

# Welcome to the RAB Meeting!



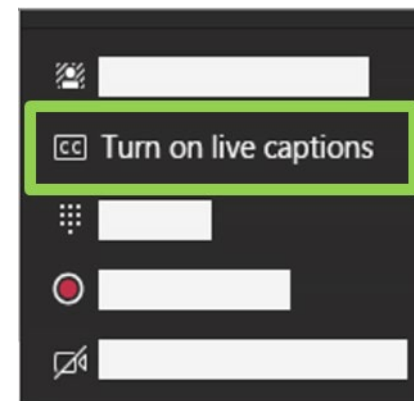
Thank you for joining the  
Restoration Advisory Board (RAB) Meeting for  
***Naval Air Station (NAS) Brunswick***

The meeting will begin at 2:00 p.m.

For captions, click

More ●●● at the top of the screen and then

Click 'Turn on live captions'





# Restoration Advisory Board Meeting Former Naval Air Station (NAS) Brunswick

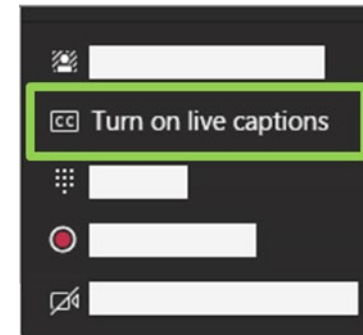
May 17, 2023





- **Closed Captioning**

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- **Screen Layout**

- To adjust the layout on your screen, select More ●●●
- Choose the preferred view from available choices. Options include Full Screen, Gallery View, and Focus on Content

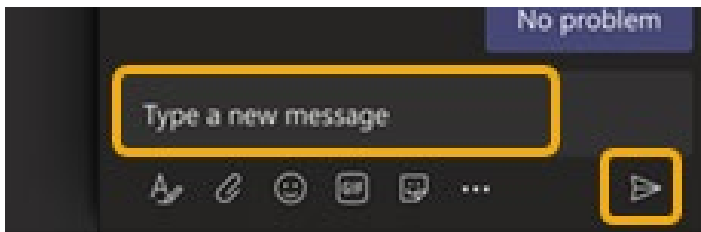


# Q&A Options

**1) To ask a question, select 'show conversation'**



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



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



# Meeting Agenda



- **Introductions**
- **Recent Site Activity Updates**
  - Community Outreach
  - Recent Redevelopment Activities
  - FOST Activity
  - Picnic Pond Remedial Action
  - Jordan Avenue Wellfield
  - PFAS RI
  - New PFAS Extraction Wells
  - Hangar 4 AFFF Status/Path Forward
    - PFOS AFFF
  - IRP Sites 1/3, 8, and 18
- **Upcoming Work**
  - PFAS RI Next Steps
  - Jordan Avenue Wellfield
  - LTM Program
  - GWETS Activities
  - LUC Compliance Activities
- **Questions/Wrap-Up**



# ***Introductions***

- **RAB Co-Chairs:**

- Ms. Suzanne L. Johnson, Esq.
- Mr. David Barney, BRAC Environmental Coordinator, Navy BRAC Program Management Office

- **RAB Members:**

- Mr. Derek Pinkham, Remedial Project Manager, Navy
- Mr. Michael Daly, Remedial Project Manager, United States Environmental Protection Agency (EPA)
- Mr. Iver McLeod, Remedial Project Manager, Maine Department of Environmental Protection (MEDEP)
- Ms. Kristine Logan, Midcoast Regional Redevelopment Authority (MRRA)
- Mr. Paul Ciesielski, Town of Harpswell, Maine
- Mr. Scott Libby, Town of Topsham, Maine
- Ms. Carol A. White, C.A. White & Associates, Brunswick Area Citizens for a Safe Environment (BACSE)
- Mr. David Page, PhD, Town of Brunswick, Maine



# ***Recent Site Activity Updates***

## ***Community Outreach***



- **Community Involvement Plan (CIP) update has been posted to website**
- **New notification system is up and running – subscribe at the website**
- **Recent draft documents submitted to RAB/BACSE**
  - **GWETS 2022 annual report – January 2023**
  - **2021 Annual LUC Inspection Report – Feb 2023**
  - **2022 Annual LUC Inspection Report – Feb 2023**
  - **PFAS RI Human Health Risk Assessment (HHRA) Work Plan – Feb 2023**
  - **Tissue Sampling SAP Addendum – March 2023**
  - **2022 NEX LTM Report – March 2023**
  - **2022 ONFF LTM Report – March 2023**



# Recent Site Activity Updates

## Community Outreach



## New Navy Website and Email Document Delivery

[bracpmo.navy.mil](http://bracpmo.navy.mil)

The screenshot shows the homepage of the Base Realignment and Closure (BRAC) Program Management Office website. At the top, a dark blue navigation bar contains the links "BRAC BASES", "PROPERTY DISPOSAL", "LIBRARY", and "CONTACT US". A red arrow points to the "BRAC BASES" link. Below the navigation bar is a large blue banner with the text "Base Realignment and Closure (BRAC) Program Management Office". The main content area is divided into several sections. On the left, under the heading "Installations", there is a map of the United States with several states highlighted in blue (AK, WA, CA, HI, MO, SC, FL, PR, ME, MA, RI, CT, MD). A red arrow points to the state of Maine (ME). Above the map, text reads "Click the map below to access a list of BRAC websites". Below the map is the heading "Announcements". On the right side, there is a section titled "BRAC KEY FACTS ACHIEVEMENTS" and "Community Info". Below "Community Info" are two tabs, "Future" and "Past", with "Future" selected. Below these tabs is a link "View More Community Information >". Further down is a section titled "What's New" with "Future" and "Past" tabs, and "Future" selected. Below the "What's New" section, there are two announcements: "Notice of Engineering Evaluation/Cost Analysis Open for Public Comment through 14 Dec. 2022" and "Former Naval Weapons Station Seal Beach, Detachment Conford". At the bottom left of the page, the date "NOV 15, 2022" is displayed.



# Recent Site Activity Updates

## Community Outreach



## New Navy Website and Email Document Delivery

[bracpmo.navy.mil/BRAC-Bases/Northeast/Former-Naval-Air-Station-Brunswick/](http://bracpmo.navy.mil/BRAC-Bases/Northeast/Former-Naval-Air-Station-Brunswick/)

The screenshot shows the website for the Former Naval Air Station Brunswick. At the top, there's a navigation bar with links: BRAC BASES, PROPERTY DISPOSAL, LIBRARY, and CONTACT US. Below this, a breadcrumb trail reads "BRAC Bases &gt; Northeast &gt;". The main heading is "Former Naval Air Station Brunswick". On the left, a sidebar menu includes "Former Naval Air Station Brunswick", "Meeting Material", "Documents", "Public Notices", "Contact", "Links", "Click and Subscribe to Updates" (highlighted with a red arrow), and "Other Northeast Bases". The main content area features a large photo of a sign for "Naval Air Station Brunswick, Maine" with a "Base Summary" section below it. To the right, there's a "BRAC KEY FACTS" section titled "Base Overview" with a bulleted list of facts: Brunswick, Maine; Total Acreage: 3,372; BRAC Year: 2005; Closure Date: May 31, 2011; Action: Closure - Completing BRAC disposal and environmental actions; and Local Redevelopment Authority (LRA). Below this is a "Community Information" section with "Future" and "Past" tabs. At the bottom right is a "What's New" section with "Current" and "Past" tabs. The "Base Summary" section includes a "Base Mission and Use" paragraph and a detailed paragraph about the base's history and location.



# ***Recent Site Activity Updates***

## ***Recent Redevelopment Activities***



- **Construction Permission Requests**
- **Review Projects for Adherence to LUCs**
  - **Soil Disturbance**
  - **Groundwater extraction**
- **More than 10 Forms Submitted this Calendar Year**
  - **Small and large projects**
    - Purinton Road Housing
    - Lift Station
    - MEDOT Allagash Sidewalk
    - MARC Phase 1A
    - Naval Air Museum – walkway
    - Sign Post
    - Utility Trench (fiber optic cable)



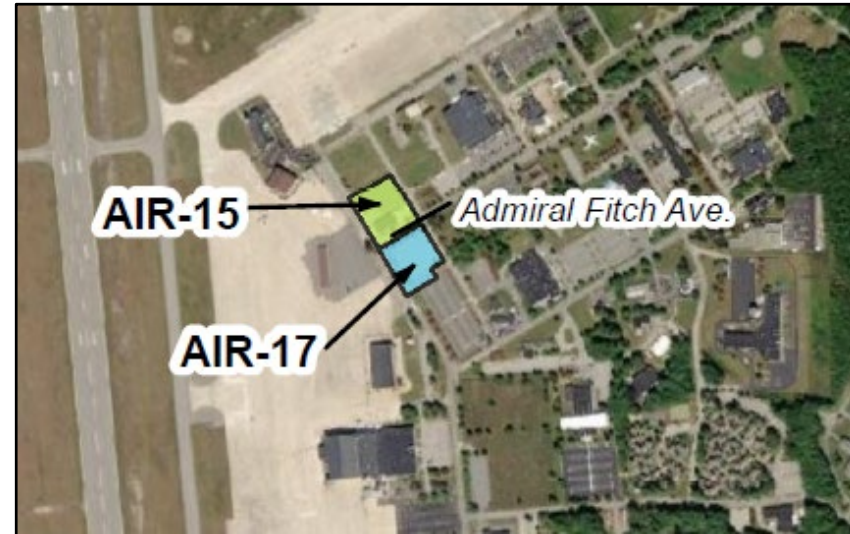
# Recent Site Activity Updates

## FOST Activity



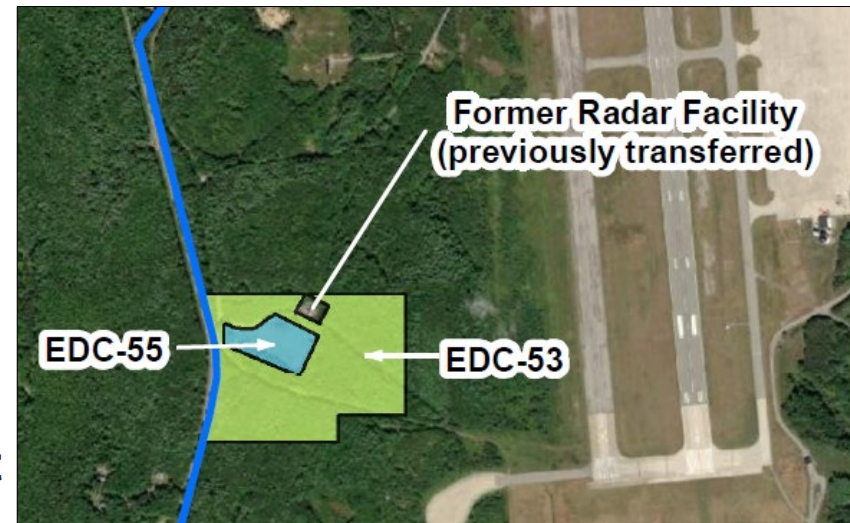
- **FOST 2023-1**

- Parcels AIR-15 and AIR-17
- 4.08 acres
- Buildings 9 and 45 and Orion Street Parking Area
- Draft submitted in April 2022
- Final FOST signed on May 4, 2023, and property transfer expected shortly



- **FOST 2023-2**

- Parcels EDC-53 and EDC-55
- 33.59 acres
- Quarry Area – EDC-53 is Waste Disposal Area and EDC-55 is Kick-Out Area
- Draft to public being prepared
- Expected June release date for comment





# ***Recent Site Activity Updates***

## ***FOST Activity (cont'd)***



- **FOST 2023-3**

- Public Works Parcel
- 6.01 acres
- Located at intersection of Orion Street and Purinton Road
- Includes Buildings 19, 53, 408, 584, and 590 and adjacent paved areas
- Internal draft being prepared

- **FOST 2023-4**

- Parcel AIR-12
- Building 250 and Hangar 4 and land to the north not conveyed with initial airfield transfer
- Internal draft being prepared
- Coordinating disposition of AFFF with MRRA and in accordance with Navy policy



# Recent Site Activity Updates

## *Picnic Pond Remedial Action*



- **Pond A dredging completed in 2022. A total of 4,774 tons of sediment were treated and shipped off site.**
- **Post-excavation sample results indicated that Remedial Goals were met in Pond A.**
- **Due to weather concerns, dredging was stopped in late 2022.**
- **Dredging subcontractor re-mobilized in April 2023 to begin dredging of Pond B.**
- **Dredging resumed on May 9, 2023.**
- **Subcontractor plans on completing dredging of Pond B and Picnic Pond by September 2023.**





# ***Recent Site Activity Updates***

## ***Jordan Avenue Wellfield Investigation***



- **The Navy was notified in December 2021 by Brunswick Topsham Water District (BTWD) that PFAS results were above Maine's interim criterion for PFAS in community water systems - 20 ppt combined for six PFAS (PFOA, PFOS, PFNA, PFDA, PFHpA, PFHxS), resulting in a temporary shutdown of the wellfield.**
- **In coordination with BTWD, EPA, and MEDEP, Navy performed an expedited investigation of the Jordan Avenue Wellfield area in April/May 2022:**
  - Initial site reconnaissance
  - New well installations/groundwater sampling
  - Surface water and spring sampling
  - Staff gauge installations and water level measurements







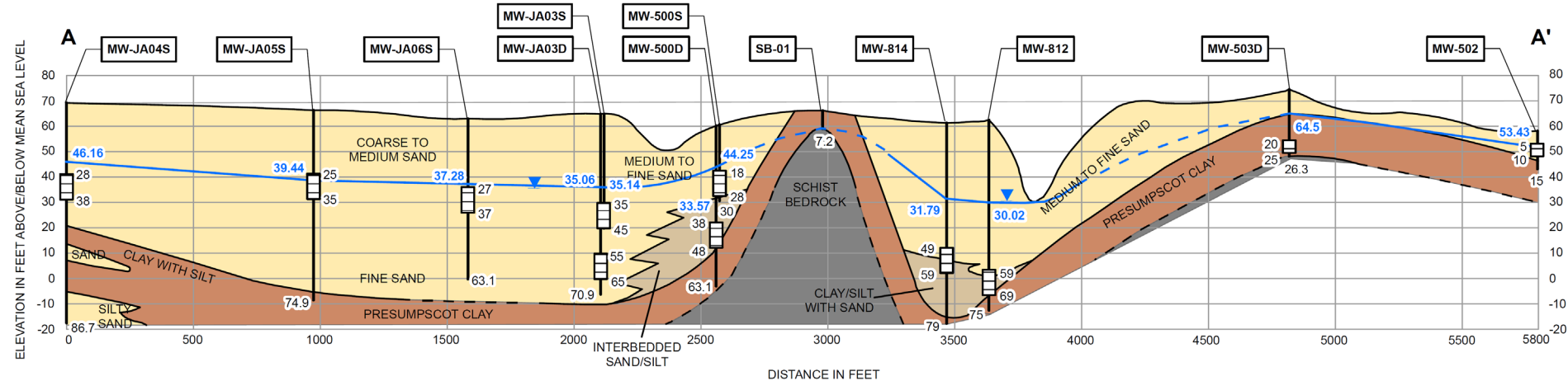
# Recent Site Activity Updates

## Jordan Avenue Wellfield Investigation



West

East









# ***Recent Site Activity Updates***

## ***Jordan Avenue Wellfield Investigation***



### **Investigation Results Summary**

- **Groundwater Sampling:** Highest PFAS concentrations at well cluster JA-03S/D
- **Spring Sampling:** Highest PFAS concentrations north of JA-03S/D well cluster
- **Surface Water Sampling:** Local stream flowing through wellfield had low PFAS concentrations; no PFAS detected in Androscoggin River samples



# ***Recent Site Activity Updates***

## ***Jordan Avenue Wellfield Investigation***



- **Following the JA Wellfield investigation, an Engineering Evaluation/Cost Analysis (EE/CA) was performed to evaluate remedial options for treating municipal wellfield water. Removal Action alternatives considered included:**
  - No action
  - Treatment via granular activated carbon (GAC)
  - Treatment using single-use ion exchange (IX) resin
  - Treatment using both GAC and resin
- **All alternatives (other than no action) would also include supporting BTWD's current PFAS mitigation efforts until the selected remedy is in place**



# ***Recent Site Activity Updates***

## ***Jordan Avenue Wellfield Investigation***



- **The EE/CA report was released for public review and comment in November 2022**
  - Treatment using both GAC and resin was the recommended removal action alternative for implementation
- **A Non-Time-Critical Removal Action Memorandum is under development documenting the final Removal Action alternative selection**
  - Anticipate a summer 2023 release
- **The Navy is currently negotiating with BTWD for an Environmental Services Cooperative Agreement (ESCA) to fund construction of a new treatment plant.**



# ***Recent Site Activity Updates***

## ***PFAS Remedial Investigation***



- **Purpose of the PFAS RI is to update and refine the delineation of PFAS impacts at the former NAS**
  - **Areas of focus include:**
    - Northern Base Area
    - Eastern Flightline Area
    - Eastern Plume and Southeastern Sites
- **Media of focus include groundwater/pore water, surface water, sediment, storm drains, soils, and biota (finfish and shellfish)**
  - Groundwater/pore water: Delineation of lateral/vertical PFAS distributions, confirming high concentration areas
  - Surface water/sediment/storm drains – migration pathways
  - Soils: Residual sources - targeting potential PFAS release areas
  - Biota: To evaluate human health risks from potential consumption



# ***Recent Site Activity Updates***

## ***PFAS Remedial Investigation***



- **Final PFAS RI UFP-SAP submitted in July 2022**
- **HHRA Work Plan**
  - Stakeholder comments received late April 2023; responses to comments are being prepared - anticipated late May 2023
- **Draft Biota (shellfish and finfish) Sampling SAP Addendum**
  - MEDEP and EPA comments received April 2023; responses to comments and Draft Final document are being prepared - anticipated late May 2023
  - Biota sampling to occur in Summer 2023



# ***Recent Site Activity Updates***

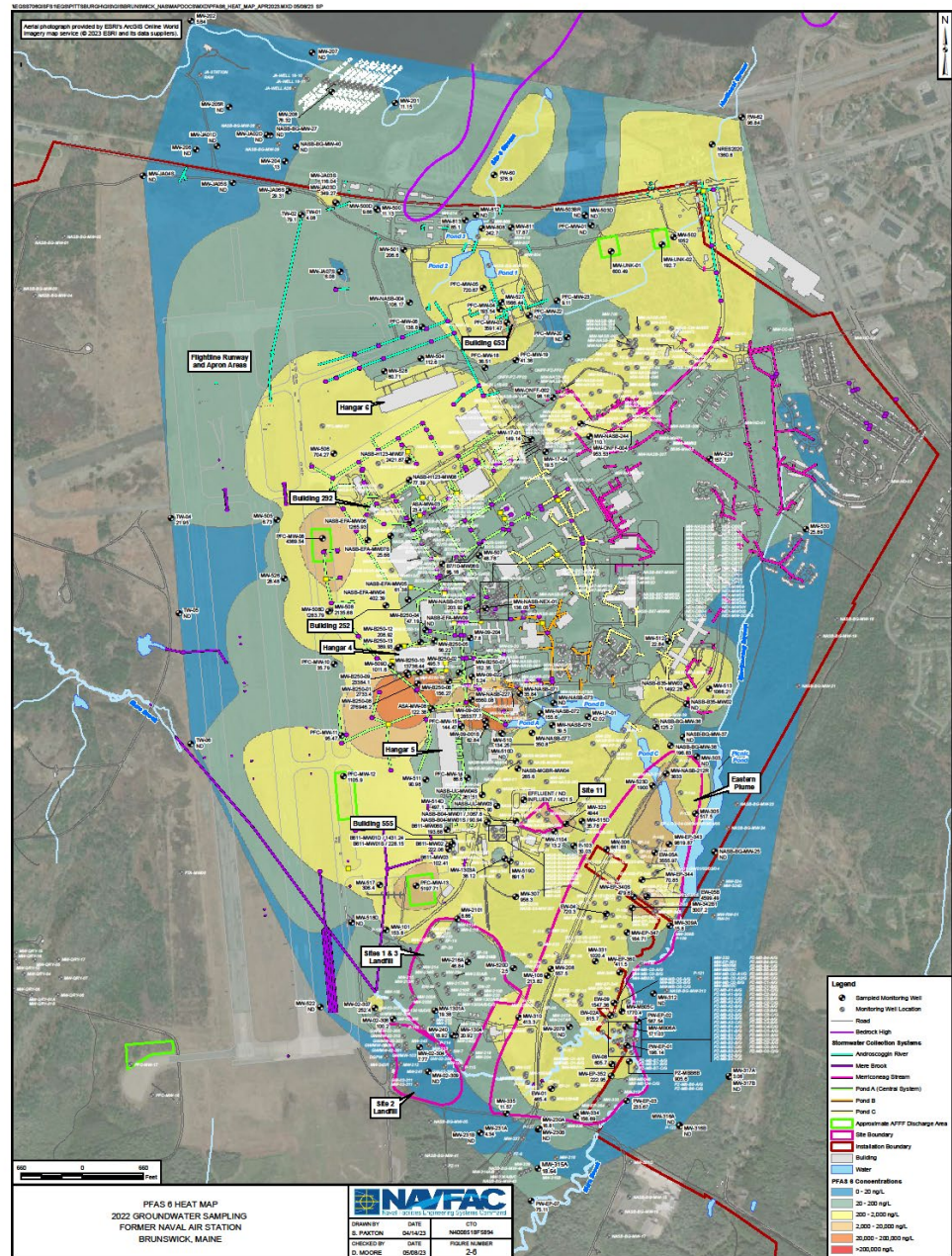
## ***PFAS Remedial Investigation***



- **PFAS RI Fieldwork and Sampling started in late August 2022**
  - Some initial Northern Area work was completed as part of the Jordan Avenue wellfield investigation in Spring 2022
  - RI activities consisted of new well installation, soil, porewater, surface water, sediment, stormwater, and groundwater sampling
  - Sitewide groundwater level measurements were collected in April 2023
- **RI analytical data evaluation - 2023**
  - Data is currently being evaluated and tables and figures generated for the RI report and data gap analysis. A technical meeting to review the data with stakeholders held May 17.
  - Soil samples are proposed to be collected from two AFFF discharge areas along Allagash Drive to address a data gap recently identified
- **RI Report anticipated in Fall 2023**
  - May be delayed if supplemental data gap field work is identified/performed.



# PFAS6 Heat Map





2022 GROUNDWATER SAMPLING  
TOTAL PFAS HEAT MAP  
FORMER NAVAL AIR STATION  
BRUNSWICK, MAINE

DATE	DATE	DATE
10/10/22	10/10/22	10/10/22
10/10/22	10/10/22	10/10/22
10/10/22	10/10/22	10/10/22



# ***Recent Site Activity Updates***

## ***New PFAS Extraction Wells***



### **Extraction Well Installation/Rehabilitation**

- **Work Plan for the installation of additional extraction well locations (PFAS focus) within the Eastern Plume and near Hangar 5 (Eastern Flightline Area) and restarting pre-existing EW-05A – submitted October 2022**
  - **Piezometers to be used for water level measurements near EW-11 and EW-05A were installed during the PFAS RI in Fall 2022.**
  - **EW-05A was rehabilitated and re-developed in November 2022. The well is in good condition to be used as an extraction well.**
  - **Installation and development of EW-10 and EW-11 within the Lower Sand unit completed in January 2023.**



# ***Recent Site Activity Updates***

## *New PFAS Extraction Wells*





# ***Recent Site Activity Updates***

## ***New Extraction Wells***



- **Extraction Well Testing**

- Well performance testing (step-drawdown tests, 24-hour pumping tests, and sampling) was completed during the weeks of May 1 and May 8, 2023.
- Pumped water was treated at the GWETS.
- Pumping tests results will be evaluated for future extraction well system modifications.

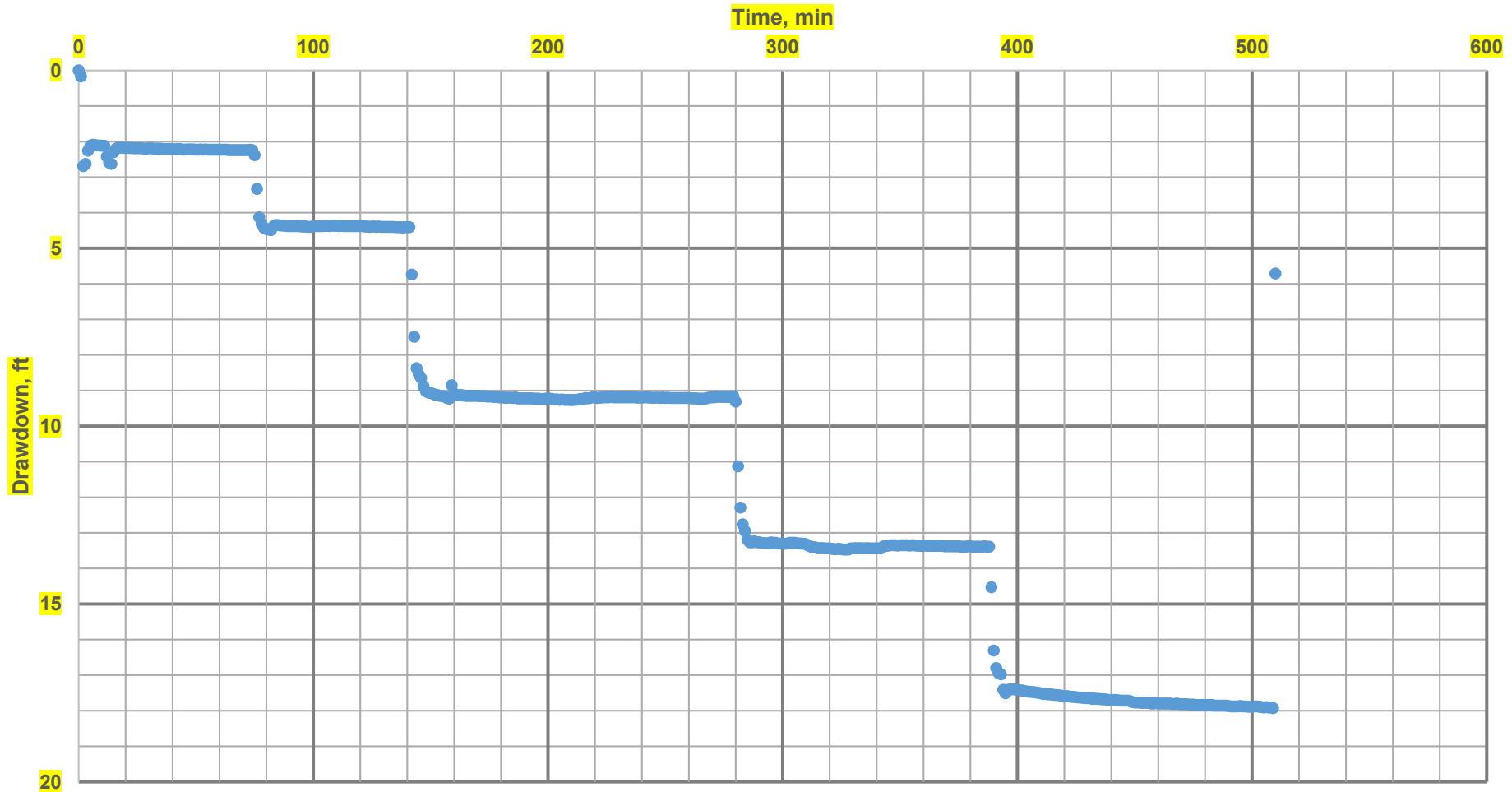


# Recent Site Activity Updates

## New Extraction Wells



EW11 Step-Drawdown Test





# ***Recent Site Activity Updates***

## ***Hangar 4 AFFF Status/Path Forward***



- **AFFF system in place and active**
- **Necessary for intended use of the facility as Hangar**
- **Room is designed as “Secondary Containment”**
- **Navy Owner, MRRA Operator under LIFO**
- **Subject to DoD policy to remove all PFAS AFFF by October 2024 if Navy owned**
- **PFOS AFFF**





# Recent Site Activity Updates

## Recent Work at Sites 1/3, 8, and 18



### Sites 1/3

- Purpose – Identify whether related radioactivity previously identified continues to be present in soils at Sites 1/3.
- Domestic waste and hazardous materials were disposed of at these sites.
- Gamma walkover surveys were performed at the landfill outfalls and surface soil samples were collected.
- Results of the radiological assessment indicate that concentrations of radionuclides of concern exceed release criteria.
- Recommend continued monitoring at each of the outfalls.





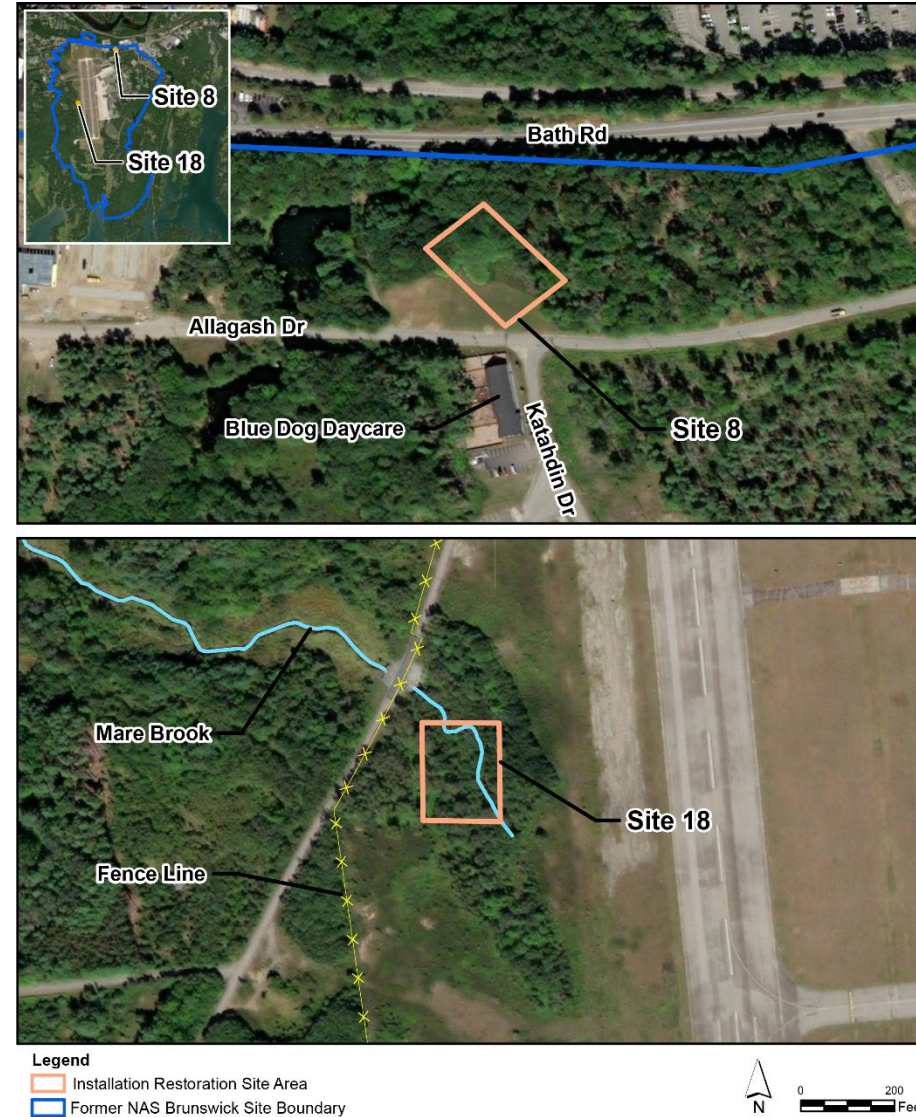
# Recent Site Activity Updates

## Recent Work at Sites 1/3, 8, and 18



### Sites 8 and 18

- Purpose of study was to document radiological conditions at Sites 8 and 18.
- Sites were suspected to contain general radioactive material.
- Radiation surveys, test pitting, and soil sampling was performed.
- No exceedances of the investigation levels during the radiological surveys, and concentrations of radionuclides of concern in all subsurface soil sample results were below the release criteria.
- Recommended unrestricted radiological release of the site.





# ***Upcoming Work***

## ***PFAS RI Path Forward***



- **Finalization of the HHRA work plan and biota sampling SAP Addendum**
  - Spring/Summer 2023
- **Biota sampling – Summer 2023**
- **RI data evaluation/RI Report – Fall 2023**
- **Feasibility Study – 2nd Quarter 2024**
- **Proposed Plan/ROD – Summer/Fall 2024**
- **Should Phase 2 RI fieldwork be needed, overall schedule may be extended 6 to 9 months or so**



# ***Upcoming Work***

## ***Jordan Avenue Wellfield***



- **Non-Time-Critical Removal Action Memorandum – Summer 2023**
- **Negotiation of an ESCA between the Navy and BTWD (underway, anticipate completion Summer 2023)**
- **Implementation of the selected Removal Action Alternative – Fall 2023/early 2024**
- **Current BTWD PFAS mitigation activities will be supported by the Navy until the selected Removal Action is implemented**



# ***Upcoming Work***

## ***Long-Term Monitoring Program***



- **LTM SAP was revised in November 2022**
  - Included evaluation of sampling locations, frequency of sampling, analytes
  - Included updates for contractors (laboratory)
  - Consolidated reporting for all sites to one annual report
- **Upcoming:**
  - Internal Draft Multi-Site LTM Report for 2022 will be submitted to Navy in May
  - Spring LTM sampling at the GWETS will occur in May
- **ONFF/NEX: 2022 Tech Memos were submitted as Draft on March 30, 2023**



# Upcoming Work

## Long-Term Monitoring Program – Site Locations



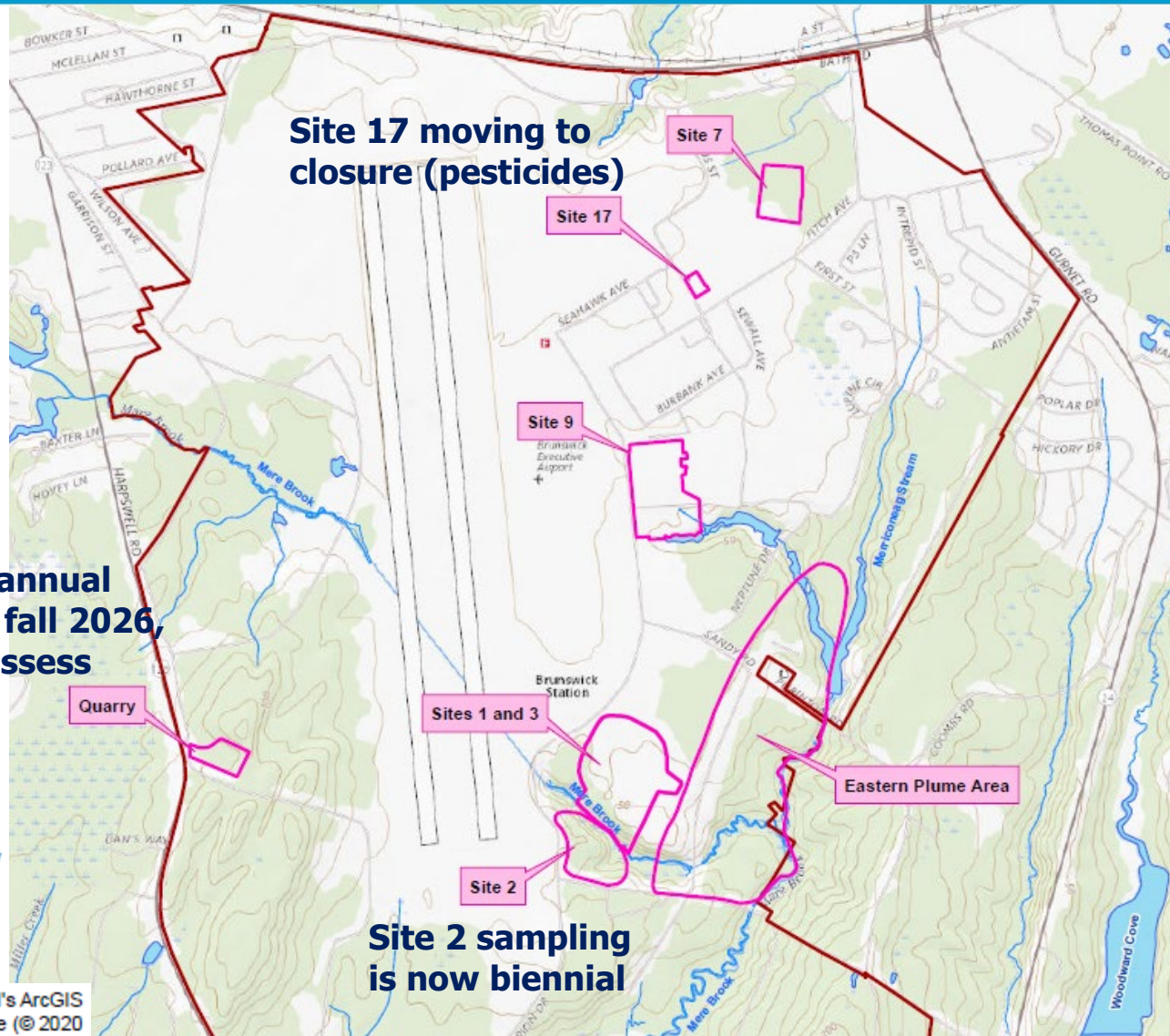
**Quarry, annual  
through fall 2026,  
then reassess**

**Site 17 moving to  
closure (pesticides)**

**Site 2 sampling  
is now biennial**

### Legend

- Stream
- Former Base Boundary
- Waterbody
- Site Boundary





# ***Upcoming Work***

## ***GWETS Activities***



- **Annual GWETS report submitted in January 2023**
- **Monthly PFAS sampling of the GWETS continuing**
  - **Influent**
  - **Mid-carbon**
  - **Effluent**
- **The carbon was changed in mid-April 2023**



# ***Upcoming Work***

## ***Land Use Control Compliance Activities***



### **2022 Landowner Compliance Status**

- **In November 2022, approximately 350 certification forms were sent to property owners to acknowledge and adhere to existing conditions associated with the property (i.e., land use controls [LUCs]).**
- **To date, 230 signed certification forms have been received.**
- **Most of the remaining forms are associated with condos or housing authority properties and were later deemed the responsibility of the applicable owner's association. Future compliance forms will be sent to the owner's associations, not individual owners.**



# ***Upcoming Work***

## ***Land Use Control Compliance Activities***



### **2023 LUC Open House**

- **A LUC Open House is tentatively planned for September 2023. During the Open House, the Navy will be available to discuss:**
  - The construction permit/approval process
  - Scheduling construction reviews
  - PFAS groundwater concerns and how they may affect construction
  - Periods and protocols for use of the GWETS to treat PFAS-impacted groundwater
  - Property owner questions and concerns
- **Following the LUC Open House, 2023 certification forms will be mailed.**
- **Additional communication and notifications will include:**
  - Mailing of postcards prior to the Open House to notify property owners of the planned date as well as the upcoming certification form process.
  - MRRA will communicate directly with property owners through their own communication pathways.



# Questions



**Questions?**

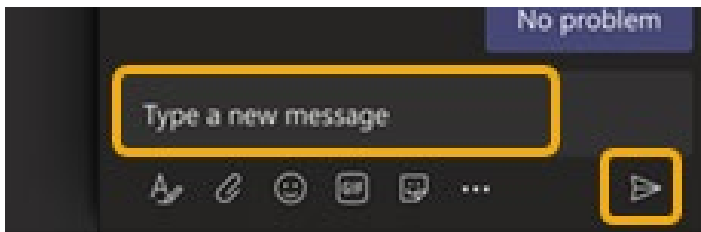


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**3) Phone-only attendees can dial \*6 to raise their hand and have the opportunity to ask a question.**



# ***Thank You!***



**Thank you for attending today's meeting!**

**Next RAB Meeting: Tentatively planned for  
Wednesday, September 20, 2023, at 2:00 pm  
Location/format to be determined**



# Acronyms



<b>AFFF</b>	<b>Aqueous film-forming foam</b>
<b>BACSE</b>	<b>Brunswick Area Citizens for a Safe Environment</b>
<b>BRAC</b>	<b>Base Realignment and Closure</b>
<b>BTWD</b>	<b>Brunswick Topsham Water District</b>
<b>CERCLA</b>	<b>Comprehensive Environmental Response, Compensation, and Liability Act</b>
<b>CIP</b>	<b>Community Involvement Plan</b>
<b>DoD</b>	<b>Department of Defense</b>
<b>EDC</b>	<b>Economic Development Conveyance</b>
<b>EE/CA</b>	<b>Engineering Evaluation/Cost Analysis</b>
<b>EPA</b>	<b>United States Environmental Protection Agency</b>
<b>ESCA</b>	<b>Environmental Services Cooperative Agreement</b>
<b>FOST</b>	<b>Finding of Suitability to Transfer</b>
<b>GAC</b>	<b>Granular activated carbon</b>
<b>gpm</b>	<b>Gallons per minute</b>
<b>GWETS</b>	<b>Groundwater extraction and treatment system</b>
<b>HHRA</b>	<b>Human health risk assessment</b>
<b>IRP</b>	<b>Installation Restoration Program</b>
<b>IX</b>	<b>Ion exchange</b>



# Acronyms (cont'd)



<b>LIFOC</b>	<b>Lease in Furtherance of Conveyance</b>
<b>LTM</b>	<b>Long-term monitoring</b>
<b>LUC</b>	<b>Land use control</b>
<b>MEDEP</b>	<b>Maine Department of Environmental Protection</b>
<b>MRRA</b>	<b>Midcoast Regional Redevelopment Authority</b>
<b>NAS</b>	<b>Naval Air Station</b>
<b>NEX</b>	<b>Naval Exchange</b>
<b>NOSSA</b>	<b>Naval Ordnance Safety &amp; Security Activity</b>
<b>ONFF</b>	<b>Old Navy Fuel Farm</b>
<b>PFAS</b>	<b>Poly- and perfluoroalkyl substances</b>
<b>PFOA</b>	<b>Perfluorooctanoic acid</b>
<b>PFOS</b>	<b>Perfluorooctanesulfonic acid</b>
<b>RAB</b>	<b>Restoration Advisory Board</b>
<b>RI</b>	<b>Remedial Investigation</b>
<b>ROD</b>	<b>Record of Decision</b>
<b>SAP</b>	<b>Sampling and Analysis Plan</b>
<b>UFP</b>	<b>Uniform Federal Policy</b>



# Base Map with CERCLA Sites

