Welcome to the TRC Meeting!

Thank you for joining the
Technical Review Committee (TRC) Meeting for
Naval Air Warfare Center Warminster

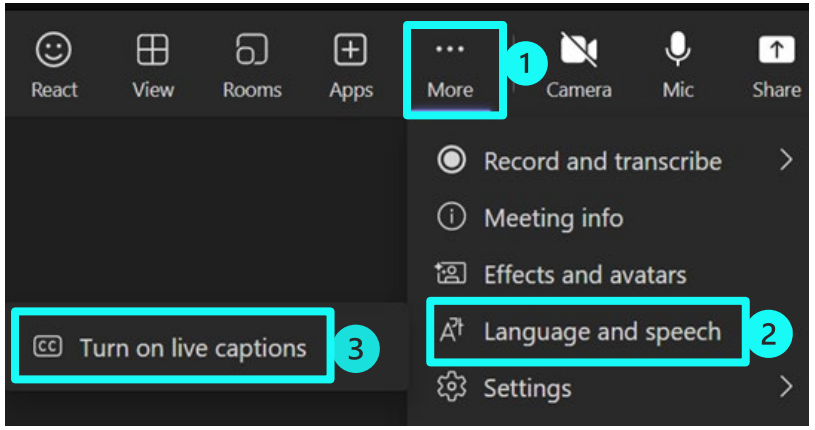
The meeting will start at 6:00 p.m.

For captions:

Click More ●●● at the top of the screen

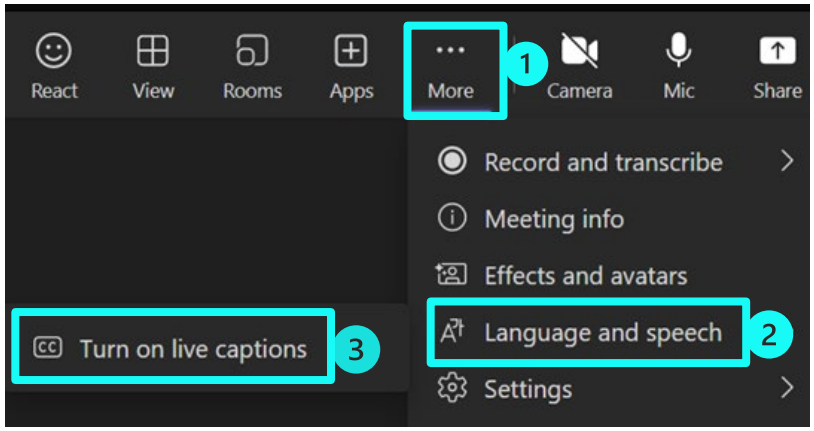
Click ‘Language and Speech’

Click ‘Turn on live captions’



Teams Tools

- **Closed Captioning**
  - Click More ●●● at the top of the screen
  - Click ‘Language and Speech’
  - Click ‘Turn on live captions’



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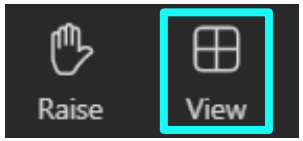


  - Choose the preferred view from available choices. Options include Full Screen, Gallery View, and Focus on Content

Former Naval Air Warfare Center (NAWC) Warminster

Technical Review Committee (TRC) Meeting

February 8, 2024

Virtual Meeting Information

- The virtual meeting will show the presentations.
- The presenters will be audio only.
- Microsoft Teams sign-in names of all presenters and attendees will be visible to everyone.
- The meeting is not being recorded; minutes will be prepared. Webinar sign-in names will be used for the minutes.
- Public notices were published January 26 and February 2, posted on the Navy website, and provided to the mailing list.

Outline/Agenda

6:00 pm Welcome and Announcements

6:05 pm Environmental Restoration Program Update

6:20 pm PFAS Update

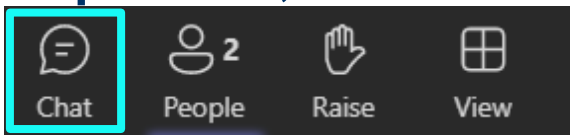
6:35 pm Regulator comments

6:45 pm TRC and community questions / comments

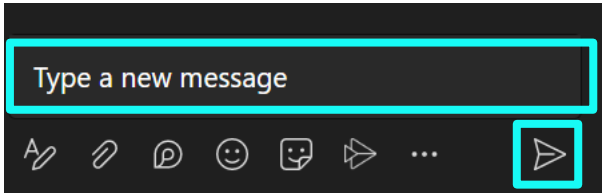
7:15 pm Meeting concludes

Q&A Options

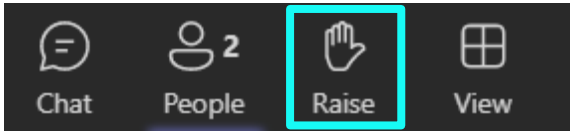
1) To ask a question, select ‘Chat’



Type question in the text box, and then select Send.



2) Raise your hand to be recognized and have your microphone unmuted. Select Raise your hand icon.



3) Phone-only attendees can dial *6 to raise their hand and have the opportunity to ask a question.

Background Information

- A Technical Review Committee (TRC) is a stakeholder group that meets on a regular basis to discuss environmental restoration at a specific property that is either currently or was formerly owned by DoD, but where DoD oversees the environmental restoration process.

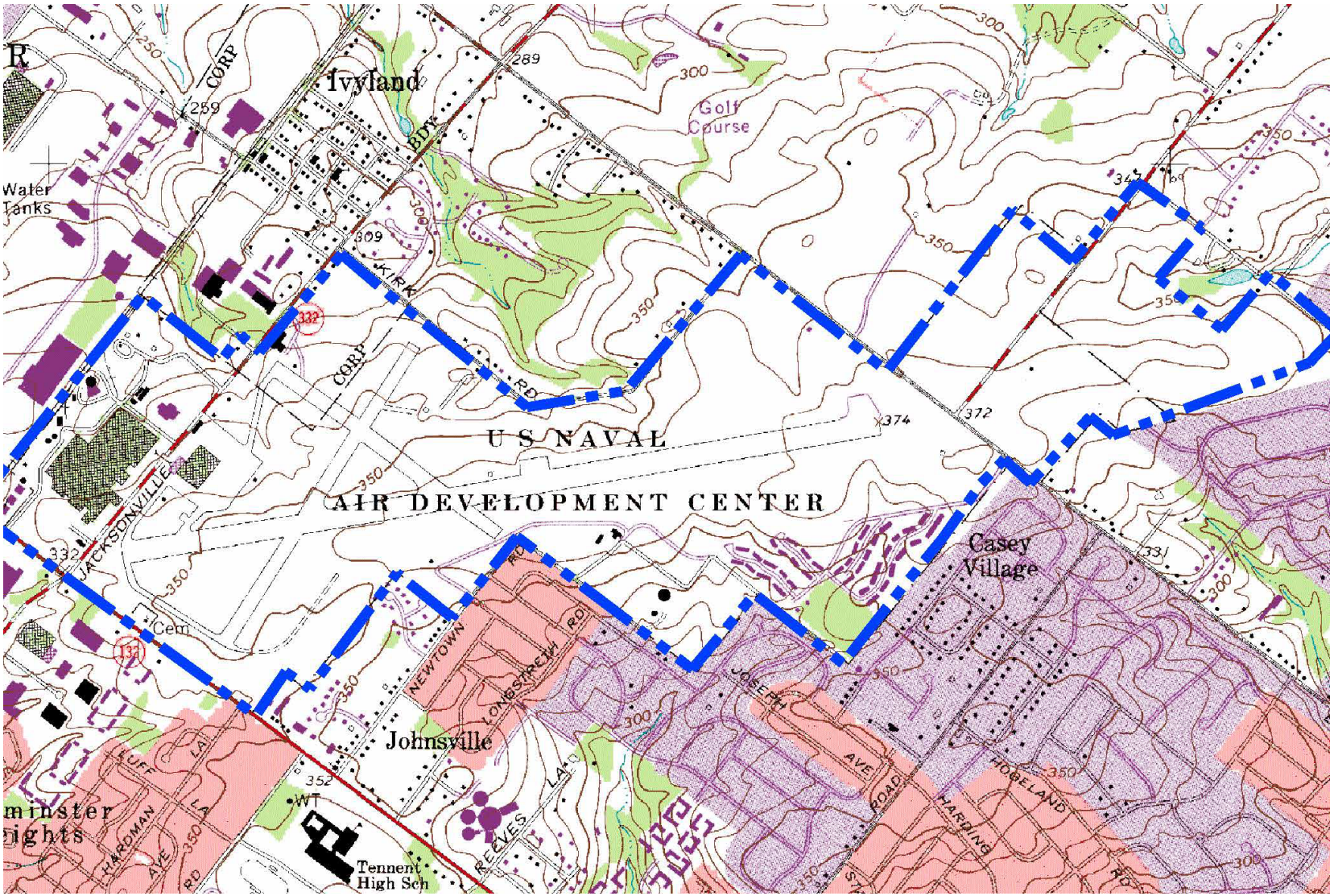
- TRCs enable people interested in the environmental cleanup at a specific installation to exchange information with representatives of regulatory agencies, the installation, and the community. The TRC consists of Navy, EPA, state, and community representatives.

- TRCs may only address issues associated with environmental restoration activities. Health-related issues are not addressed by the TRC. Health information links are provided at the end of the presentation.

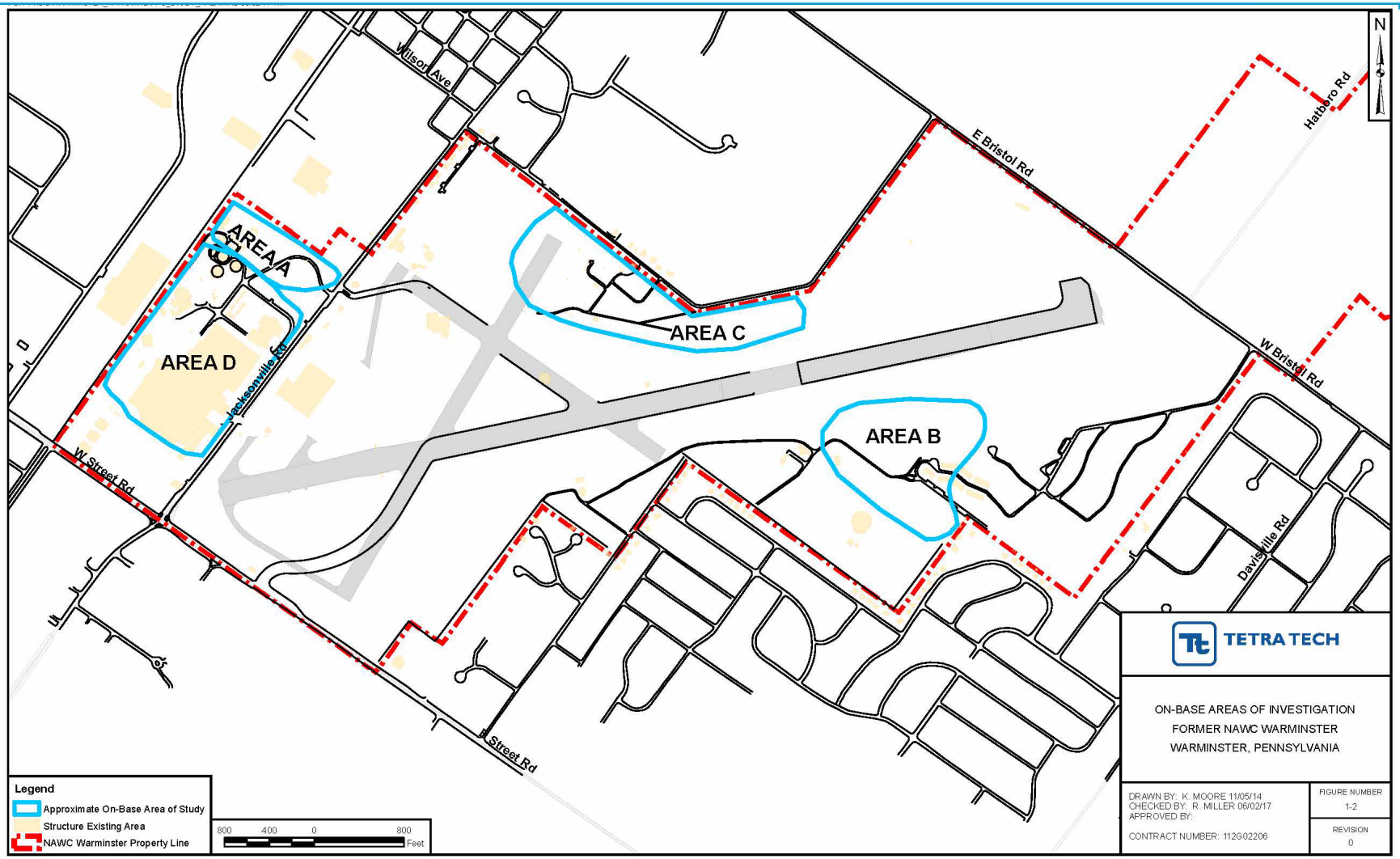
Source: 10 USC 2705 and DoD Restoration Advisory Board Rule Handbook
https://denix.osd.mil/rab/home/unassigned/rab-rule-handbook/

Environmental Restoration Program

Environmental Restoration Site Location



Environmental Restoration Site Location



Maps depicting site locations within these Areas can be found in Backup.

Environmental Restoration Sites

AREA	SITES	OPERABLE UNITS	SITE DESCRIPTION	STATUS
A	1	OU-1A (Groundwater) OU-9 (Soil, sediment, surface water)	Waste disposal	Groundwater (OU-1A) ROD Sept. 2000 Soil (OU-9) ROD June 2000.
	2	OU-1A (Groundwater) OU-9 (Soil, sediment, surface water)	Sludge disposal pit	Groundwater (OU-1A) ROD Sept. 2000 Soil (OU-9) ROD June 2000.
	3	OU-1A (Groundwater) OU-9 (Soil, sediment, surface water)	Waste disposal	Groundwater (OU-1A) ROD Sept. 2000 Soil (OU-9) ROD June 2000.
	Impoundment Area	OU-1A (Groundwater) OU-9 (Soil, sediment, surface water)	Unlined wastewater sludge impoundment areas	Groundwater (OU-1A) ROD Sept. 2000 Soil (OU-9) ROD June 2000.
B	5	OU-1B (Groundwater) OU-10 (Soil, sediment, surface water)	Landfills	Groundwater (OU-1B) NFA ROD Sept. 2000 Soil (OU-10) NFA ROD signed Sept. 2000
	6	OU-1B (Groundwater) OU-7 (Soils and wastes)	Waste disposal	Groundwater (OU-1B) NFA ROD Sept. 2000 Soil (OU-7) ROD signed June 2000
	7	OU-1B (Groundwater) OU-7 (Soils and wastes)	Sludge disposal pit	Groundwater (OU-1B) NFA ROD Sept. 2000 Soil (OU-7) ROD signed June 2000
	NA	OU-2 (Groundwater)	Off-base drinking water, Areas B and C	No ROD. Emergency action 1993-1994
C	4	OU-3 (Groundwater) OU-6 (Soil, sediment, surface water)	Landfills	Groundwater (OU-3) ROD March 1995 OU-3 ESD Sept. 1999 Soil (OU-6) NFA ROD June 2000
	8	OU-3 (Groundwater) OU-5 (Soil, sediment, Surface Water)	Fire Training Area	Groundwater (OU-3) ROD March 1995 OU-3 ESD Sept.1999 Soil (OU-5) NFA ROD Sept. 1999
D	NA	OU-4 (Groundwater) OU-8 (Soils)	Industrial Area	Groundwater (OU-4) ROD June 2000 Soil (OU-8) NFA ROD June 2000

Remedial Action Summary

- Operable Units 1A (OU-1A), 3 (OU-3) and 4 (OU-4) have land use controls (LUCs) and a groundwater extraction and treatment system to remove volatile organic compounds (VOCs). The system extracts groundwater from Areas A, C, and D and uses air stripping and granular activated carbon (GAC) to process up to 216,000 gallons per day, or 150 gallons per minute (gpm). The treated water is discharged to a tributary of Little Neshaminy Creek.

- Operable Units 7 (OU-7) and 9 (OU-9) have LUCs, which are monitored annually.

- The remaining Operable Units - OU-1B, OU-2, OU-5, OU-6, OU-8 and OU-10 - have no further action.

The remedies continue to operate properly and successfully.

Monitoring Activities and Reports Update

- Recent Monitoring Activities:
  - Annual groundwater sampling event - May 2023:
    - Area A – 28 MWs and 15 EWs sampled for select VOCs.
    - Area C – 6 MWs and 7 EWs sampled for select VOCs.
    - Area D – 9 MWs and 8 EWs sampled for select VOCs.
    - Extraction wells also sampled for PFAS & Cr+6.
    - Event completed concurrently with additional PFAS RI GW sampling
  - Analytical data pending. Report under Navy review.
- Planned Monitoring Activities:
  - Annual groundwater sampling event scheduled for May 2024.

Groundwater monitoring provides information to evaluate the protectiveness of the remedies.

Groundwater Treatment System

- Effective flowrates for December 2023: 121 gpm – (6-month average from May 2023 – December 2023= 113.2 gpm)
  - 47.6 gpm from Area A (6-month average = 42.3 gpm)
  - 40.8 gpm from Area C (6-month average = 35.8 gpm)
  - 32.6 gpm from Area D (6-month average = 35.0 gpm)
- Through December 2023, over 1.39 billion gallons of groundwater have been treated, removing over 5,460 pounds of VOCs, since the treatment plant began operating in 1996.
- Beginning in 2014, additional extraction wells were activated, and new granular activated carbon was added to treat for perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS).

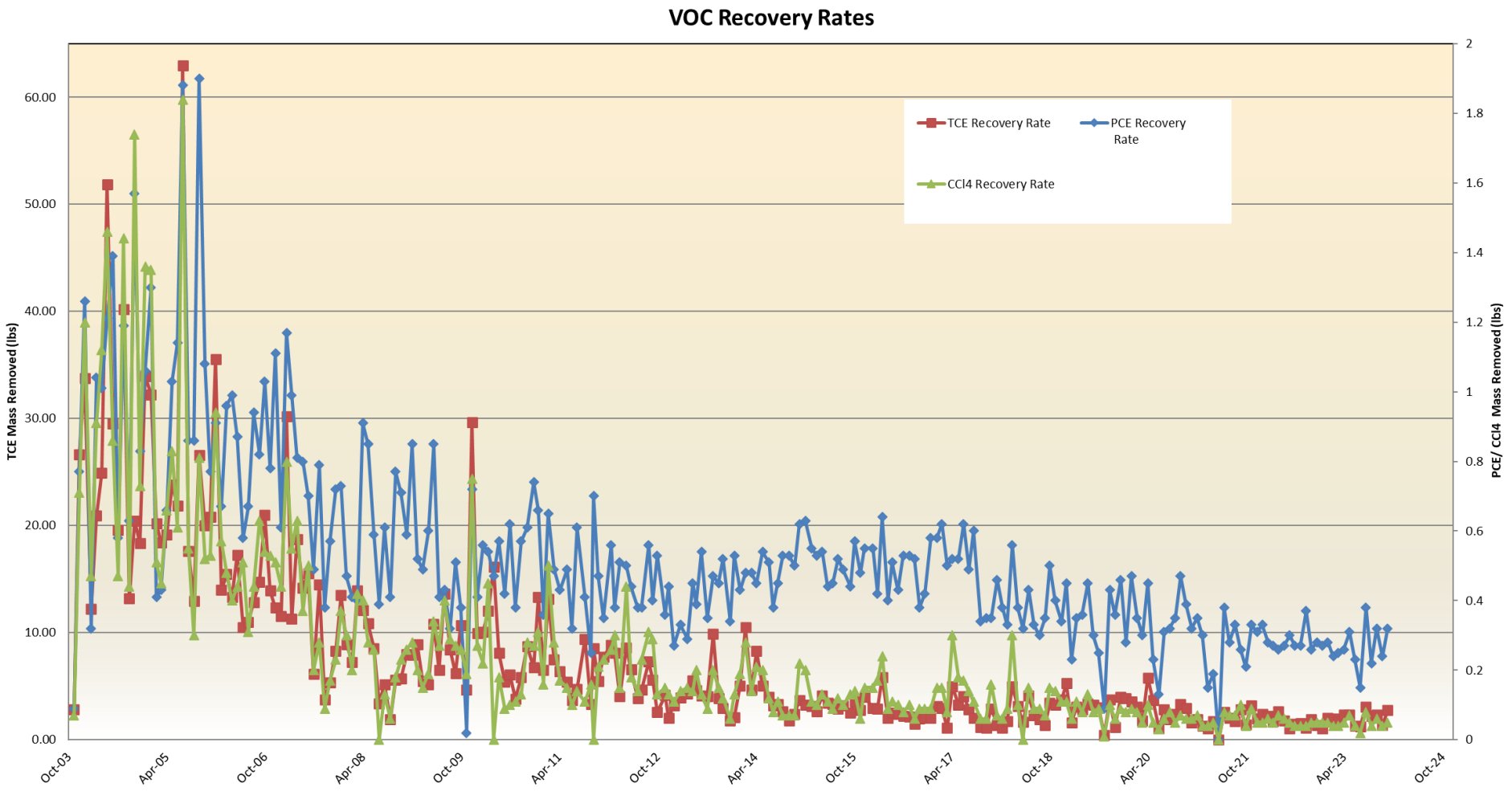
Additional information about the remedial actions and the Groundwater Treatment System can be found in Backup

Groundwater Treatment System – VOC Removal

- Cumulative dissolved-phase VOC recovery through December 2023 reporting period (all areas):
  - Trichloroethene (TCE) – 5,093 pounds (2.77 lbs in December 2023)
  - Tetrachloroethene (PCE) – 193 pounds (0.32 lb in December 2023)
  - Carbon Tetrachloride (CCl_4) – 173 pounds (0.05 lb in December 2023)

- Historically, the majority of VOC recovery is from Area A.

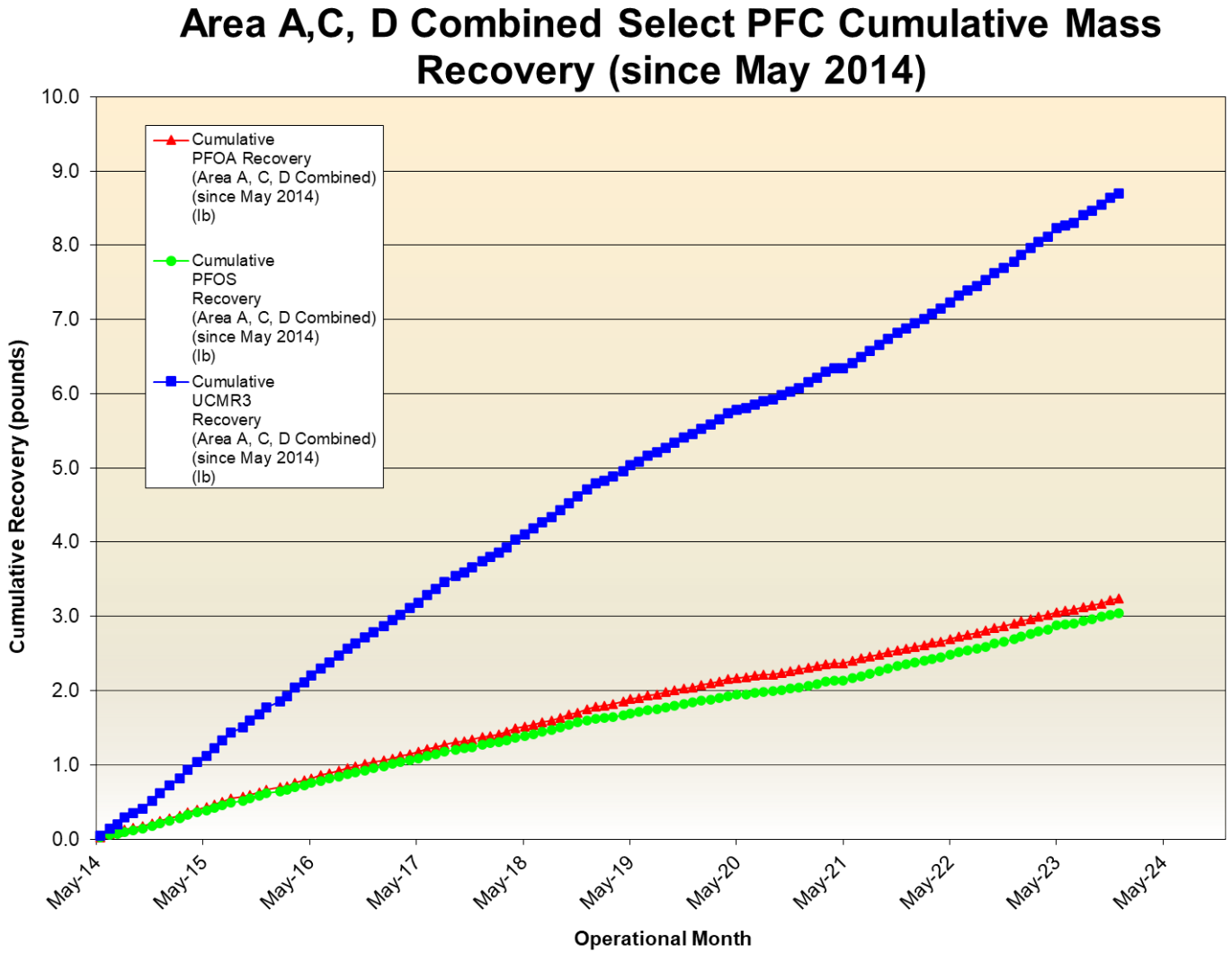
VOC Removal Evaluation – VOC Recovery Rates



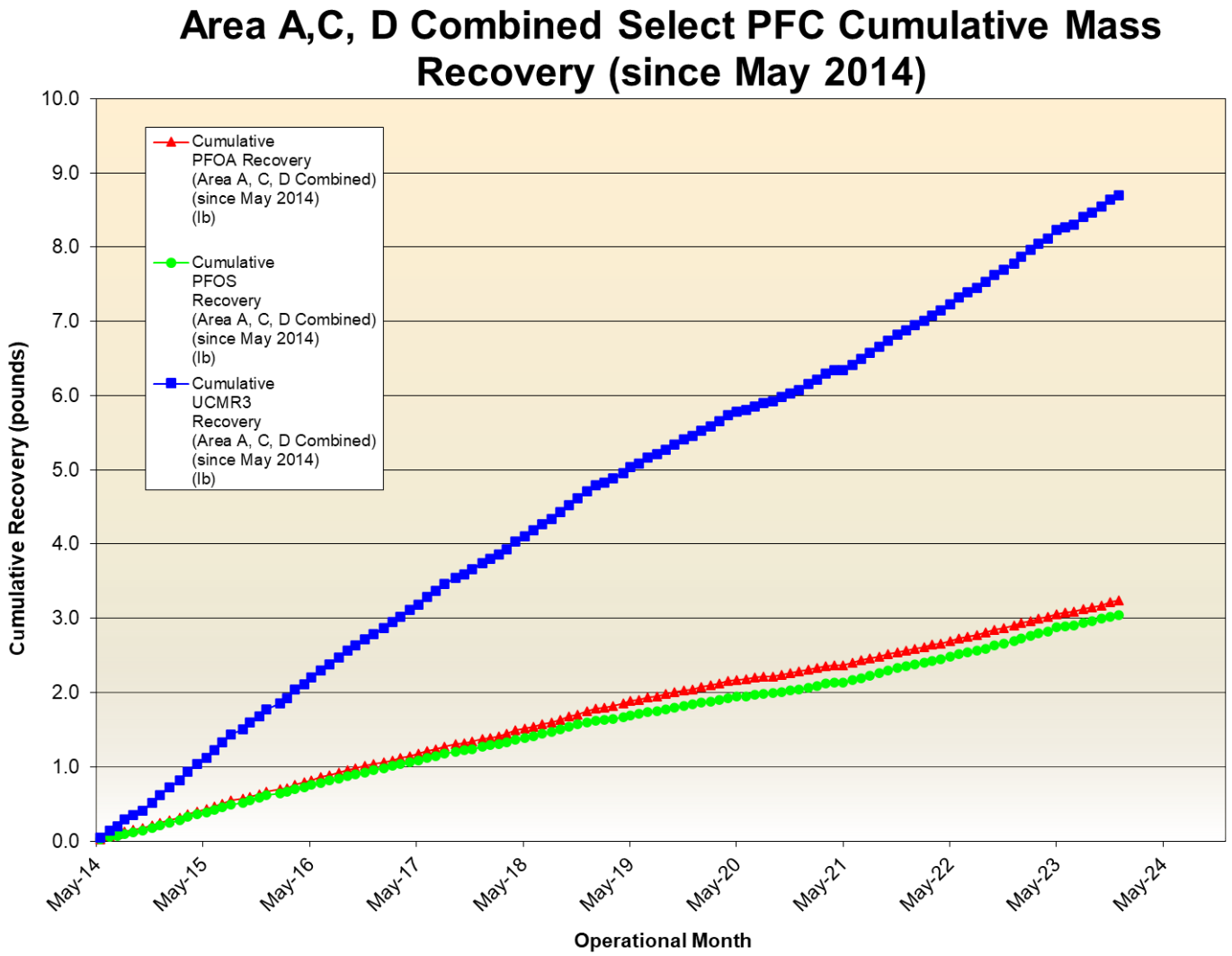
Groundwater Treatment System – PFAS Removal

- PFAS recovery (of six Third Unregulated Contaminant Monitoring Rule [UCMR3] PFAS compounds including PFOA and PFOS), beginning May 2014 through December 2023 reporting period (all areas):
  - PFOA – 3.24 pounds (0.02 lb in December 2023)
  - PFOS – 3.05 pounds (0.02 lb in December 2023)
  - Six UCMR3 PFAS combined – 8.69 pounds (0.06 lb in December 2023)
- From each Area (May 2014 through December 2023):
  - Six UCMR3 PFAS Combined:
    - Area A – 2.09 pounds
    - Area C – 4.48 pounds
    - Area D (beginning Nov 2014) – 2.12 pounds

Groundwater Treatment System – PFAS Removal



Groundwater Treatment System – PFAS Removal



Groundwater Treatment System Operations

- OB-11 began full time operation on January 6, 2021.
- Two 80-cubic-foot resin vessels added following the GAC units for Cr+6 polishing in mid 2021. Permanently installed in June 2023.
- Effluent discharge relocation within U.S. Government-owned lands completed in August 2020. The final construction completion report is available in the administrative record.
- Delaware River Basin Commission Docket renewal received December 2023, expiration November 22, 2031.

Per- and Polyfluoroalkyl Substances (PFAS)

Private Drinking Water Well Sampling Update

(revised February 2024)

- January 14, 2023: PA Maximum Contaminant Levels (MCLs) for PFOA and PFOS were published.
  - PFOA: 14 ppt
  - PFOS: 18 ppt
- Navy BRAC PMO evaluated historic drinking water data and identified locations where:
  - PFOA and/or PFOS concentrations were above the PA MCLs,
  - Laboratory detection limits were above the PA MCLs, or
  - Samples were more than three years old.
- Next steps:
  - Offering bottled water/future public drinking water connections to Navy impacted locations with PFOA / PFOS concentrations above PA MCLs.
  - Resampling locations where laboratory detection limits were above PA MCLs or samples were more than three years old.
  - Begin issuing offer letters for municipal water connections

Municipal Drinking Water Actions

(revised February 2024)

- The Navy has established a cooperative agreement with Warminster Township Municipal Authority (WMA) to provide treatment at 10 municipal wells for PFOA/PFOS. WMA has finished construction on all four wells.
- The Navy has established cooperative agreements with three water purveyors to provide municipal connections for private drinking water wells with to address PFAS due to historical activities at former NAWC Warminster:
  - Warwick Township Water and Sewer Authority (WTWSA)
  - Northampton Bucks County Municipal Authority (NBCMA)
  - WMA
- Total funding provided is over $30 million.

Private Drinking Water Well Sampling Update

(Cont.)

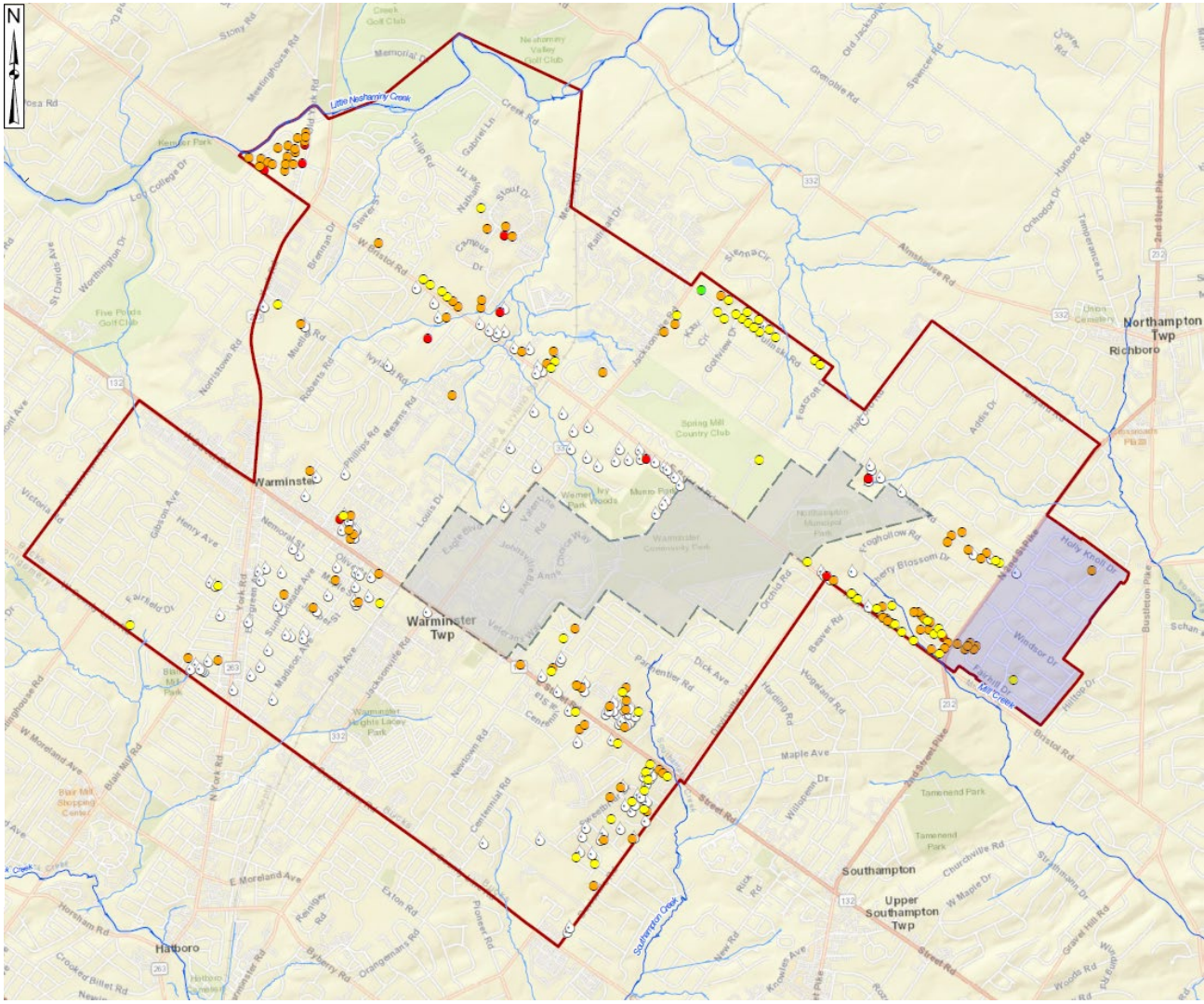
Private well sampling summary	Current
PFOA/PFOS Concentrations above 70 ppt	12
PFOA or PFOS Concentrations above PA MCL and < 70 ppt	96
PFOA or PFOS Concentrations below PA MCL	61
PFOA or PFOS below PA MCL but detection limit over PA MCL	1

** Connections are provided via cooperative agreement between the Navy and local municipal authorities.*

Private Drinking Water Well Sampling Area

Private drinking water well sampling for PFOA/PFOS and provision of bottled drinking water is being performed by Tetra Tech, a U.S. Navy contractor.

Point of contact is:
Emily Barley
Tetra Tech Sampling Task Manager
E-mail: emily.valentine@tetratech.com
Phone: (412) 921-8544



Legend

Symbol color represents highest concentrations.

- PFOA or PFOS Concentrations above 70 ppt (12 Wells)
- PFOA or PFOS Concentrations above PADEP MCL and <70 ppt (96 Wells)
- PFOA and PFOS Concentrations less than PADEP MCL (61 Wells)
- PFOA and PFOS Concentrations Below Detection Limit, but Detection Limit exceeds PADEP MCL (1 Well)
- Public Water Connection (Some not by Navy)
- Creek
- Tributary
- NAWC Sampling Area
- NAWC Expanded Area

Private Drinking Water Well Sampling Update

(Cont.)

- March 14, 2023: EPA announced the proposed draft National Primary Drinking Water Regulation (NPDWR) for 6 PFAS, including PFOA and PFOS, for public comment.
  - Proposed MCL PFOA: 4 ppt
  - Proposed MCL PFOS: 4 ppt
- Navy BRAC PMO continues to review our existing data and conduct additional sampling, where necessary, in preparation to incorporate EPA's final drinking water standards.

Private Drinking Water Well Actions By Others

- Actions at public and private wells in Warrington Township and western Warminster Township, near the Biddle Air National Guard Base (formerly called the Horsham Air Guard Station), are addressed separately by the Air Force/ Air National Guard.

  Bill Myer, Environmental Restoration Program Manager
  3501 Fetchet Ave - Shepperd Hall
  Joint Base Andrews, MD 20762-5157
  Phone (240) 612-8473
  e-mail: WILLIAM.MYER.2@US.AF.MIL

- Contact the appropriate municipal water authority regarding private drinking water well actions that are funded by the Military Installation Remediation and Infrastructure Authority (MIRIA).

PFAS Remedial Investigation (RI) – Phase 1 Activities

- Sampling and Analysis Plans (SAPs) and addendums prepared in 2015 – 2019. Plans are available in the Administrative Record.
- Surface water/sediment sampling – October 2016
- Groundwater sampling from existing wells – Apr/May 2017
- Surface water/sediment sampling – May 2017
- Soil sampling (potential PFAS source areas) – June 2017
- Inactive municipal production well profiling – April 2018 – September 2019

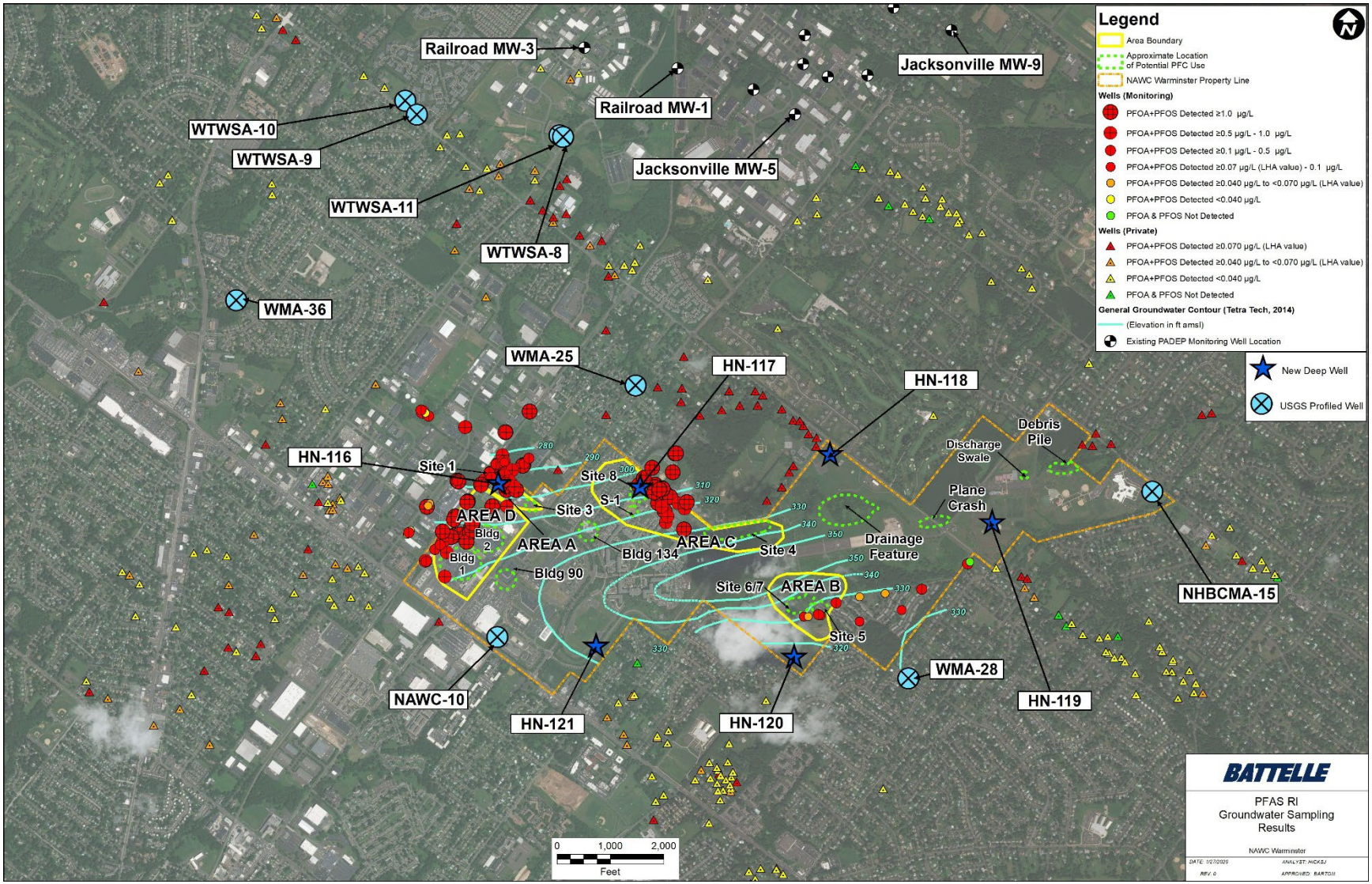
Additional information about NAWC Warminster PFAS RI activities performed can be found in Backup

PFAS RI – Phase 1 Activities

- Groundwater monitoring well installation – May 2018 – March 2019
- Groundwater sampling from Hazardous Sites Cleanup Act (HSCA) site monitoring wells – August 2018
- Supplemental soil sampling (Area C potential PFAS source area) – September 2018
- Groundwater sampling from newly installed monitoring wells – March 2019
- Supplemental surface water sampling (based on United States Geological Survey [USGS] modeling simulations) – March 2020

NAWC Warminster PFAS RI data are available on the BRAC PMO website

PFAS RI – Phase 1 Groundwater Sampling Results



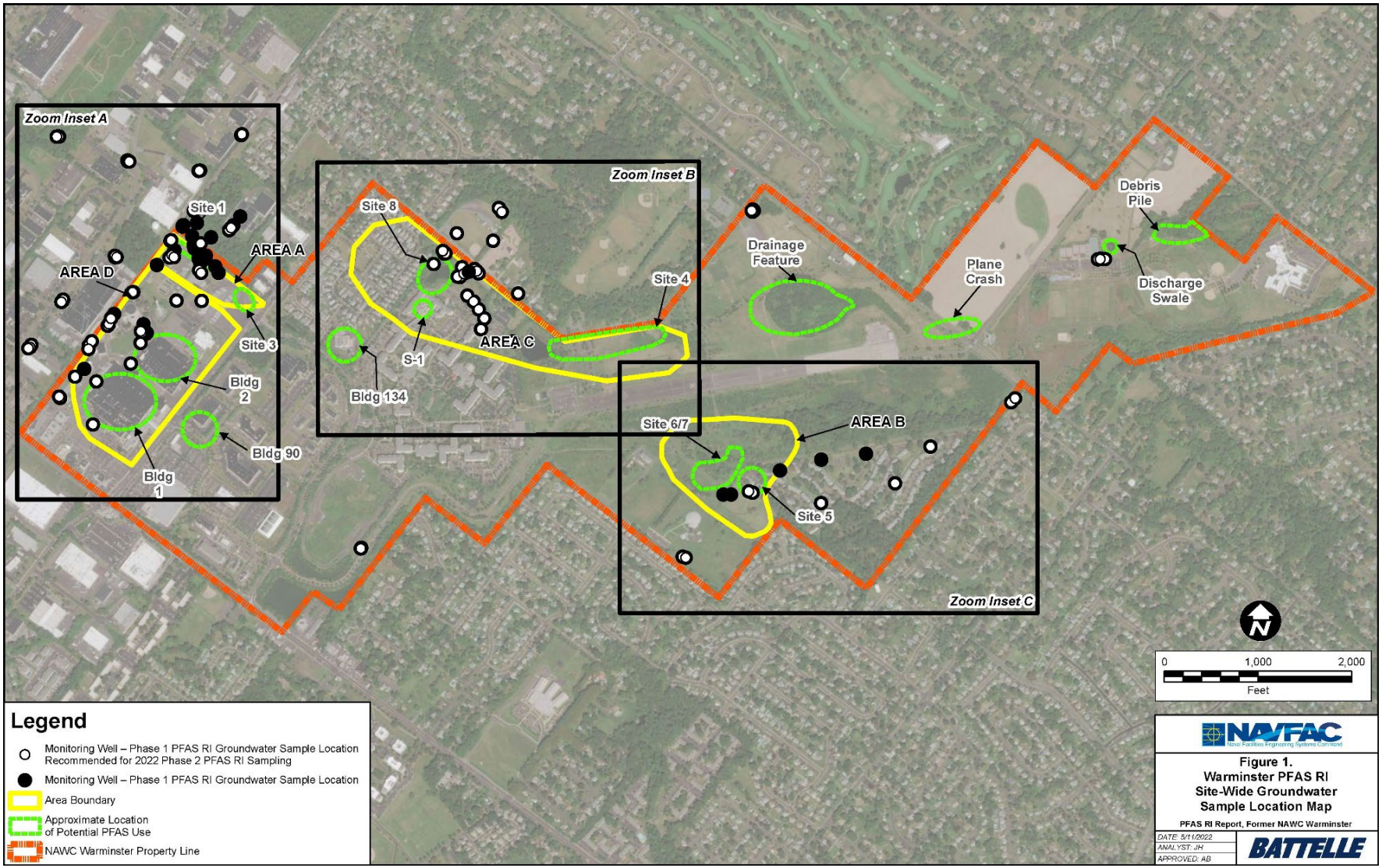
Phase 1 PFAS RI

- Phase 1 RI Report
  - RI data are available on the NAWC Warminster website; 22 April 2019 and 26 May 2021 files.
  - Final Phase 1 PFAS RI Report submitted March 10, 2023.

Phase 2 PFAS RI

- Phase 2 RI – summer 2020 groundwater sampling
  - Groundwater sampling work plan finalized in June 2020.
  - Groundwater sampling performed in June/July 2020
    - 94 monitoring wells and 29 extraction wells
    - 12 PADEP HSCA wells
    - Results report finalized 01 Nov 2021.
- Phase 2 RI – summer 2022 groundwater sampling
  - Groundwater sampling work plan finalized in May 2022.
  - Groundwater sampling performed in May/June 2022
    - 96 monitoring wells and 29 extraction wells
    - Results to be incorporated into Phase 2 PFAS RI report

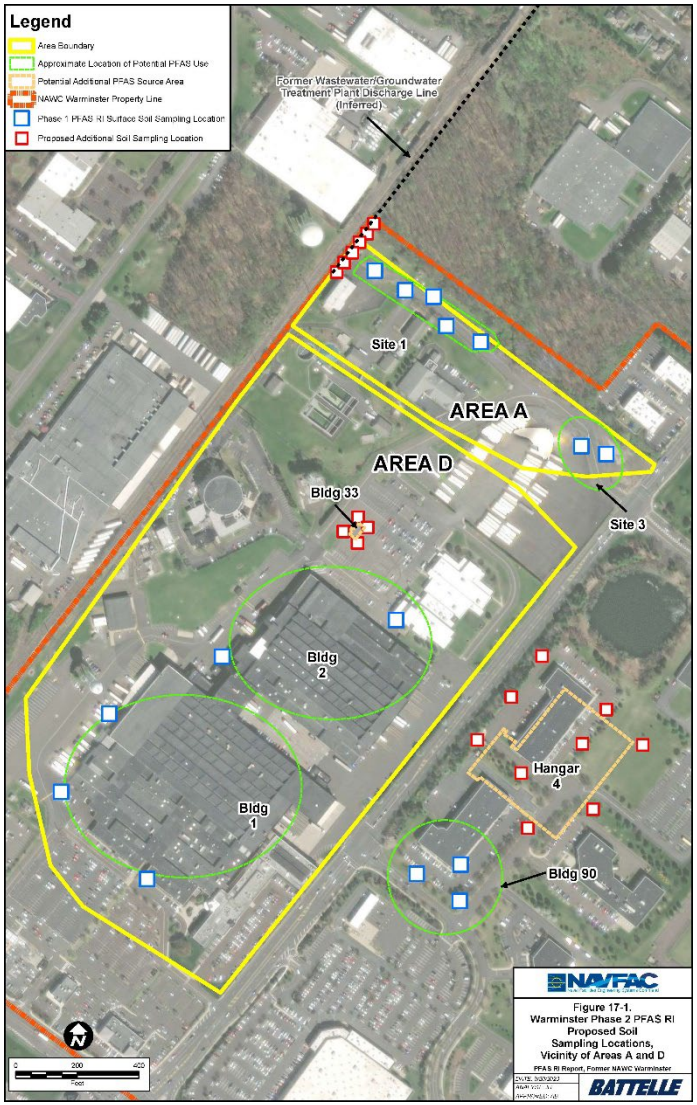
PFAS RI 2022 Phase 2 Groundwater Sample Locations

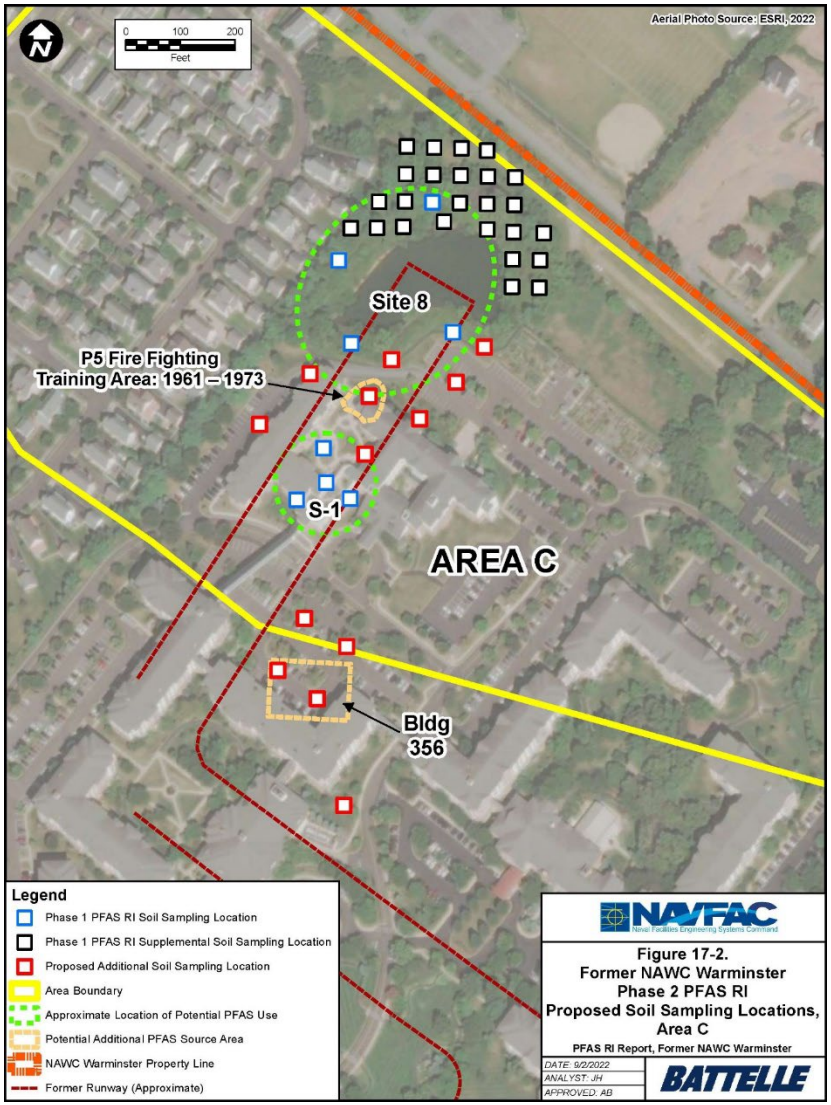


Phase 2 PFAS RI Path Forward

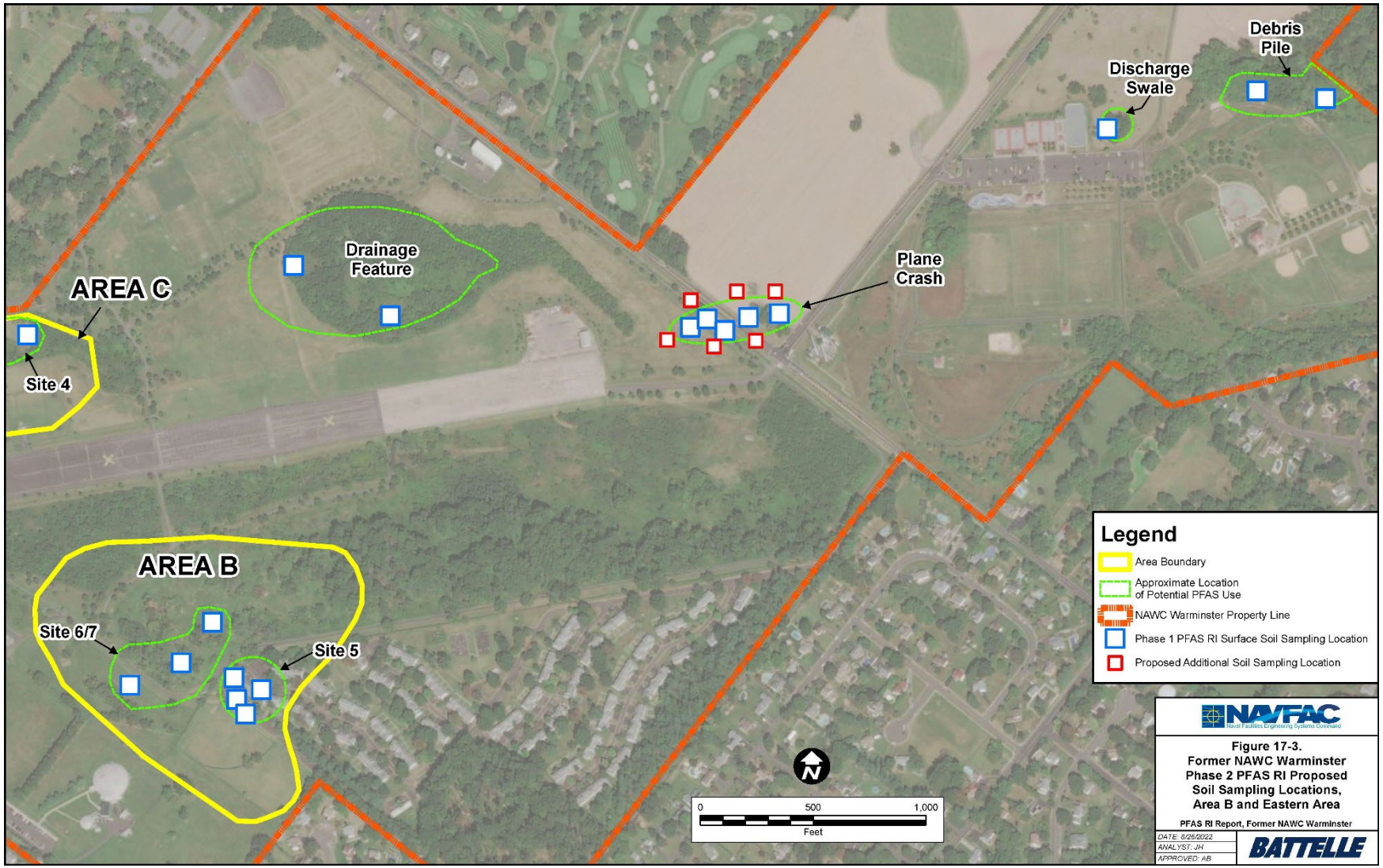
- Additional Phase 2 RI fieldwork in spring 2024 as decided with regulators; scoping meeting held January 2022 and UFP-QAPP under regulatory review
- Proposed additional PFAS characterization activities to potentially include:
  - Soil sampling in potential additional PFAS source areas.
  - Additional groundwater monitoring well installation within perimeter of former base.
  - Other activities to be determined to address possible Phase 1 RI data gaps.

Phase 2 PFAS RI Proposed Soil Sampling

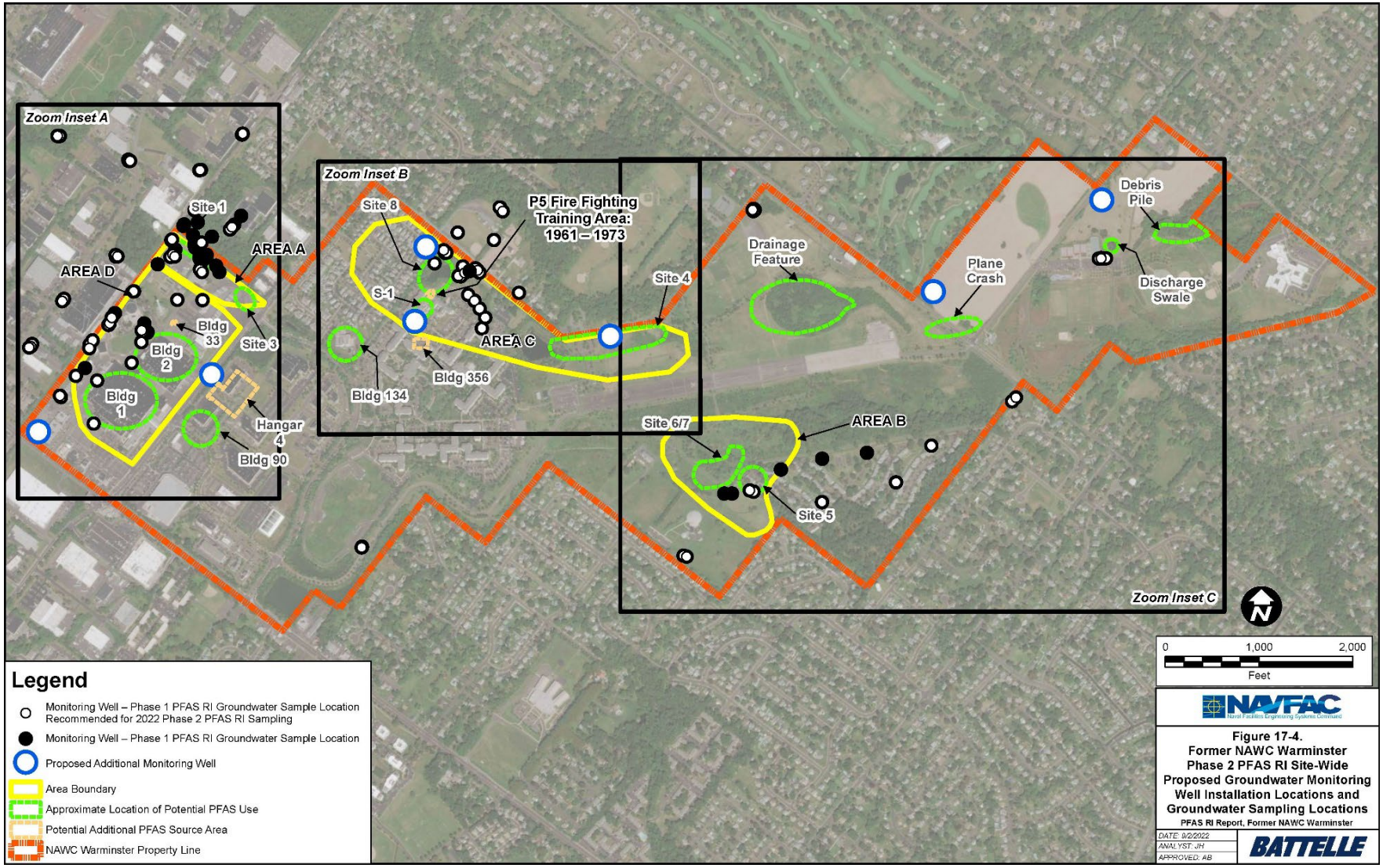




Phase 2 PFAS RI Proposed Soil Sampling (cont.)



Phase 2 PFAS RI Proposed New Groundwater Wells



PFAS RI Surface Water Sampling

- Sample surface water from creeks/tributaries within the three watersheds present at former NAWC Warminster:
  - At least two sampling locations (upstream and downstream) in each surface water tributary.
  - Locations downstream of tributary confluences.
  - Locations along long tributary reaches without nearby confluence points.
  - Locations selected near potential PFAS source areas with elevated surface water concentrations during Phase 1 RI.
- Initial schedule to sample annually in late summer/fall during low-flow conditions and concurrent with surface water monitoring for NASJRB Willow Grove and Biddle Air National Guard Base.

PFAS RI Surface Water Sampling (cont.)

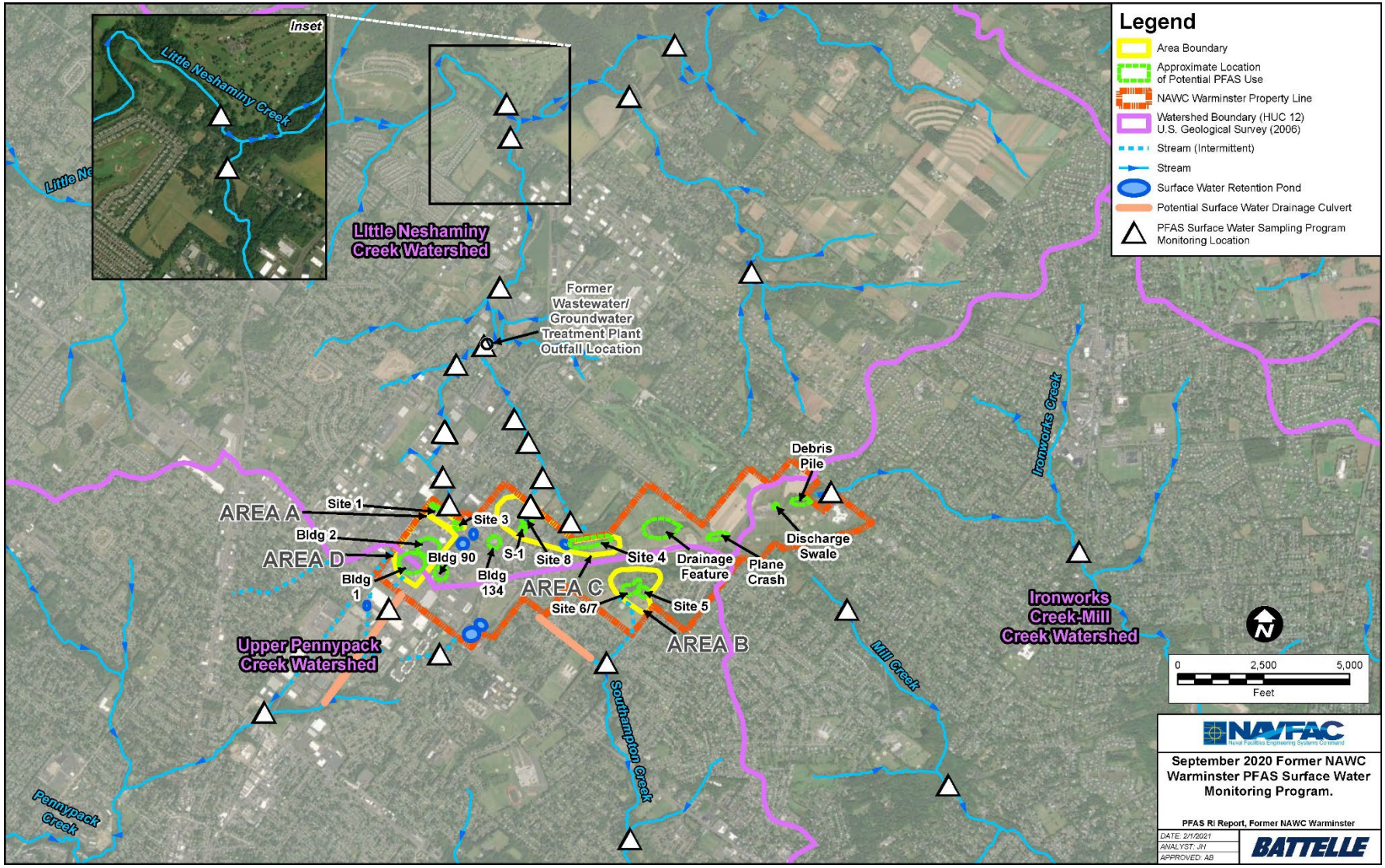
- 22 surface water locations sampled Sep 2020 and Sep 2021; 24 locations sampled Sep 2022 (added 2 locations from NASJRB Willow Grove program)
- USGS performed concurrent flow monitoring at 11 locations.
- 2020 surface water monitoring report finalized Apr 2022.
- 2021 surface water monitoring report finalized Apr 2023.
- 2022 surface water monitoring report finalized Jan 2024.
- 2023 annual sampling completed in Sep 2023; internal draft report being prepared.

PFAS RI Surface Water Sampling (cont.)

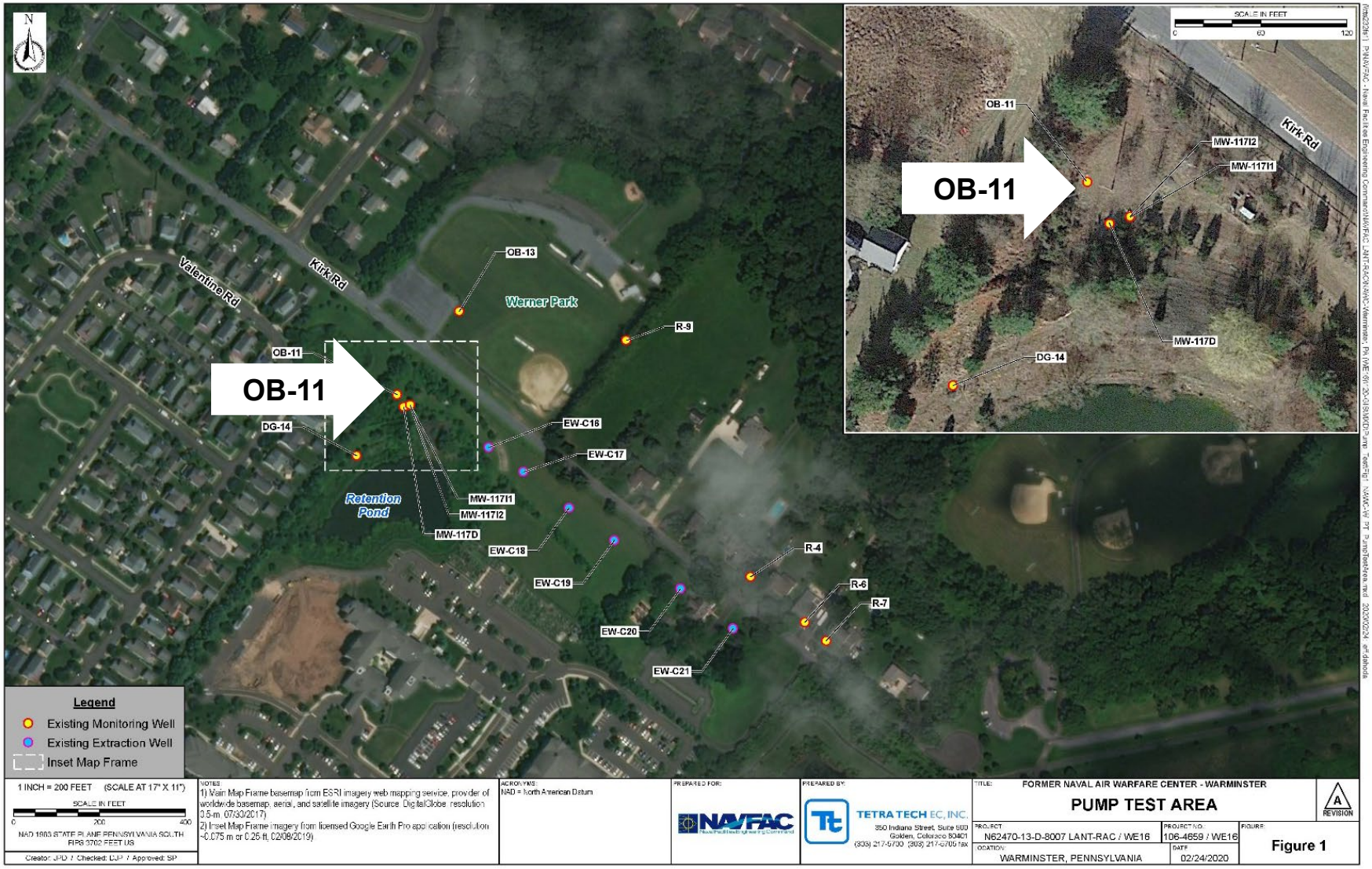
Watershed	Tributary/Creek	Number of Surface Water Sampling Locations	Number of USGS Flow Monitoring Locations
Little Neshaminy Creek	Little Neshaminy Creek	2*	1
	Little Neshaminy Creek West Tributary	11*	4
	Little Neshaminy Creek East Tributary	2	1
Upper Pennypack Creek	Pennypack Creek	3	1
	Southampton Creek	2	1
Iron Works Creek/ Mill Creek	Ironworks Creek	2	1
	Mill Creek	2	1

* Includes one location initially included in the NASJRB Willow grove surface water sampling program.

PFAS RI Surface Water Sampling Locations



Conversion of OB-11 to Extraction Well



Conversion of OB-11 to Extraction Well (cont.)

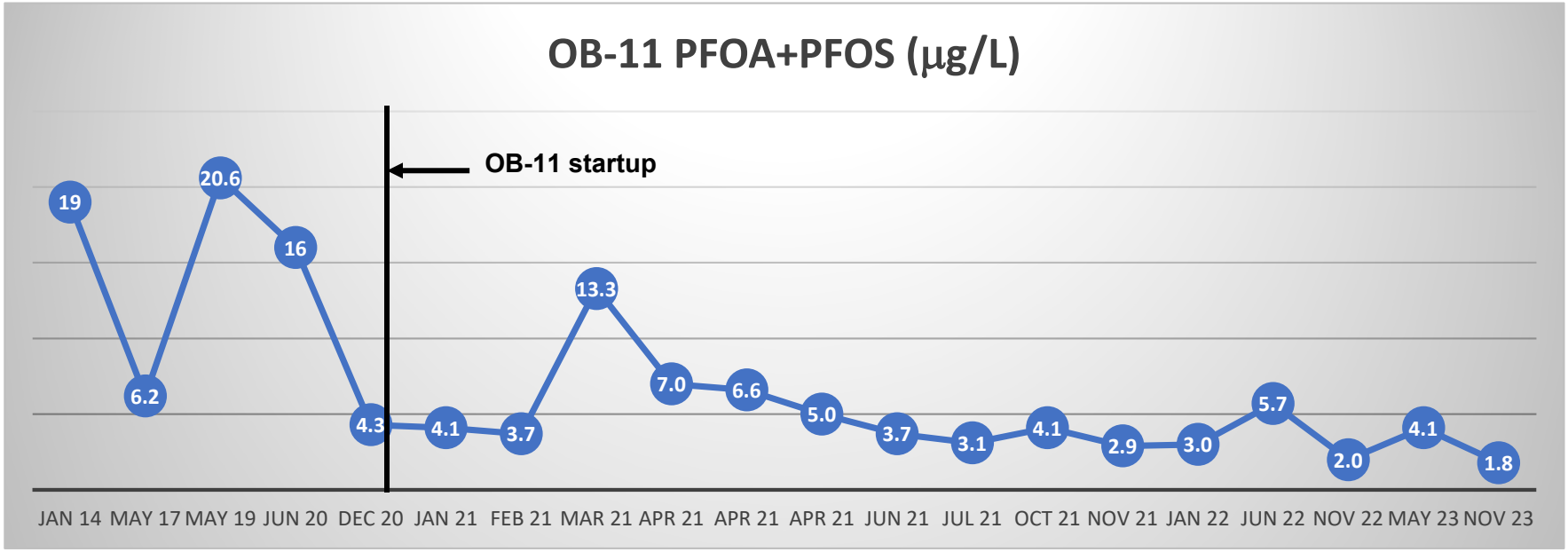
- Throughout RI process, to date, highest PFOA+PFOS groundwater concentrations observed in Area C monitoring well OB-11, with concentrations up ~20,000 ppt:
  - 19 J µg/L (19,000 ppt) in Jan 2014
  - 20.6 µg/L (20,600 ppt) in May 2019
- Time-critical removal action (TCRA) memorandum for this action completed in June 2020.
- OB-11 conversion completed in Dec 2020.
  - OB-11 extraction well brought online full time beginning on January 6, 2021.
  - TCRA Performance Monitoring Plan developed to evaluate the effect of OB-11 extraction well operation in reducing PFAS concentrations in groundwater.

OB-11 Performance Monitoring

- Baseline and quarterly water level measurements and samples from nine groundwater and two surface water locations for one year.
- Monthly samples from OB-11 during Q1 and Q2.
- Quarterly performance monitoring reporting
  - First quarterly monitoring report performed in Apr 2021; report finalized Mar 2022 (includes baseline sampling results)
  - Second quarterly monitoring report performed in Jul 2021; report finalized Mar 2022
  - Third quarterly monitoring performed in Oct 2021; report finalized Jul 2022
  - Fourth quarterly monitoring performed in Jan 2022; report finalized Feb 2023

OB-11 TCRA Performance Monitoring Results

- Decreasing groundwater PFOA+PFOS trend in OB-11, OB-13



- Fluctuating PFOA+PFOS groundwater concentrations in other performance monitoring wells
- Fluctuating surface water concentrations

OB-11 Performance Monitoring Path Forward

- All OB-11 performance monitoring wells sampled as part of Spring 2022 Phase 2 PFAS RI groundwater sampling
- Semiannual sampling of all OB-11 performance monitoring wells
  - Most recent semiannual event performed Nov 2023
- Annual sampling of surface water performance monitoring locations
- Quarterly groundwater elevation and staff gauge monitoring for one year; semiannual thereafter

PFAS Information and Resources - Website

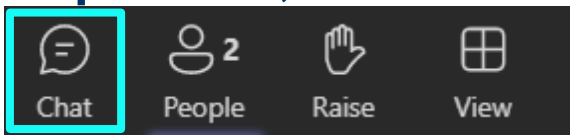
https://www.bracpmo.navy.mil/BRAC-Bases/Northeast/Former-Naval-Air-Warfare-Center-Warminster/

Additional weblinks for PFAS information and resources available in backup

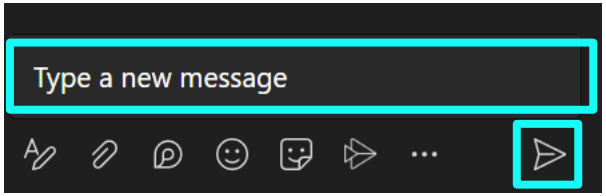
Comments from the Environmental Protection Agency or the Pennsylvania Department of Environmental Protection

Q&A Options

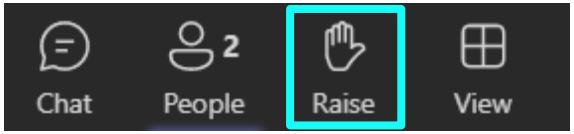
1) To ask a question, select 'Chat'



Type question in the text box, and then select Send.



2) Raise your hand to be recognized and have your microphone unmuted. Select Raise your hand icon.



3) Phone-only attendees can dial *6 to raise their hand and have the opportunity to ask a question.

For more Information

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Next Technical Review Committee (TRC) meeting:
Hybrid Meeting August 2024 (date/timeTBD)

Environmental Restoration discussions have concluded.

Health Professionals

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PADOH
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Thank you for joining the Technical Review Committee (TRC) meeting for the former Naval Air Warfare Center (NAWC) Warminster.

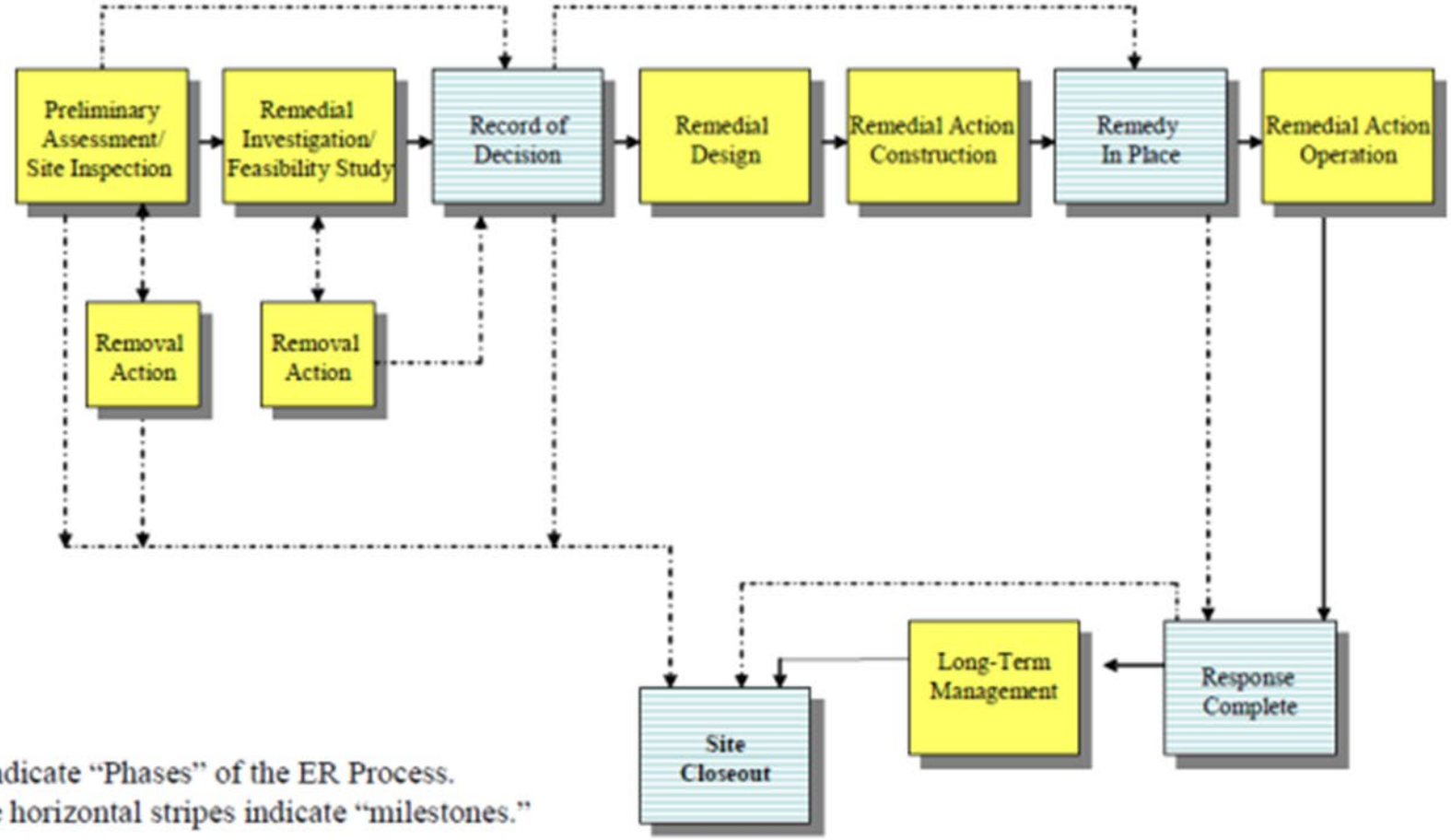
The meeting has concluded.

BACKUP / ADDITIONAL INFORMATION

NAWC Warminster History

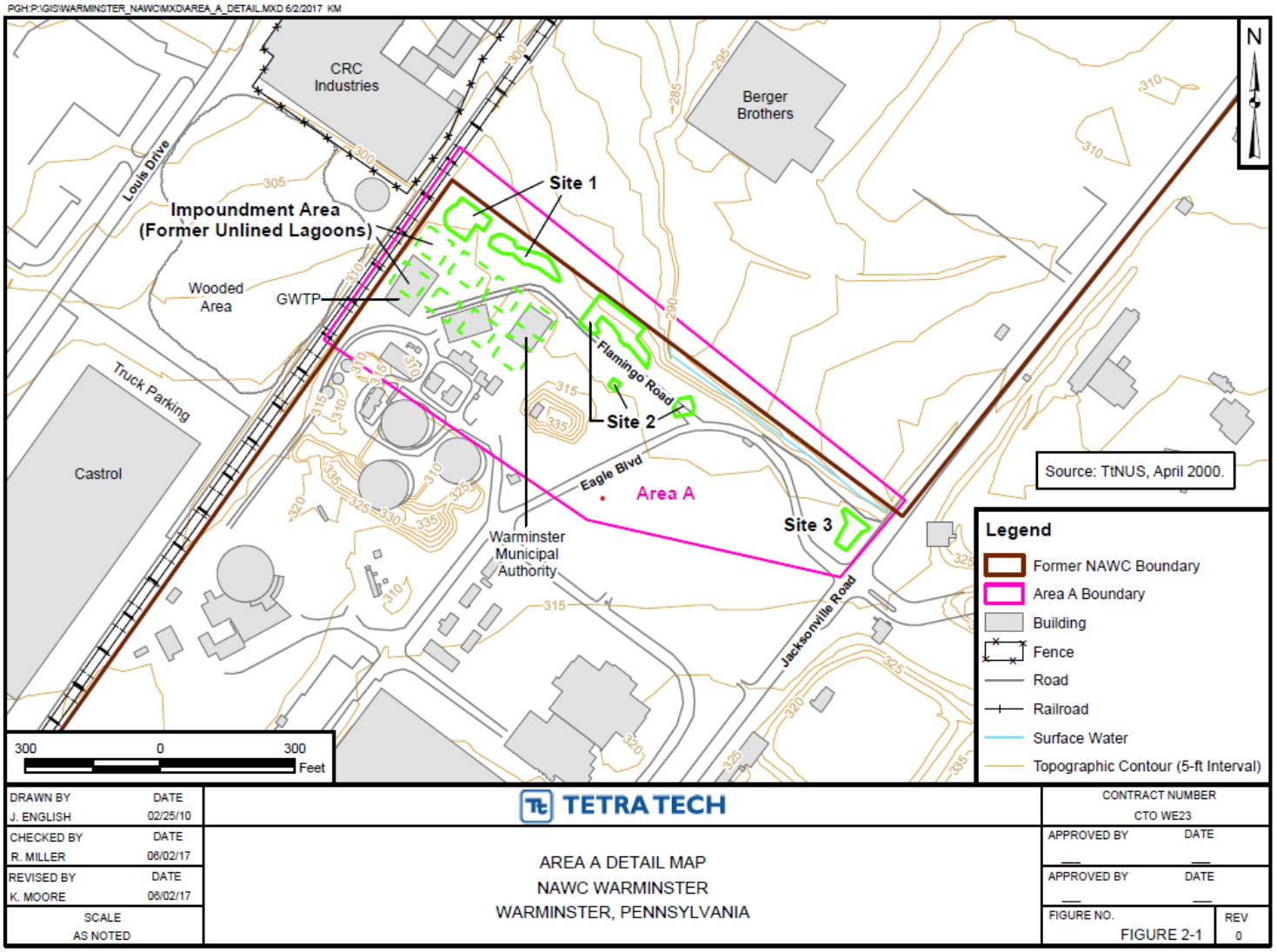
- Originally site of Brewster Aeronautical Corporation, acquired by the U.S. Government in 1944.
- Designated Naval Air Development Center (NADC) in 1949
- Was also known as Johnsville Naval Air Station.
- Listed in National Priorities List (NPL) in 1989 as Naval Air Development Center Warminster (Eight Waste Areas)
- Became Naval Air Warfare Center (NAWC) in January 1993.
- Closed by Base Realignment and Closure (BRAC) in 1995.
- Operations ceased in 1997, Naval Facilities Engineering Command became responsible for property disposal and environmental restoration.
- All property transferred by 2000. Former housing areas, Jacksonville Road and Shenandoah Woods, transferred to NASJRB Willow Grove.

Environmental Restoration Program

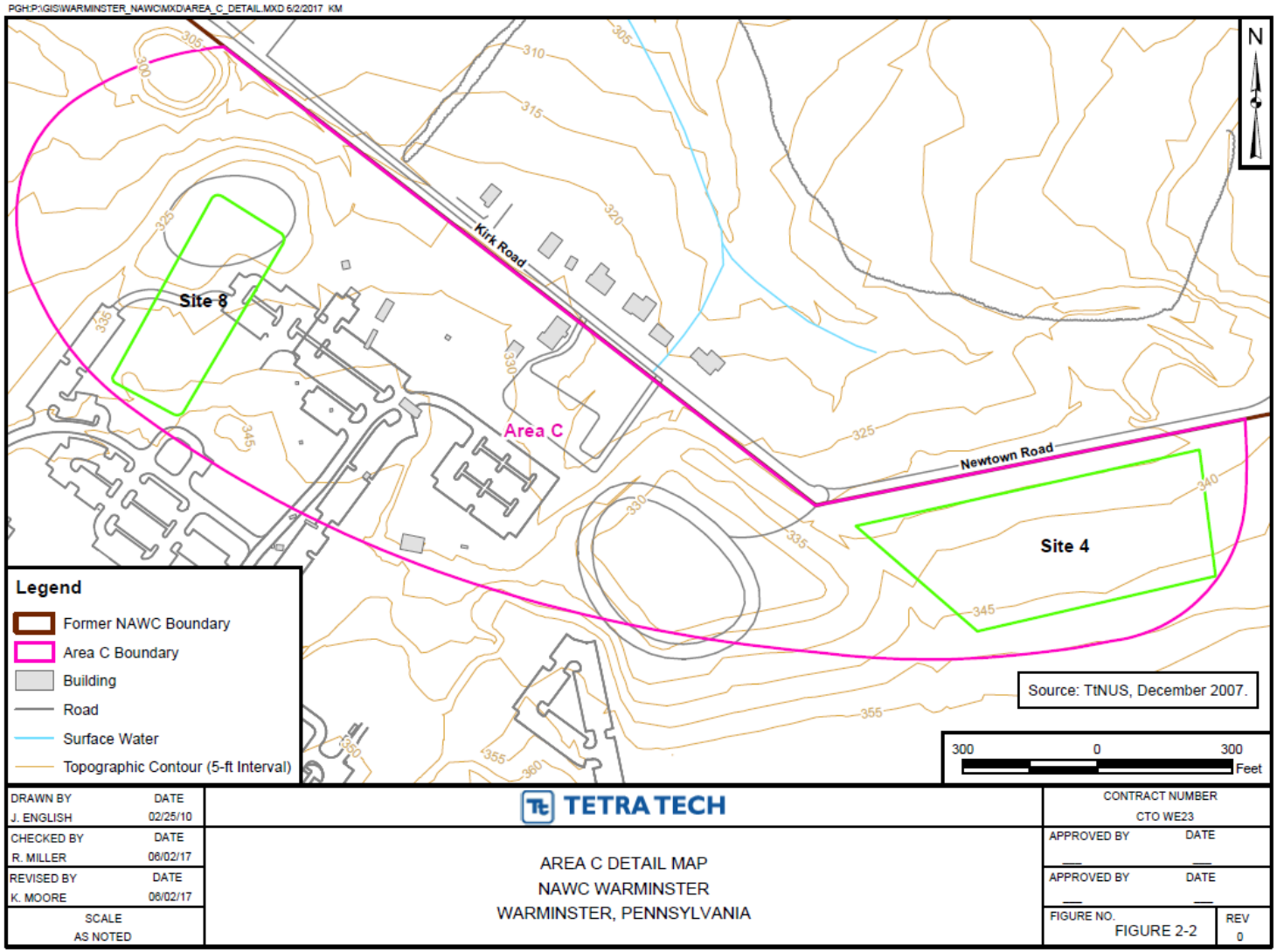


Notes:
Yellow boxes indicate "Phases" of the ER Process.
Boxes with blue horizontal stripes indicate "milestones."

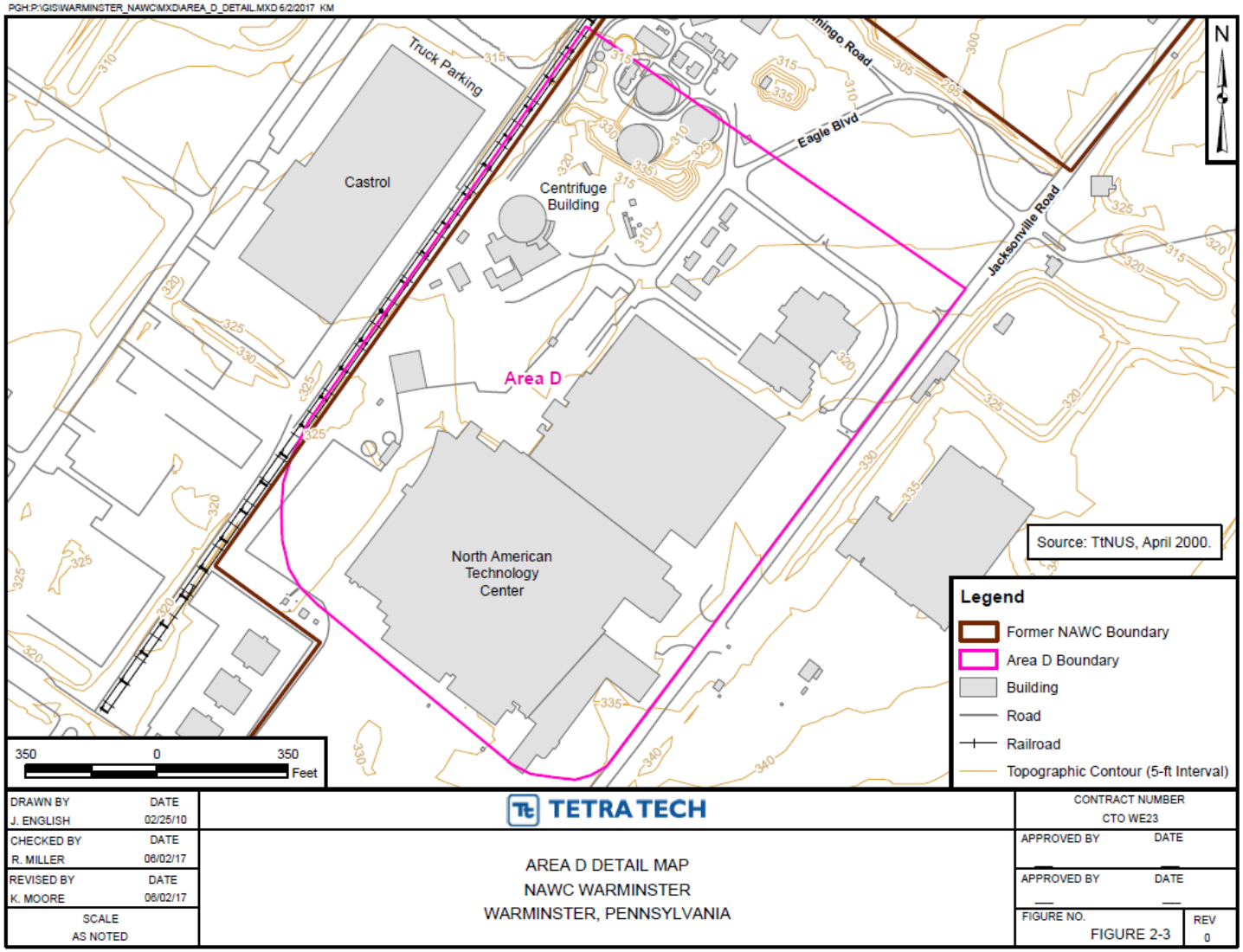
Environmental Restoration Site Location



Environmental Restoration Site Location



Environmental Restoration Site Location



Groundwater Treatment Plant Discharge Permits

- DRBC (Delaware River Basin Commission) Docket:
  - Docket renewal submitted in February 2023.
  - Valid for 5 years / mirrors NPDES (currently expires 2023).
- PADEP issued NPDES (National Pollutant Discharge Elimination System) permit:
  - Permit renewed on 1 August 2018. Removal of PFOA and PFOS to below 70 ppt is now required.
  - Valid for 5 years (expires 31 July 2023).
- Relocation of discharge line and new outfall triggered new discharge approval:
  - Above permits replaced with WQ ARARs NO: 092021.
  - Valid August 1, 2020, to be reviewed by November 22, 2026.

PFAS Background Information

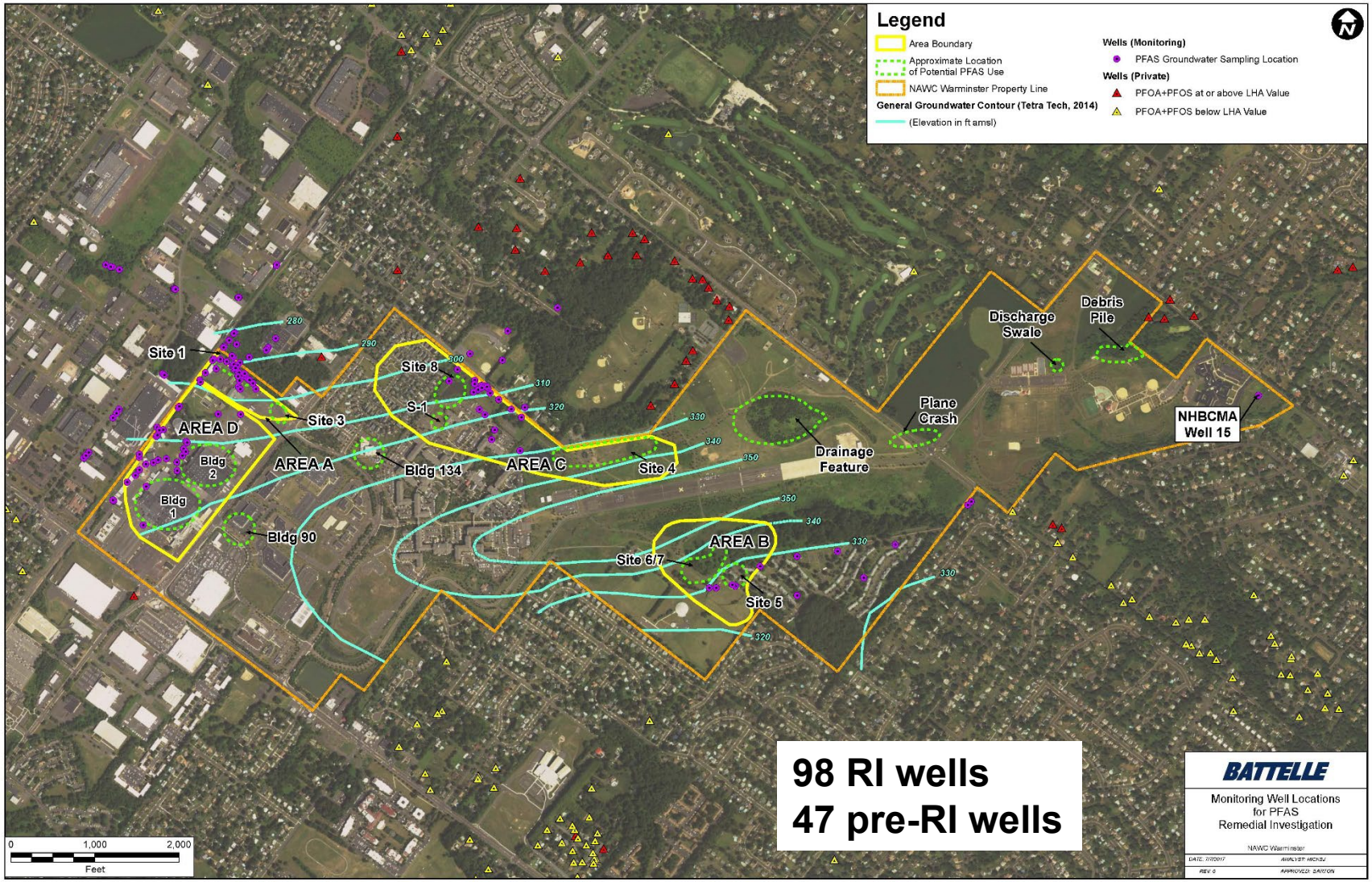
- In mid-2014, PFAS known as Perfluorooctanoic Acid (PFOA) and Perfluorooctane Sulfonate (PFOS) were found in public drinking water wells near NAWC Warminster through an EPA program known as the Unregulated Contaminant Monitoring Rule (UCMR).
- The health advisory levels at that time were 0.4 micrograms per liter (µg/L), or 400 parts-per trillion (ppt), for PFOA and 0.2 µg/L, or 200 ppt, for PFOS.
- PFOA/PFOS are man-made chemicals found in a wide variety of consumer products and also in fire-fighting solution known as aqueous film-forming foam (AFFF), which was used at NAWC Warminster.
- In the summer of 2014, the Navy began sampling for PFOA/PFOS in private drinking water wells and worked with Warminster Municipal Authority (WTMA) on the municipal drinking water wells.

PFAS Background Information (continued)

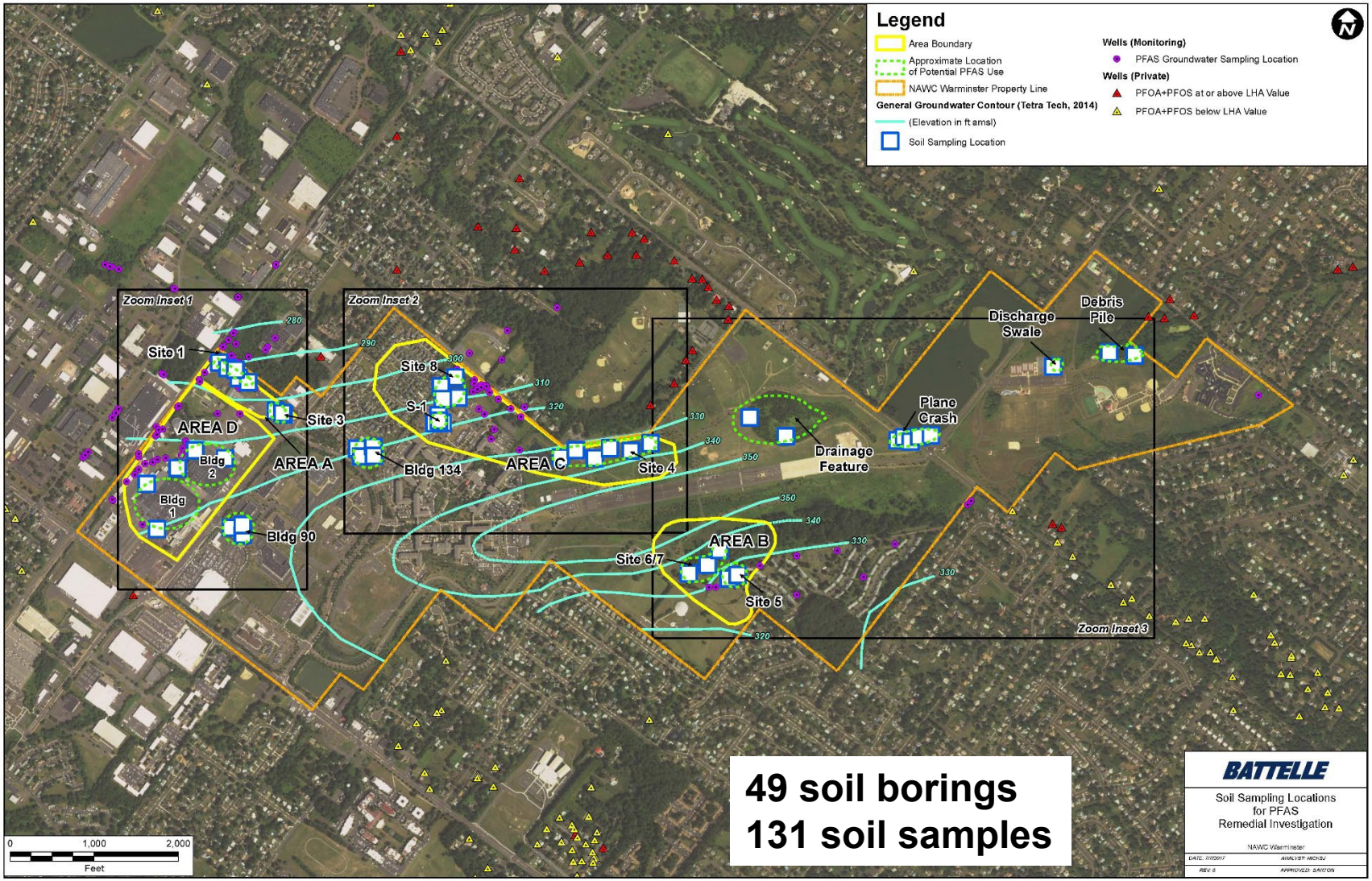
- In May 2016, the Environmental Protection Agency established a lifetime Drinking Water Health Advisory (HA) level of 70 parts-per-trillion (0.07 µg/L) for combined PFOA and PFOS.
- The Navy's priority continues to be eliminating exposure to PFOA/PFOS above health advisory levels in drinking water.
- Any health concerns should be addressed with your health professional. Health information weblinks are provided at the end of this presentation.

Warminster Potential PFAS Source Areas

PFAS RI Groundwater Sampling Locations



PFAS RI – Initial Soil Sample Locations



Shenandoah Woods Housing Area

- Shenandoah Woods Housing area was closed under BRAC 2005, as a remote site associated with the former Naval Air Station Joint Reserve Base Willow Grove.
- The former housing area is located on the former Naval Air Warfare Center Warminster and consisted of 199 town-house-type housing units situated on approx. 55 acres.
- A portion of the former housing area was fire damaged by vandalism in February 2019 and April 2021; demolition/cleanup was completed by the Navy in August 2021.
- The non-fire-damaged parcel, approx. 54 acres, was transferred to the Bucks County Redevelopment Authority (BCRDA) and the National Park Service in summer 2021. After fire debris was removed, the last parcel (less than an acre) was transferred to the BCRDA in October 2021.

PFAS Information and Resources

Department of the Navy (DON) Perfluorinated Compounds (PFC)/PFAS website
https://www.secnav.navy.mil/eie/Pages/PFAS_Home.aspx

NAVFAC BRAC PMO Websites (includes links to environmental information and the administrative record):

https://www.bracpmo.navy.mil/BRAC-Bases/Northeast/Former-Naval-Air-Station-Joint-Reserve-Base-Willow-Grove/Documents/

https://www.bracpmo.navy.mil/BRAC-Bases/Northeast/Former-Naval-Air-Warfare-Center-Warminster/Documents/

A subscription service is available on the BRAC PMO websites to receive e-mail notification of new information.

PFAS Information and Resources (continued)

Environmental Protection Agency

https://www.epa.gov/pfas

Agency for Toxic Substances and Disease Registry

https://atsdr.cdc.gov/pfas/index.html

Pennsylvania Department of Environmental Protection

https://www.dep.pa.gov/Citizens/My-Water/drinking_water/Pages/default.aspx

Horsham Township

https://horsham.org/

Warminster Township

https://warminstertownship.org/

PFAS Information and Resources (continued)

Horsham Water and Sewer Authority

https://www.horshamwater-sewer.com

Warminster Township Municipal Authority

https://www.warminsterauthority.com/

Warwick Township Water and Sewer Authority

https://wtwsa.org/

Pennsylvania Department of Health

https://www.health.pa.gov/topics/envirohealth/Pages/PFAS.aspx

Participation in DoD Funded PFAS Research

- SERDP/ESTCP are DoD-funded environmental research programs.
- NAWC Warminster and NASJRB Willow Grove is supporting ~$9M of SERDP/ESTCP funded research investigating new PFAS assessment and remediation technologies.
- Will continue to seek participation in additional SERDP/ESTCP work at NASJRB Willow Grove or nearby NAWC Warminster.
- Participate in other Navy or USEPA funded research.

SERDP/ESTCP Projects and organizations leading the research:

- **Soil or Groundwater Treatment**
  13 Total Projects Participated, projects since last RAB
  - ER18-1300 –College of Wooster
    Completed pilot column study with new absorption media in March/April 2020.
  - ER18-1063 – Colorado School of Mines
    Pilot column testing of different commercial resins to commence in late June at WG
- **Passive Treatment of Storm Water**
  - ER18-1230 –Oregon St. Univ.
- **Assessment of Fate and Transport of PFAS in Surface Water**
  - ER19-1073 (New Start) –Academy of Natural Sciences of Drexel University
  - ER19-1193 (New Start and potential participation) –Towson State University

DoD's SERDP/ESTCP PFAS website:

https://map.serdp-estcp.org/Featured-Initiatives/Per-and-Polyfluoroalkyl-Substances-PFASs/pfas_efforts.pdf