

Restoration Advisory Board Meeting (RAB) Former Naval Air Station Brunswick

January 22, 2025



Major Site Activity Updates

Historical & Ongoing Navy PFAS Efforts



PFAS Remedial Investigation Update

- PFAS RI conducted between Summer 2022 and October 2023.
- More than 500 samples were collected in various environmental media including soil, groundwater, surface water, sediment, stormwater, porewater, seeps, springs, and biota (fish and shellfish tissue).
- PFAS RI results were briefed during the May 2024 RAB meeting, meeting slides are available on the Navy's website. Data was shared with MEDEP, USEPA, and BACSE.
- The Navy is continuing PFAS investigations to refine the conceptual site model (CSM) and are discussed as part of this presentation.

Major Site Activity Updates

Historical & Ongoing Navy PFAS Efforts, continued

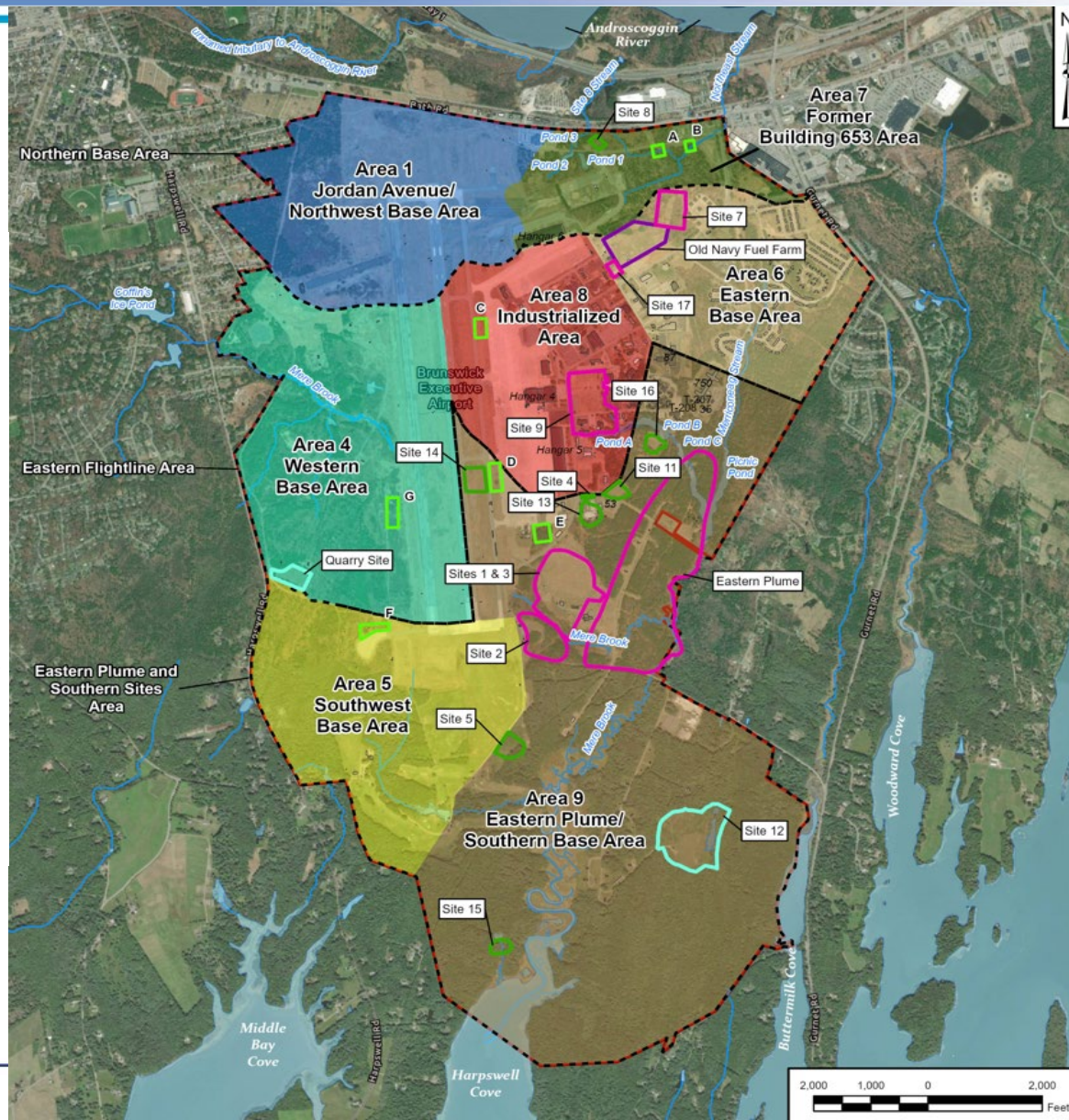


Legend

- PFAS Reporting Areas
- Approximate AFFF Discharge Area
- IR Program Site
- IR Program Site - No Further Action
- Land Use Control Boundary
- Petroleum Oil Lubricant Site
- Former Installation Boundary
- Building
- Former Building
- Water
- Stream

PFAS Reporting Area

- Area 1 Jordan Avenue/Northwest Base Area
- Area 4 Western Base Area
- Area 5 Southwest Base Area
- Area 6 Eastern Base Area
- Area 7 Former Building 653 Area
- Area 8 Industrialized Area
- Area 9 Eastern Plume/Southern Base Area



Major Site Activity Updates

Historical & Ongoing Navy PFAS Efforts (Continued)



Hangar 6 Aqueous Film-Forming Foam (AFFF)

- Hangar 6, located between PFAS Reporting Areas 1 and 7, houses a fire suppression system which uses AFFF.
- No historical releases were documented at the time of the 2013 preliminary assessment; however, approximately 2 to 3 accidental releases were thought to have occurred.
- Results from the RI indicate PFAS in groundwater are above project screening levels in the vicinity of Hangar 6.
- Additional investigations (e.g., sampling) related to PFAS impacts in the vicinity of Hangar 6 are planned and will be discussed later in this presentation.

Major Site Activity Updates

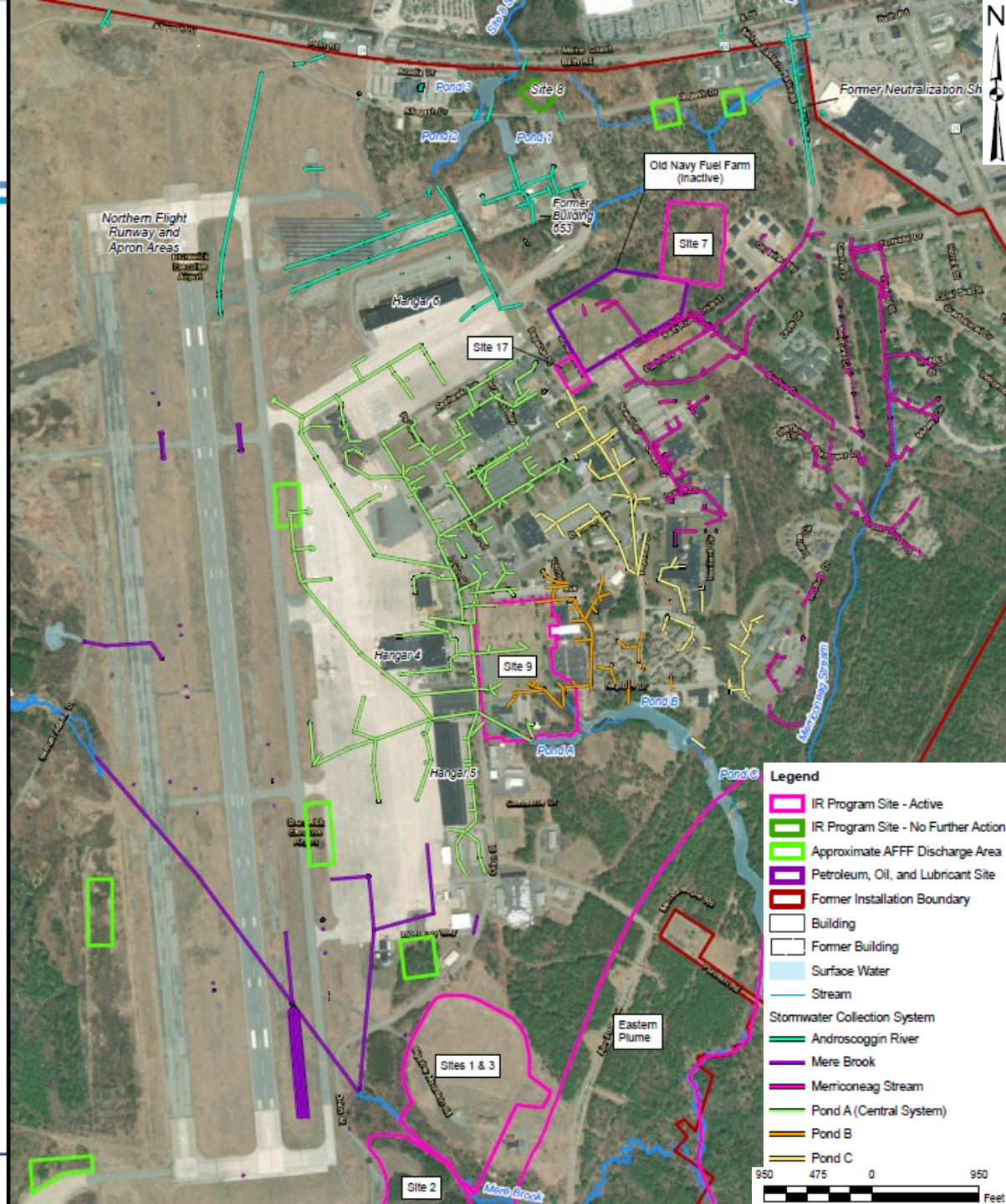
Historical & Ongoing Navy PFAS Efforts (Continued)



Stormwater at former NAS Brunswick

- A separate stormwater sewer system collects direct runoff at former NAS Brunswick with portions constructed in the 1940s.
- The stormwater system is a network of pipes, drains, inlets, catch basins, and retention ponds designed to quickly move water from impervious areas.
- As part of redevelopment following base closure, improvements have been made to the stormwater system.
- Data gaps exist relative to past knowledge and existing maps of the system.

Basewide Stormwater System



Major Site Activity Updates

Historical & Ongoing Navy PFAS Efforts



Stormwater Conceptual Site Model (CSM)

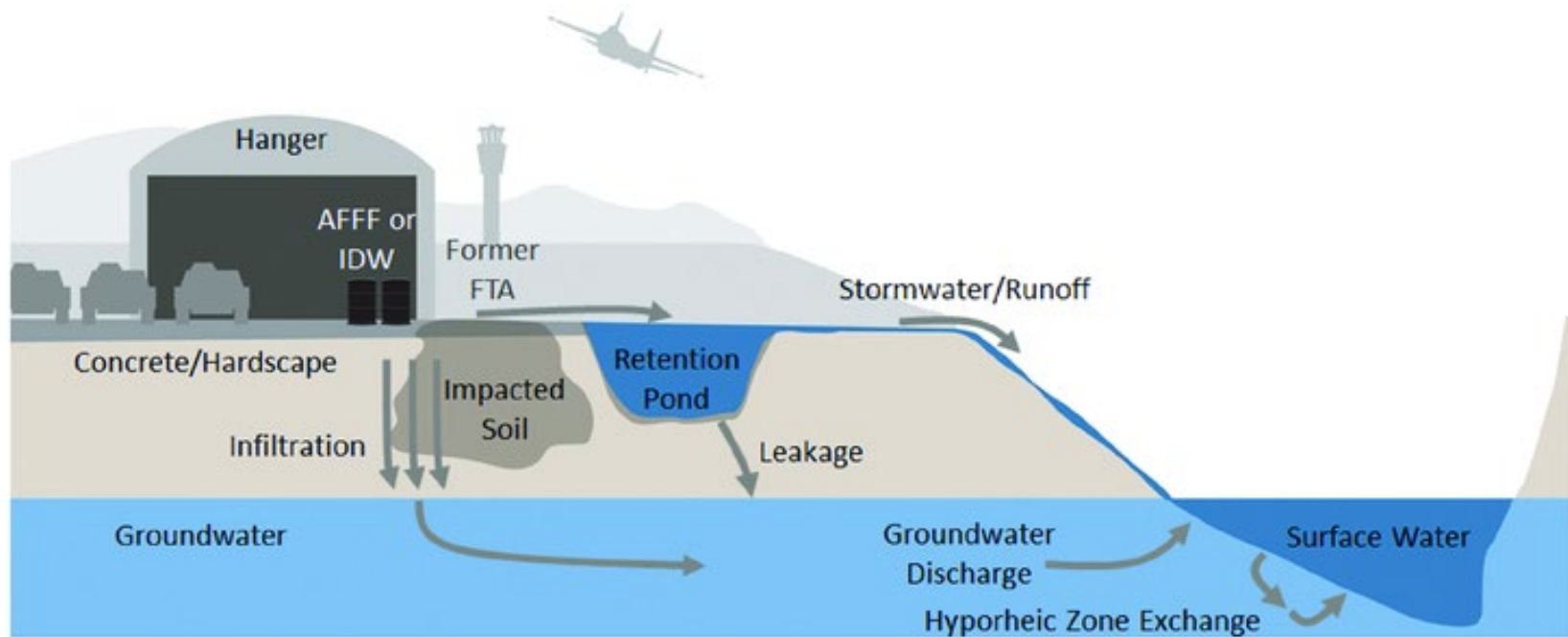
- PFAS were used in a variety of applications at former NAS Brunswick, primarily as constituents in aqueous film-forming foam (AFFF).
- AFFF was stored and used for firefighting and firefighting training purposes throughout the base, which has resulted in releases of PFAS to the environment.
- Once PFAS were released to the environment, they migrated through the stormwater system to surface water via overland runoff and transport of PFAS-impacted soils/sediments and migrated to groundwater by infiltration through soil to the groundwater.
- The stormwater system is a direct migration pathway to both surface water and groundwater.

Major Site Activity Updates

Historical & Ongoing Navy PFAS Efforts



Example Conceptual Site Model



Major Site Activity Updates

Historical & Ongoing Navy PFAS Efforts



Previous Stormwater Investigations

- During the PFAS RI, concentrations of PFAS exceeded one or more of the PFAS RI project screening levels in all media sampled and high concentrations of PFAS were detected in stormwater samples collected in the central flightline area between Hangars 4 and 5.
- Additionally, the data collected during PFAS RI and previous investigations, indicate the potential for groundwater seepage to occur to the stormwater system, contributing to the concentrations of PFAS observed in stormwater.
- To refine the CSM and identify how PFAS may or may not be entering and moving through the stormwater system, the Navy is beginning the process of completing a stormwater evaluation.

Major Site Activity Updates

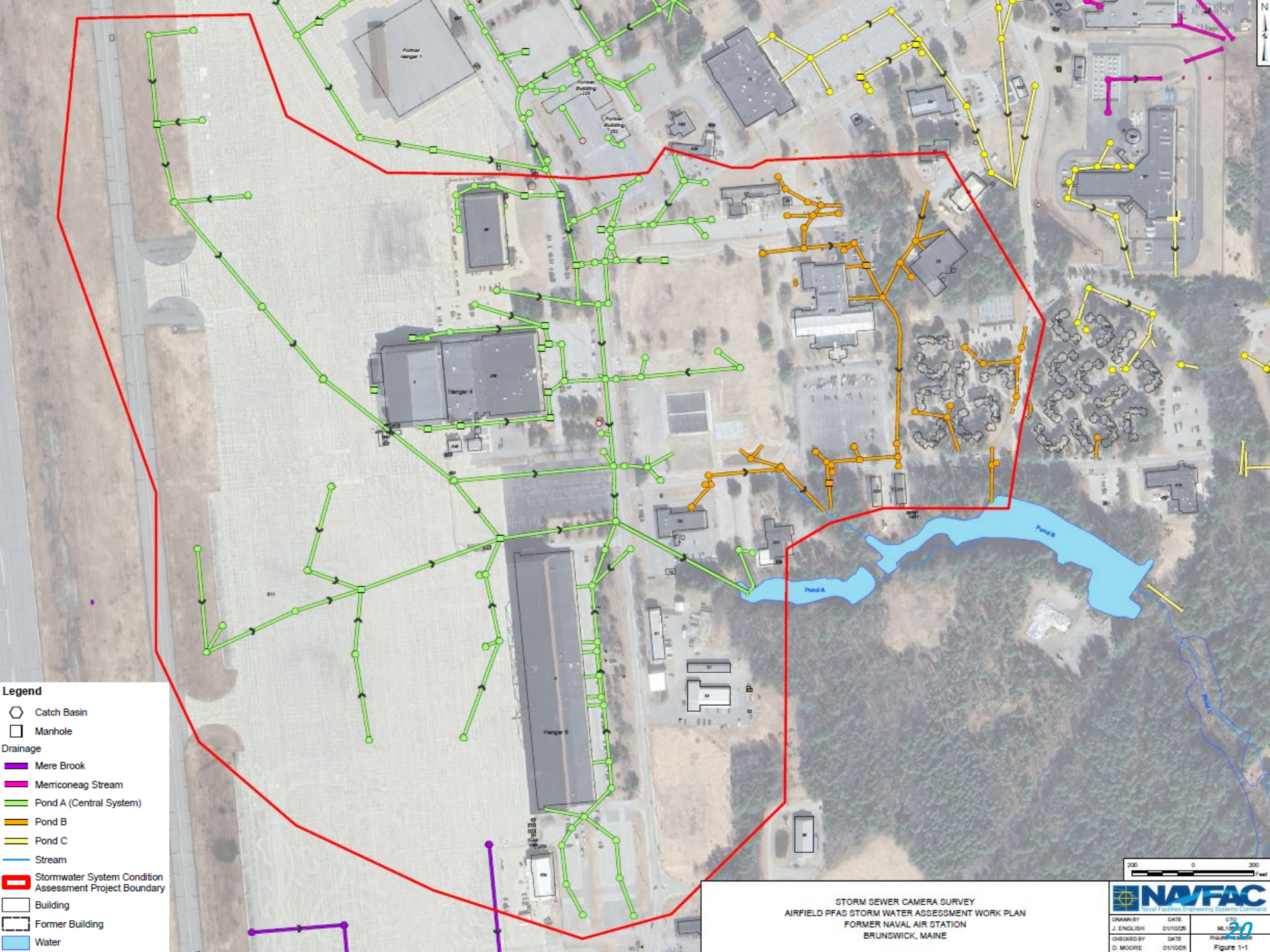
Historical & Ongoing Navy PFAS Efforts



Stormwater

Navy expects this stormwater system evaluation to be completed in phases which will include the following:

- An evaluation of surface runoff/stormwater catchment areas
- A stormwater system condition assessment
- A closed-circuit television (CCTV) video camera survey of the stormwater system
- Stormwater baseflow evaluation



- Legend**
- Catch Basin
 - Manhole
 - Drainage
 - Mere Brook
 - Merriconeag Stream
 - Pond A (Central System)
 - Pond B
 - Pond C
 - Stream
 - Stormwater System Condition Assessment Project Boundary
 - Building
 - Former Building
 - Water

STORM SEWER CAMERA SURVEY
AIRFIELD PFAS STORM WATER ASSESSMENT WORK PLAN
FORMER NAVAL AIR STATION
BRUNSWICK, MAINE

300 0 300 Feet

NAVFAC
Naval Facilities Engineering Command

DRAWN BY J. ENGLISH	DATE 01/10/25	CITY ML1
CHECKED BY D. MOORE	DATE 01/10/25	FIGURE Figure 1-1

Major Site Activity Updates

Historical & Ongoing Navy PFAS Efforts, continued



Off-Property PFAS Drinking Water Sampling

- The Navy has historically sampled for PFAS in off-property private drinking water wells in 2016 and 2020/2021 in areas that have the potential for PFAS-impacts related to historical operations at former NAS Brunswick.
- Areas sampled were located north and east of the former base boundary.
- The Navy is planning to conduct confirmatory sampling in these same areas; however, property owners outside these areas can contact the Navy to discuss if sampling at your property is warranted.
- The Sampling and Analysis Plan (SAP) to conduct private well sampling for PFAS is currently being updated.
- Sampling will require the permission from the property owner. Access agreements will be sent to property owners prior to conducting the sampling.
- A questionnaire will also be provided with the access agreement for a property owner to provide information about the private well and any filtration or treatment systems being used.

Major Site Activity Updates

Historical & Ongoing Navy PFAS Efforts, continued



Off-Property PFAS Drinking Water Sampling

- Once a property owner has granted permission, the Navy's contractor, Resolution Consultants, will contact the property owner to schedule a date and time to conduct the sampling.
- Sampling should take one hour or less to complete.
- The Navy is planning to conduct the private well sampling in early 2025.
- Individual results will be provided to the property owner.

Major Site Activity Updates

Historical & Ongoing Navy PFAS Efforts, continued



Jordan Avenue Wellfield PFAS Source Identification

- Potential source(s) of PFAS to the Jordan Avenue Wellfield may include the historical use of PFAS-containing AFFF related to fire suppression systems and operations (e.g., Hangar 6) located upgradient from the Jordan Avenue Wellfield.
- A desktop evaluation has been initiated to review historical PFAS investigations conducted by the Navy in the area between Hangar 6 and the Jordan Avenue Wellfield.
- This evaluation will identify data gaps, if any, and additional investigations will be proposed, if necessary.

Major Site Activity Updates

Historical & Ongoing Navy PFAS Efforts, continued



Jordan Avenue Wellfield

- The Navy and Brunswick/Topsham Water District (BTWD) are operating under an Environmental Services Cooperative Agreement (ESCA) for treatment plant upgrades valued at \$21M.
 - Phase I: Support current action (hydraulic containment using the lower wellfield) and design of a treatment system. Design was completed in early 2024.
 - Phase II: Supports construction of the PFAS treatment system.
 - Navy awarded Phase II in mid-2024. BTWD issued Notice To Proceed to the selected contractor in late Summer 2024. Construction started Fall 2024.



Major Site Activity Updates

Historical & Ongoing Navy PFAS Efforts, continued



Hangar 4 Aqueous Film-Forming Foam (AFFF)

- Navy contractors have drained and rinsed the AFFF fire suppression system according to the 30 July 2024 Department of Defense (DoD) guidance document.
- A total of 14,150 gallons of rinse water and AFFF concentrate were removed from the system and transported to a CERCLA subtitle C Landfill in Emelle, Alabama following the procedures outlined in the USEPA Off-Site Rule.
- Contractors demobilized from the Site on November 6, 2024.



Major Site Activity Updates

LUC Compliance Activities, continued



CERCLA LUC Inspections, continued

- The 2023 Annual LUC inspection recommended well repairs and additional no trespassing signs
 - Well repairs have been conducted
 - 10 additional No Trespassing signs have been hung up in the vicinity of Picnic Pond



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Other Activities, continued



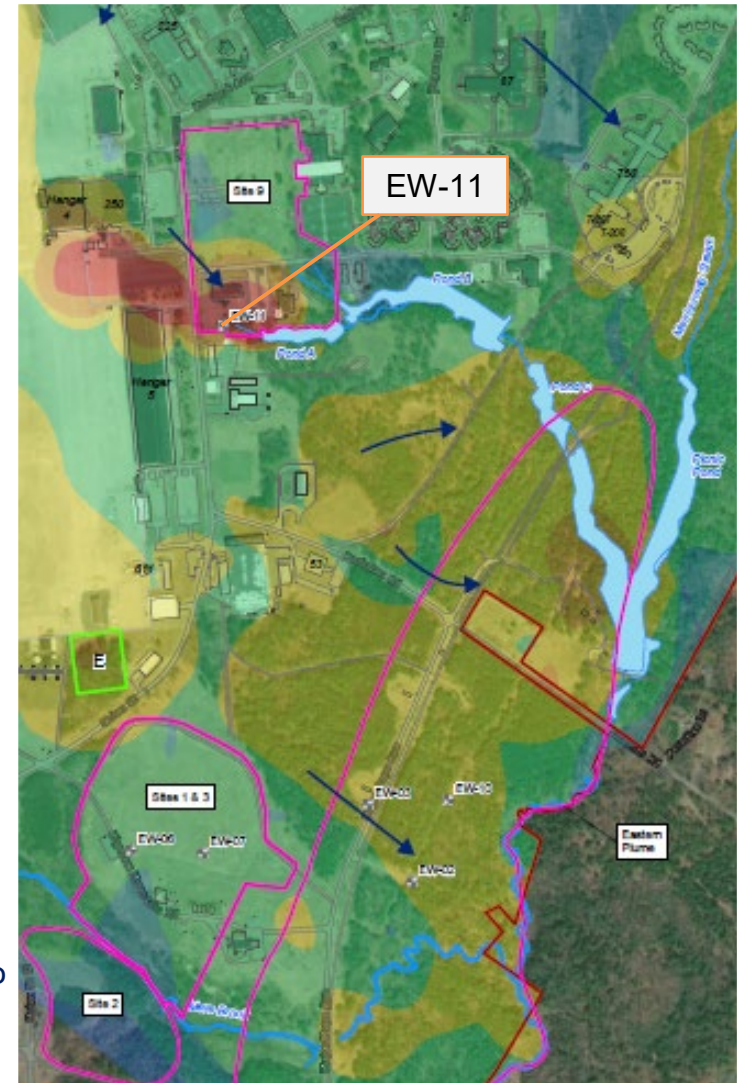
Groundwater Extraction and Treatment System (GWETS)

- An Interim ROD was signed in June 1992 to address groundwater contamination at the Eastern Plume identified during the RI.
 - Included a treatment plant to control and prevent further migration of contaminated groundwater off the NAS Brunswick property, and
 - To begin reducing the concentrations of contaminants prior to selecting the final remedy.
- Has been in operation since the mid-1990s to treat chlorinated volatile organic compounds (CVOCs) impacted groundwater.
- GWETS is very effective at treating CVOCs and providing hydraulic control of the Eastern Plume and includes six extraction wells to maintain hydraulic control.
- GWETS treats approximately 2 million gallons per month.
- Monthly Operations and Maintenance (O&M) reporting includes documenting GWETS performance along with laboratory analytical results.

Other Activities, continued

GWETS, continued

- Initial PFAS investigations conducted at the base identified PFAS in groundwater at the Eastern Plume.
- The GWETS was modified in 2015 to use treatment materials capable of treating both CVOC and PFAS-impacted groundwater.
 - Existing extraction wells were designed to treat CVOC-impacted areas.
 - Evaluation was conducted to optimize the extraction wells in PFAS-impacted areas.
 - New extraction well (EW-11) was installed and connected to the GWETS to treat PFAS in the Eastern Plume.
 - Currently evaluating groundwater data to determine most effective treatment options while maintaining original goals of treatment.
- The GWETS only treats PFAS in groundwater at the Eastern Plume.
 - Additional PFAS treatment for construction related activities to aid in redevelopment.



Other Activities, continued



GWETS PFAS Treatment Update

- Samples continue to be collected monthly (pre- and post-treatment) for PFAS analysis.
- Reduction of influent PFAS concentrations over past 5 years.
- Effluent concentrations are below laboratory detection limits and below the MEDEP Interim Drinking Water Standard and USEPA maximum contaminant levels (MCLs).
- Reporting:
 - Monthly summaries are provided to MEDEP, USEPA, and BACSE
 - Internal Draft Annual GWETS PFAS Report for July 2023 – June 2024 was issued to the Navy in October 2024
 - Draft report anticipated in Spring 2025

Other Activities, continued



Construction Dewatering Treatment System (CDWTS)

- In 2020, the Navy installed a treatment system to support construction activities by property owners at Brunswick Landing.
- The CDWTS is designed to treat PFAS-impacted groundwater generated during redevelopment activities.
- CDWTS is located outside the existing Eastern Plume GWETS.
- Prior to treatment by the CDWTS, contractors are required to submit a treatment plan that is approved by the Navy, MEDEP, and USEPA.
- To date, the system has treated 429,112 gallons of construction water. System is currently shut down for winter.

