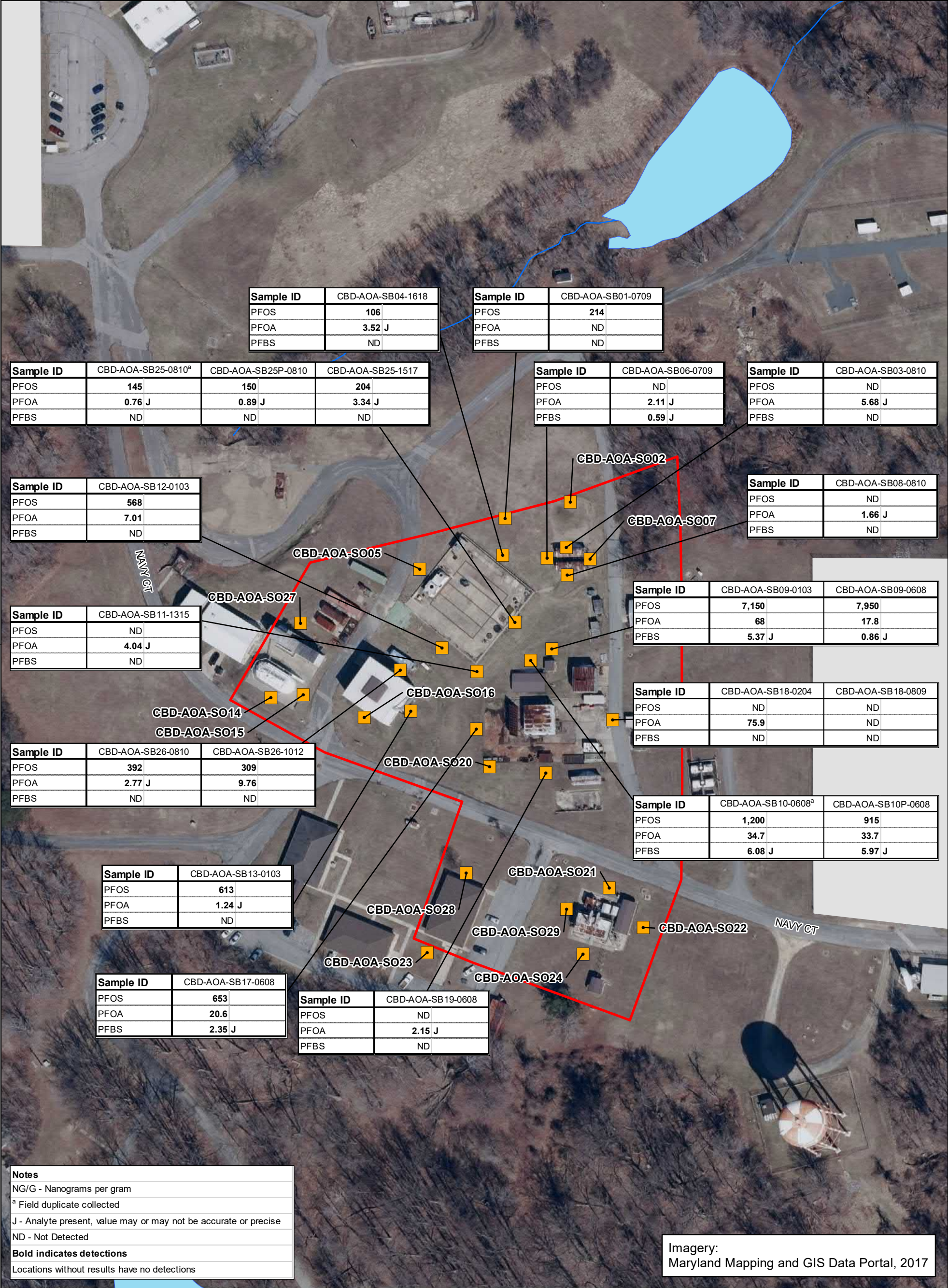
- Legend**
- Surface/Subsurface Soil Location
 - Fire Testing Area Boundary
 - Surface Water

Surface Soil Sample Locations
Site 10 PFAS SI
NRL-CBD
Chesapeake Beach, Maryland



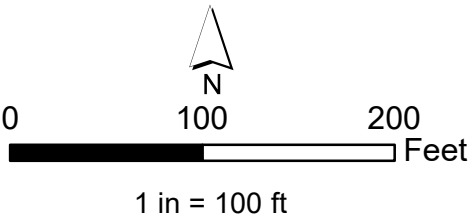
Surface Soil Results

- Surface soil was collected from 0-6 inches in areas around fire testing structures that could represent an area of release.
- Generally, PFAS concentrations were low-level detections however, higher concentrations were found in the area of the old burn pad which is the primary source area based on the historical use of the site.



- Legend**
- Surface/Subsurface Soil Location
 - Fire Testing Area Boundary
 - Surface Water

Subsurface Soil Boring Locations
Site 10 PFAS SI
NRL-CBD
Chesapeake Beach, Maryland

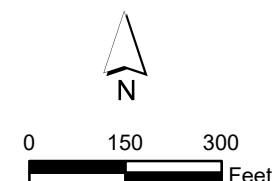


Subsurface Soil Results

- Subsurface soil was generally collected between 6 and 16 ft below ground surface in areas around fire testing structures that could represent an area of release.
- Generally, PFAS concentrations were higher in subsurface soil than surface soil suggesting downward migration through soil
- Highest concentrations were found in the area of the old burn pad which is the primary source area based on the historical use of the site.



- Legend**
- Shallow Monitoring Well Location
 - Deep Monitoring Well Location
 - Groundwater Flow Direction
 - Surface Water Centerline
 - Fire Testing Area Boundary
 - NRL-CBD Base Boundary
 - Surface Water



1 inch equals 300 feet
Basemap Data: Esri

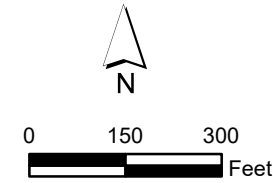
Shallow Monitoring Well Locations
Site 10 PFAS SI
NRL-CBD
Chesapeake Beach, Maryland

Shallow Groundwater Results

- Shallow groundwater was collected from wells screened generally between 20-30 ft below ground surface
- Highest concentrations were found in the area of the old burn pad which is the primary source area based on the historical use of the site.
- PFAS detection pattern indicates that PFAS are migrating along groundwater flow direction to the northeast and southeast in shallow groundwater



- Legend**
- Shallow Monitoring Well Location
 - Deep Monitoring Well Location
 - Groundwater Flow Direction
 - Surface Water Centerline
 - Fire Testing Area Boundary
 - NRL-CBD Base Boundary
 - Surface Water

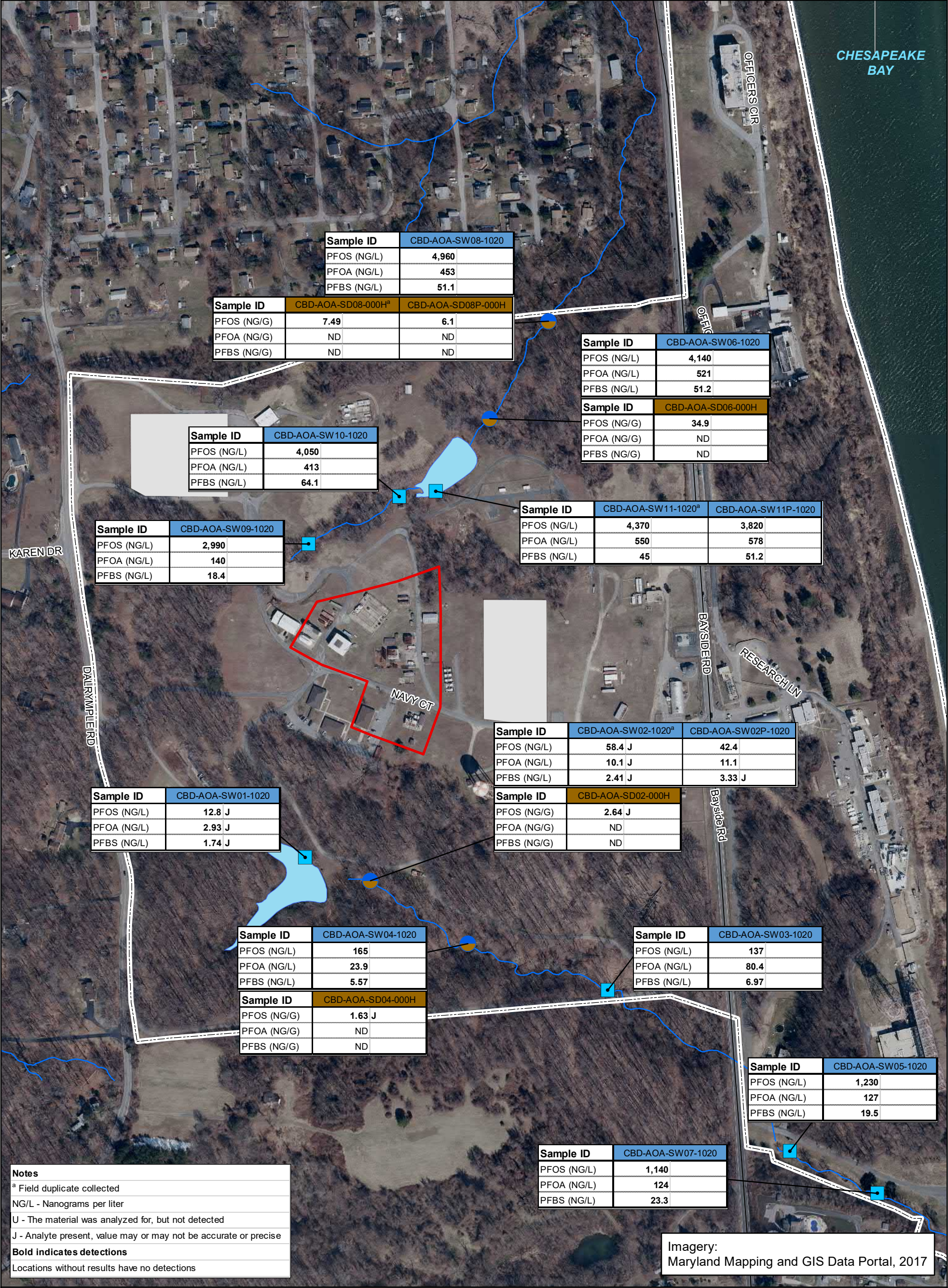


1 inch equals 300 feet

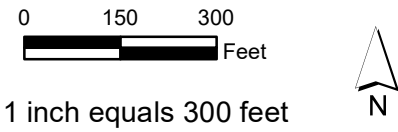
Deep Monitoring Well Locations
Site 10 PFAS SI
NRL-CBD
Chesapeake Beach, Maryland

Deep Groundwater Results

- Deep groundwater was collected from wells screened generally between 200-300 ft below ground surface
- PFAS concentrations were low level suggesting minimal migration through soil
- Highest concentrations were found in the area of the old burn pad which is the primary source area based on the historical use of the site.
- Detections in base perimeter wells were generally either non-detect or low-level estimated “J-flag” values



- Legend**
- Surface Water Location
 - Co-located Surface Water/Sediment Location
 - Fire Testing Area Boundary
 - Surface Water
 - Surface Water Centerline
 - NRL-CBD Base Boundary



Surface Water and Sediment Locations
Site 10 PFAS SI
NRL-CBD
Chesapeake Beach, Maryland

Site 10 – Surface Water and Sediment Results

- Surface water samples collected from streams located north and south of the site
- Groundwater flow direction indicates that groundwater discharges to surface water
- PFAS detections in surface water are likely attributable to groundwater to surface water discharge
- PFAS detections in sediment were all low-level below applicable screening levels

Next Steps

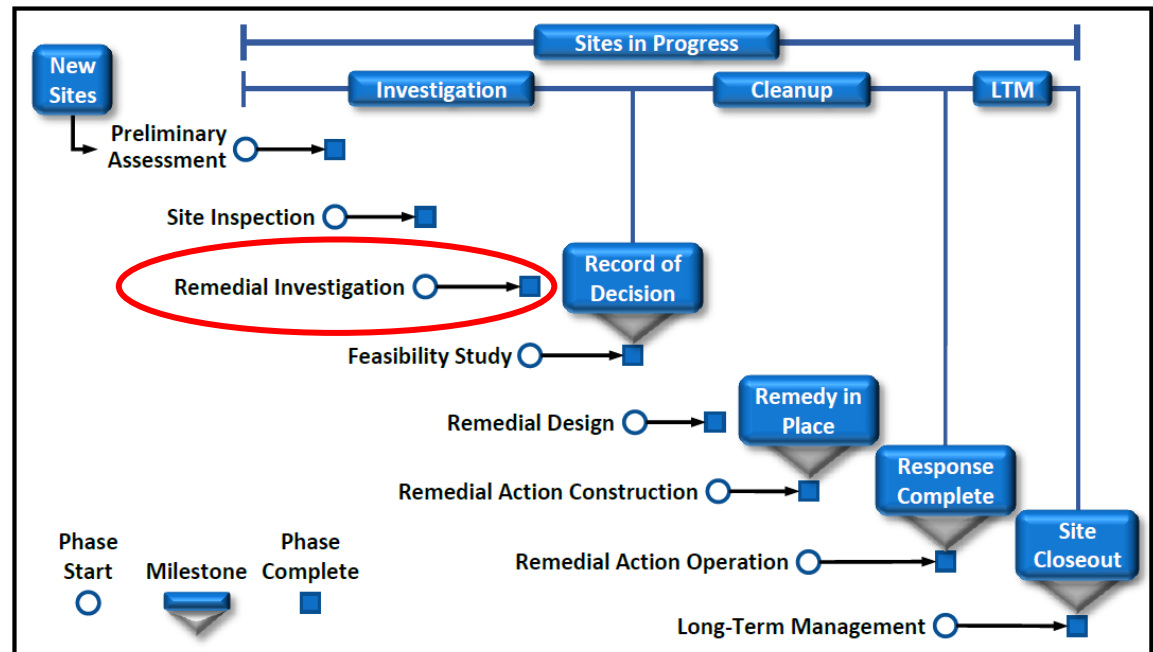
- **Prepare Site Inspection Report and coordinate with MDE for regulatory comments and approval**

- **Contents**

- Introduction
- Discussion of Site (site description and history, environmental setting, sampling results and comparison to applicable screening levels)
- Summary and Conclusions
- Figures
- Tables
- Appendices

Next Steps

- PFAS were detected in environmental media, and above applicable screening levels, which will move the site to the next step of the CERCLA process
- Remedial Investigation
 - Nature and extent of PFAS impacts
 - Fate and transport of PFAS in environmental media
 - Human health and ecological risk assessments



Questions and Comments



**Submitted Questions,
RAB Members, and the Public**

Future Meeting Planning

- As per charter, plan to meet 2 times per year
 - Navy proposes the next meeting for October 2021
 - Wednesday evenings, 5:00-7:00 p.m.
- RAB agenda topics
 - If there are topics you'd like us to discuss, please communicate them to the RAB Co-Chairs
 - Navy Co-Chair – Ryan Mayer: ryan.mayer@navy.mil
 - Community Co-Chair – Kevin Britt: kev3125@yahoo.com

Websites for More Information

- **About RABs, including the RAB Rule Handbook:**

<http://www.denix.osd.mil/rab/home/>

- **About the Navy's Environmental Restoration Program:**

<http://www.navfac.navy.mil/go/erb/>

- **About the Environmental Restoration Program at NRL-CBD:**

<https://go.usa.gov/xQFuV> (note: case-sensitive)

- **More about PFAS**

<https://mde.maryland.gov/PublicHealth/Pages/PFAS-Landing-Page.aspx>

- **RAB Co-chair Contact Information**

– Navy Co-Chair – Ryan Mayer: ryan.mayer@navy.mil

– Community Co-Chair – Kevin Britt: kev3125@yahoo.com