

# Welcome to the *RAB Meeting*



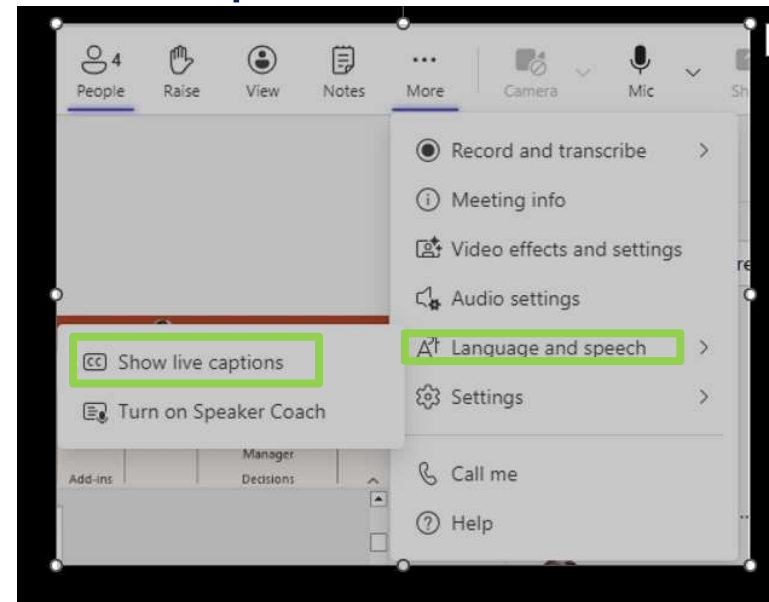
Thank you for joining the  
Restoration Advisory Board (RAB) Meeting for  
***Naval Air Station (NAS) Brunswick***

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

For captions, click More ●●● on the  
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# **Restoration Advisory Board Meeting (RAB) Former Naval Air Station Brunswick**

**October 2, 2024**

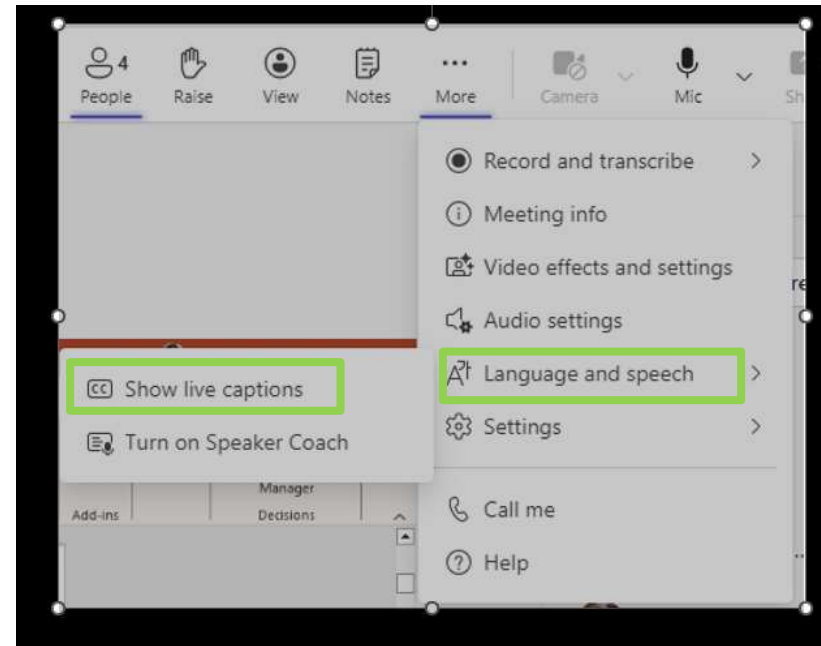


# Teams Tools



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- **Screen Layout**

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

## ***Virtual Only Meeting Information***



- This is a virtual meeting only.
- The virtual meeting will show the presentations.
- Attendee microphones will remain muted except when recognized for questions.
- Questions or comments may be entered in the chat as they arise; they will be addressed during Question & Answer (Q&A) sessions.
- The meeting is being recorded. The recording will not be made public and will be used only for preparation of meeting minutes.
- Webinar sign-in names will be used for the minutes.

# ***RAB Ground Rules and Information***



## **RAB Meeting Ground Rules**

- One speaker at a time
- Question and answer periods will be provided throughout the presentations
- Please turn cell phones off or to silent during the meeting

## **RAB Information**

- Public notice:
  - Published in The Times Record September 17 and 24
  - Published in The Northern Forecaster September 19 and 26
  - Published in Midcoast Go September 20 and 27
  - Posted on the Navy website September 6
  - Provided to the mailing list September 6
  - Newspaper digital ads appeared daily beginning on September 10
  - Cable ads appeared on TV3 September 23 through today (October 2)

# Meeting Agenda



## Introductions

### Major Site Activity Updates

- Community Outreach
- CERCLA Process
- Historical & Ongoing Navy PFAS Efforts
  - Remedial Investigation
  - Jordan Avenue Wellfield
  - Hangar 4/AFFF
- LUC Compliance
- Redevelopment Activities
- Picnic Pond Remedial Action

### Other Activities

- Five Year Review
- CERCLA & Petroleum Long-Term Monitoring
- GWETS/Eastern Plume Extraction Wells
- Sites 1 & 3 Radiological Survey
- FOSTs

### Open Discussion, Questions, and Wrap-Up

# *Major Site Activity Updates*

## *Community Outreach*



## **Restoration Advisory Board (RAB)**

- **What is a RAB?** A stakeholder group that meets on a regular basis to discuss environmental restoration but where DoD oversees the restoration process.
- **Who can participate?** Comprised of individuals from the community who are affected by the restoration activities and live/work in close proximity.
- **How often does the Brunswick RAB meet?** Triannual in January, May and September

# Members



## **RAB Co-Chairs:**

- Ms. Suzanne L. Johnson, Esq.
- Ms. W. Rachelle Knight, BRAC Environmental Coordinator, Navy

## **RAB Members:**

- Mr. Derek Pinkham, Remedial Project Manager, Navy
- Mr. Michael Daly, Remedial Project Manager, United States Environmental Protection Agency (USEPA)
- 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
- Ms. Susan Schow, 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



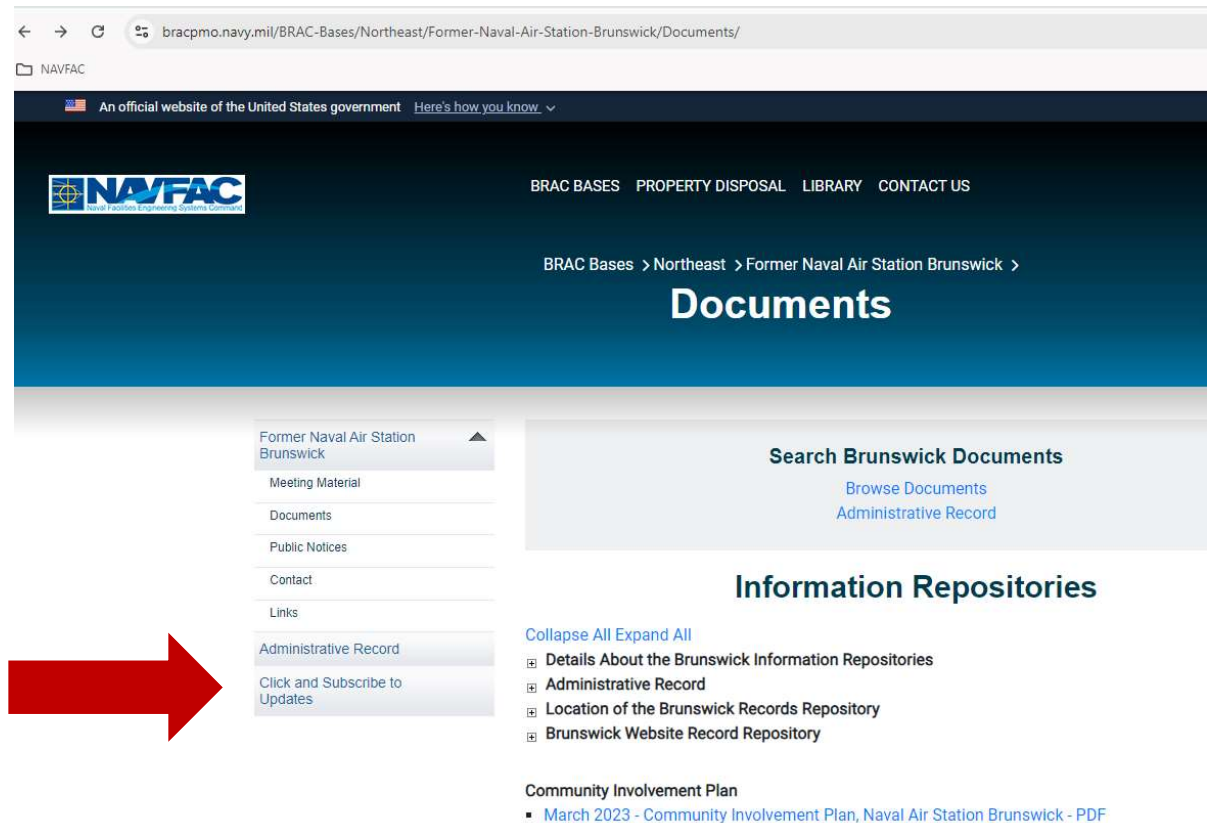
# Major Site Activity Updates

## Community Outreach



### Stay Connected

- Register for updates via GovDelivery
- Meetings held in the evening to promote increased participation
- Public notices
- Emailed to subscribers
- Posted on Navy's website
- Published in The Times Record, The Northern Forecaster, and Midcoast Go.



# Major Site Activity Updates

## Community Outreach, continued



### RAB Member Tour

- Tour conducted May 2024



### Former Naval Air Station Brunswick Restoration Advisory Board Member's Site Tour 21 May 2024

Purpose: The tour was requested by Restoration Advisory Board (RAB) members to provide areal context to facilitate review of reports.

#### 1. Community Room at 8 Venture Avenue

RAB and Land Use Control (LUC) Open House meeting space.

#### 2. Naval Exchange (NEX) Service Station

Former automobile service and gasoline retail store where leaks associated with underground storage tanks and associated piping occurred. Groundwater monitoring to assess the extent of residual petroleum impacts continues.

#### 3. Hangar 4/Building 250

Currently under lease to the Midcoast Regional Redevelopment Authority and also houses a Aqueous Film Forming Foam (AFFF) fire suppression system. The hangar is being investigated as part of the per- and polyfluoroalkyl substances (PFAS) remedial investigation.

#### 4. Site 9

Neptune Drive disposal site which included a former incinerator and associated ash landfill/dump and solvent burning areas. The remedy includes long-term monitoring for natural attenuation and land use controls prevent direct exposure.

#### 5. Groundwater Extraction Treatment System (GWETS)

The GWETS draws groundwater from extraction wells in the eastern plume area for treatment of volatile organic compounds. The system provide tangential benefit of treating PFAS.

#### 6. Picnic Pond (also known as Operable Unit 12)

Stormwater retention pond system including Ponds A, B and C constructed with a network of ditches, storm drains and impoundment ponds used to channel and control stormwater drainage at the former installation. A removal action is underway to address petroleum contaminated sediment.

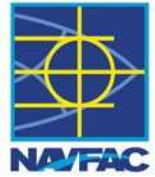
#### 7. Sites 1 and 3

Site 1 is the former Orion Street landfill and Site 3 is the former hazardous waste burial area. The GWETS was used to lower the water table below the waste. A slurry wall was constructed as a subsurface barrier to prevent groundwater from flowing through subsurface waste. Long-term monitoring and land use control inspections continue.

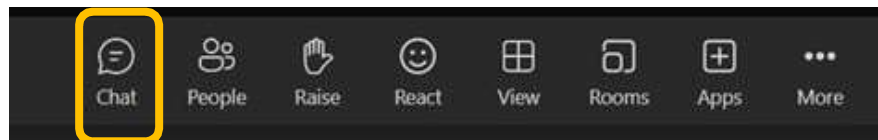
#### Site 2

Former borrow pit and inactive landfill. Due to similar site conditions and proximity to Sites 1 and 3, the same remedy implemented at Sites 1 and 3 is implemented at Site 2.

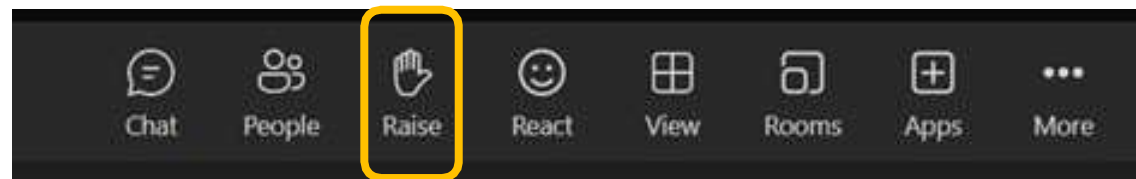
# Q&A



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# Major Site Activity Updates

## CERCLA Process



## What is CERCLA?

- The Superfund Amendments and Reauthorization Act (SARA, 1986) amended the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, 1980), known as *Superfund*.
- The Superfund program is administered by the USEPA in cooperation with State and other local government entities allowing the USEPA to clean waste sites and work with responsible parties to perform cleanup or to reimburse the government for USEPA-lead cleanups.
- The goal of Superfund is to:
  - Protect human health and the environment by providing waste site cleanup;
  - Enforce responsible parties to pay for the work performed at Superfund sites; and
  - Involve communities in the Superfund process.



# Major Site Activity Updates

## CERCLA Process, continued



## Community Participation – TAG & TAPP

Technical Assistance Grants (TAG) and Technical Assistance for Public Participation (TAPP) are two separate programs that provide communities with technical assistance to interpret scientific or engineering issues related to environmental restoration.



# Major Site Activity Updates

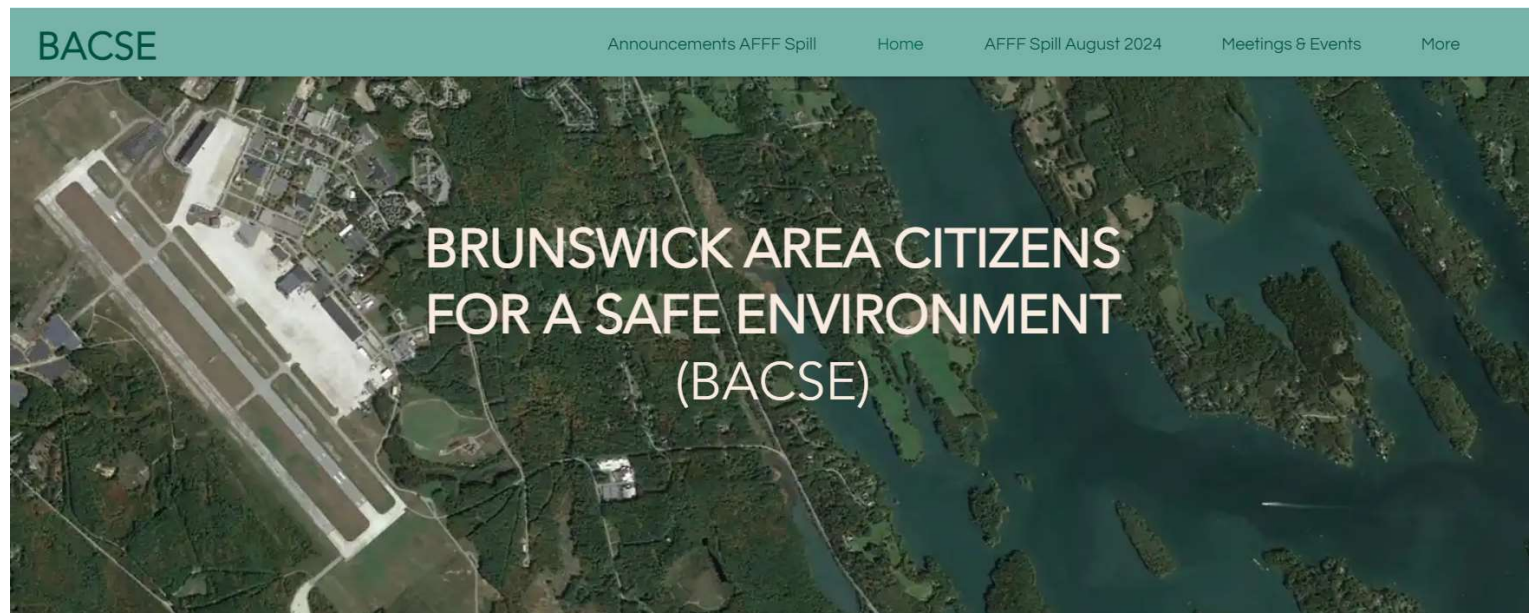
## CERCLA Process, continued



## Community Participation

- Brunswick Area Citizens for a Safe Environment (BACSE) has been a TAG recipient since 1995. Information for BACSE can be found on their website:

[www.bacsemaine.org](http://www.bacsemaine.org)

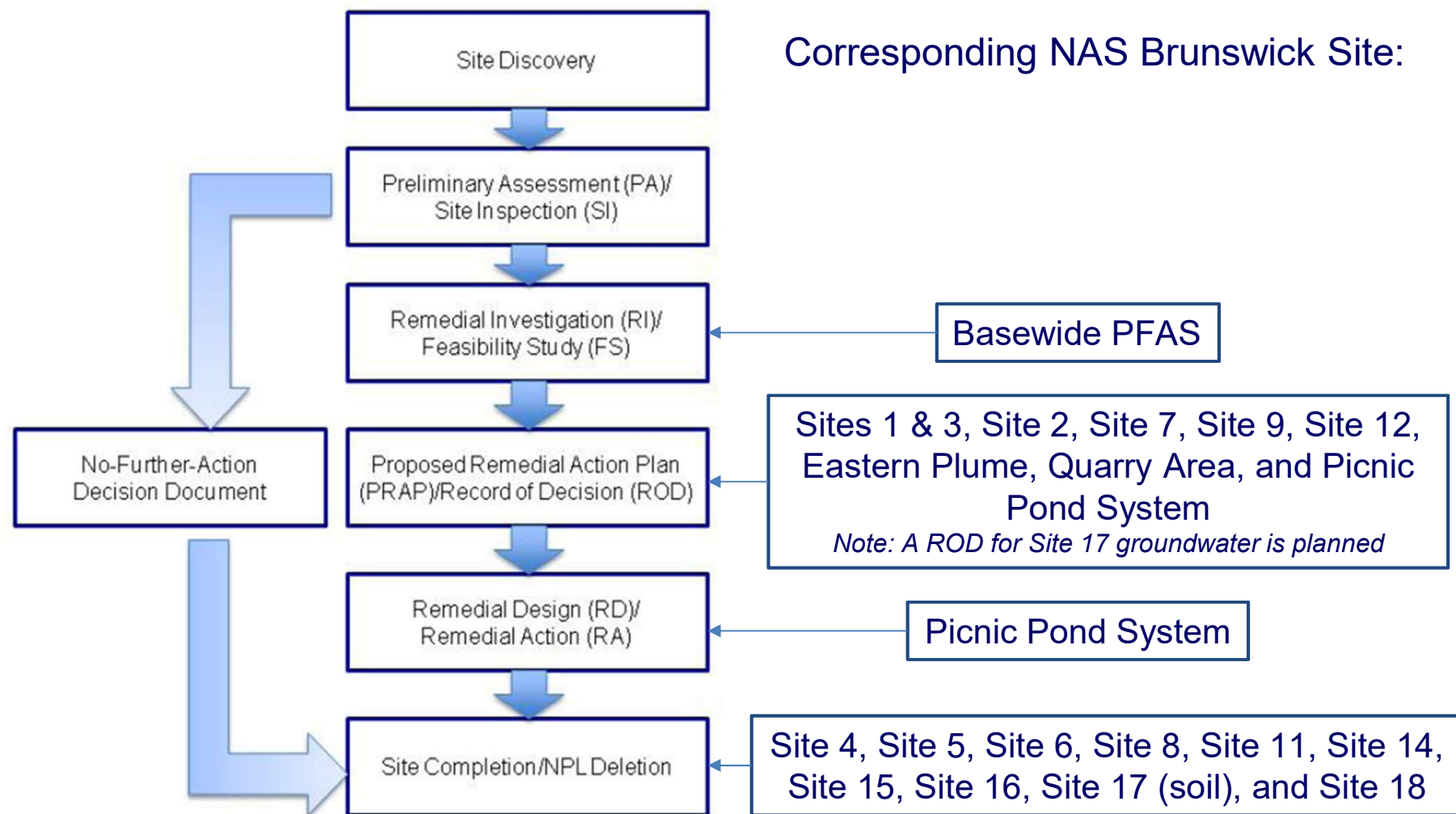


# Major Site Activity Updates

## CERCLA Process, continued



### Snapshot of the CERCLA Process



# ***Major Site Activity Updates***

## ***CERCLA Process, continued***



### **Site Discovery**

- A Superfund site is “discovered” when the USEPA has been notified of a release or potential release into the environment.
- Notification is often reported by local, state, tribal and/or other federal agencies, or citizens.
- Once USEPA has been notified, the site will begin the preliminary assessment process.



# Major Site Activity Updates

## CERCLA Process, continued



## Preliminary Assessment/Site Inspection (PA/SI)

- The PA includes:
  - Reviewing historical or other information to determine site conditions,
  - Conducting site visits and interviews,
  - Evaluating if the site poses a threat to human health and the environment, and
  - Determines if further investigation is needed.
- The SI includes:
  - Limited collection of site media (e.g., groundwater, soil) to determine what hazardous substances may be present, and
  - Determine if hazardous substances are being released to the environment and if they are a threat to human health.
- If the results of the data are **below** regulatory limits, no further action is planned.
- If the results of the data are **above** regulatory limits, the site moves to the Remedial Investigation/Feasibility Study (RI/FS) Phase.

# ***Major Site Activity Updates***

## ***CERCLA Process, continued***



## **Remedial Investigation/Feasibility Study (RI/FS)**

- The RI includes:
  - A robust sampling and analysis program to determine the extent of the contamination. That is, how deep and wide is the contamination.
  - Additional data is collected and evaluated to determine if results are above or below regulatory limits.
  - Risk assessments will be conducted to determine if there are risk to human health or the environment (plant, animal, etc.).
- The FS includes:
  - Provides multiple cleanup options to remove risks to human health or the environment.
    - Each cleanup option is evaluated to determine the best remedy (how protective, short-term and long-term effectiveness, feasibility, and cost).
  - Recommending the best remedy based on the evaluation.
  - A public hearing to explain the cleanup options and proposed remedy to the community and to hear community feedback.

# *Major Site Activity Updates*

## *CERCLA Process, continued*



## **Decision Documents (DD)**

- Following the FS recommended remedy, “Decision Documents” are created to explain how the remedy was selected.
  - Proposed Remedial Action Plan (Proposed Plan [PP]) includes:
    - A summary of site history, investigations, chemicals of concern, site risks, explanation of cleanup options evaluated, and the recommended remedy.
    - Form and date for written comment period, and
    - Date of public hearing which provides an opportunity for public to provide verbal comments on the recommended remedy.
- Following the public hearing, the remedy is formally selected.
  - Record of Decision (ROD) includes:
    - Responses to written and verbal comments provided by the community,
    - Documents the final selected remedy, the cleanup steps to be conducted, and how the remedy is protective of human health and the environment, and
    - Land Use Controls (LUCs), if needed, to protect the community.

## *Major Site Activity Updates*

### *CERCLA Process, continued*



## **Remedial Design/Remedial Action (RD/RA)**

Following the ROD, the remedy is designed and implemented.

- The RD includes:
  - Develop full-scale designs and plans for the selected remedy;
  - Establishing the LUC objectives; and
  - Identifying the actionable steps to meet the RD objectives.
- The RA includes:
  - Implementing the remedy per the designs discussed in the RD, and
  - Implementing LUC activities/actionable steps.

# ***Major Site Activity Updates***

## ***CERCLA Process, continued***



## **New Information and Regulatory Changes**

Changes may be necessary to an implemented remedy described in the ROD and must be documented.

- Explanation of Significant Differences (ESD) includes:
  - Determining how significant the change is;
  - Describing the changes to the original remedy;
  - Explaining how the change will still be protective of human health and the environment, and
  - Notifying the community of the of the ESD and availability of the document.

## ***Major Site Activity Updates***

### ***CERCLA Process, continued***



## **Site Completion/National Priority List (NPL) Deletion**

- Site completion occurs when No Further Action was determined during the PA/SI or ROD phase.
- USEPA may delete the site from the NPL if all cleanup goals have been met and no further cleanup actions are required to protect human health or the environment.
  - A public comment period will allow community to provide written comments on the proposed site deletion.
  - Following public comment period, USEPA will provide responses to comments received.
  - After comments are addressed, the site can be deleted from the NPL.

# ***Major Site Activity Updates***

## ***CERCLA Process, continued***



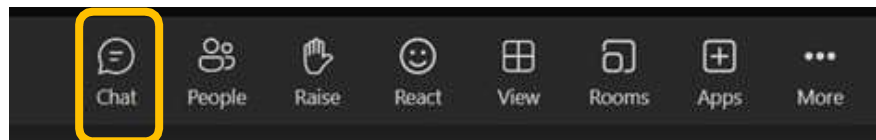
## **Long-Term Remedy Maintenance**

- For sites where contamination is left in place, the remedy needs to be operated and maintained to ensure protectiveness and reviewed every five years.
- Long-Term Maintenance includes:
  - Maintaining LUCs,
  - Conducting long-term monitoring (LTM), and
  - Optimizing existing remedy.
- Five-Year Review (FYR) includes:
  - Evaluating remedy performance,
  - Verifying that the remedy remains protective of human health and the environment, and
  - Recommending actions to achieve protectiveness.

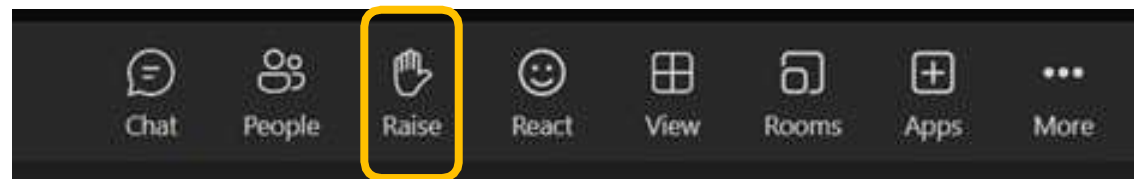
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# ***Major Site Activity Updates***

## ***Historical & Ongoing Navy PFAS Efforts***

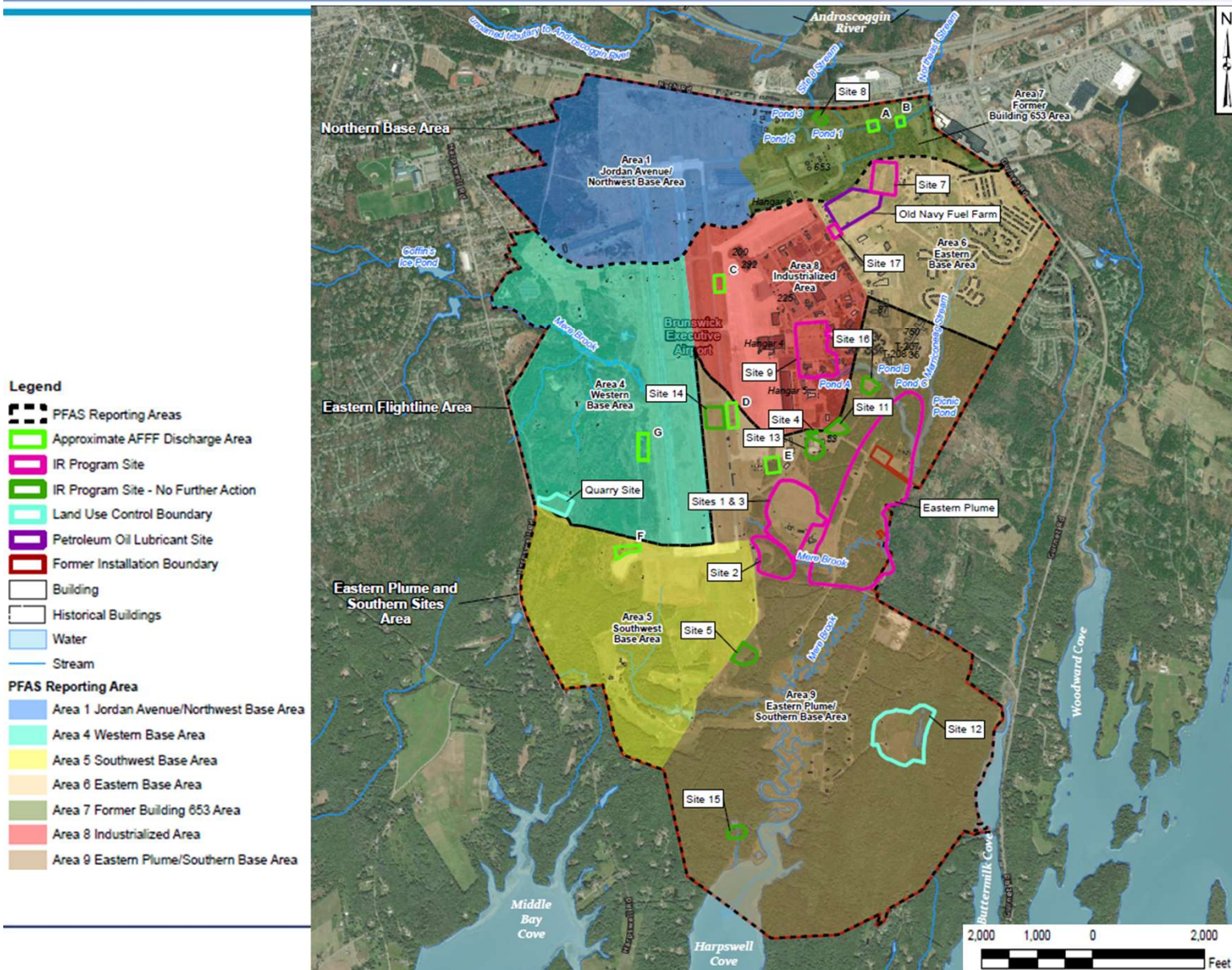


## **Historical PFAS Investigations**

- Between 2010 to 2022, the Navy has completed over 40 PFAS investigations at former NAS Brunswick.
- Historical investigations have included the collection of more than 1,000 samples for PFAS; environmental media sampled include soil, groundwater, private wells, surface water, sediment, stormwater, porewater, seeps, and springs.
- The results of the investigations completed between 2010 and 2019 were presented in a *PFAS Investigation Summary Report* prepared by Resolution Consultants in 2020.
- The *PFAS Investigation Summary Report* recommended an RI which is currently underway.

# Major Site Activity Updates

## Historical & Ongoing Navy PFAS Efforts, continued



# Major Site Activity Updates

## Historical & Ongoing Navy PFAS Efforts, continued



| Date                   | PFAS Investigation                                                                                                      | Reference         |
|------------------------|-------------------------------------------------------------------------------------------------------------------------|-------------------|
| <b>2010</b>            |                                                                                                                         |                   |
| October 2010           | West Fire Training Area Investigation                                                                                   | Tetra Tech, 2014a |
| <b>2012</b>            |                                                                                                                         |                   |
| August 2012            | Eastern Plume and Site 11 Investigation (Round 1)                                                                       | Tetra Tech, 2014b |
| November 2012          | Maine Department of Environmental Protection (MEDEP) Groundwater Extraction and Treatment System (GWETS) Split Sampling | Resolution, 2015b |
| November/December 2012 | Buildings 611 and 555 Investigation                                                                                     | Tetra Tech, 2014c |
| <b>2013</b>            |                                                                                                                         |                   |
| May 2013               | Eastern Plume and Site 11 Investigation (Round 2)                                                                       | Resolution, 2015b |
| <b>2014</b>            |                                                                                                                         |                   |
| November 2014          | Basewide Perfluorinated Compound (PFC) Sampling                                                                         | Resolution, 2021  |
| November 2014          | MEDEP Basewide PFC Split Sampling                                                                                       | Resolution, 2015b |
| November/December 2014 | Eastern Flightline Investigation                                                                                        | Tetra Tech, 2015  |
| <b>2015</b>            |                                                                                                                         |                   |
| February 2015          | Brunswick and Topsham Water District Unregulated Contaminant Monitoring Rule 3 (UCMR3) Sampling (Round 1)               | Resolution, 2015b |
| June 2015              | Paradise Spring PFC Sampling                                                                                            | Resolution, 2015b |
| August 2015            | Brunswick and Topsham Water District UCMR3 Sampling (Round 2)                                                           | Resolution, 2015b |
| November 2015          | Basewide PFC Sampling                                                                                                   | Resolution, 2021  |
| November 2015          | MEDEP Basewide PFC Split Sampling                                                                                       | Resolution, 2015b |
| November 2015          | August 2016 GWETS Carbon Change-Out PFC Monitoring                                                                      | Resolution, 2015b |
| June and November 2015 | Picnic Pond Investigation                                                                                               | Resolution, 2015a |
| November 2015          | Basewide PFAS Investigation                                                                                             | Resolution, 2016  |
| November 2015          | MEDEP Basewide PFAS Split Sampling                                                                                      | Resolution, 2015b |
| November 2015          | April 2019 GWETS PFAS Pilot Study                                                                                       | Resolution, 2015b |
| December 2015          | Eastern Flightline Investigation (Phase II)                                                                             | Tetra Tech, 2016  |
| <b>2016</b>            |                                                                                                                         |                   |
| April - June 2016      | Off-Base Private Well Sampling, Coombs Road                                                                             | Resolution, 2018a |
| October/November 2016  | Off-Base Private Well Sampling and Surface Water Investigation, Northern Properties                                     | Resolution, 2018a |

| Date           | PFAS Investigation                                                                     | Reference         |
|----------------|----------------------------------------------------------------------------------------|-------------------|
| <b>2017</b>    |                                                                                        |                   |
| June 2017      | Former Building 653 PFAS Investigation                                                 | Resolution, 2018b |
| October 2017   | Limited Basewide PFAS Investigation                                                    | Resolution, 2020  |
| December 2017  | Old Navy Fuel Farm (ONFF) PFAS Investigation                                           | Resolution, 2020  |
| <b>2018</b>    |                                                                                        |                   |
| January 2018   | Brunswick Landing Venture PFAS Investigation;                                          | Tetra Tech, 2018a |
| January 2018   | Site 4/Building 53 PFAS Investigation                                                  | Tetra Tech, 2018a |
| May 2018       | Basewide PFAS Investigation                                                            | Resolution, 2020  |
| May 2018       | MEDEP Basewide PFAS Split Sampling                                                     | Resolution, 2020  |
| August 2018    | Cook's Corner Connector Road PFAS Investigation;                                       | Tetra Tech, 2019a |
| August 2018    | Brunswick Landing Lot 15 PFAS Investigation (Round 1)                                  | Tetra Tech, 2018b |
| November 2018  | Brunswick Landing Lot 15 PFAS Investigation (Round 2)                                  | Tetra Tech, 2018b |
| November 2018  | Eastern Plume Extraction Well PFAS Investigation                                       | Resolution, 2020  |
| December 2018  | Site 9 PFAS Investigation                                                              | Tetra Tech, 2019c |
| December 2018  | Captains Way PFAS Investigation                                                        | Tetra Tech, 2019b |
| <b>2019</b>    |                                                                                        |                   |
| April 2019     | Wild Oats PFAS investigation                                                           | Tetra Tech, 2019f |
| April 2019     | Undocumented Orion Street Landfill PFAS Investigation                                  | Tetra Tech, 2019e |
| April 2019     | Blue Dog Day Care PFAS Investigation                                                   | Tetra Tech, 2019d |
| <b>2020</b>    |                                                                                        |                   |
| June 2020      | Storm drain sampling in the Eastern Flightline and Eastern Plume areas                 | Tetra Tech, 2021a |
| <b>2022</b>    |                                                                                        |                   |
| May 2022       | Off-base PFAS private well sampling                                                    | Tetra Tech, 2023a |
| September 2022 | Expedited investigation of PFAS in the former Northern Base Area (Jordan Avenue wells) | Tetra Tech, 2022b |



# **Major Site Activity Updates**

## *Historical & Ongoing Navy PFAS Efforts, continued*



### **PFAS RI (Summer 2022 to October 2023)**

- More than 500 samples have been collected during the RI; environmental media sampled include soil, groundwater, surface water, sediment, stormwater, porewater, seeps, springs, and biota (fish and shellfish tissue).
- Fish and shellfish tissue data were collected in the Fall of 2023 to support human health and ecological risk assessments for the PFAS RI. Samples were collected from on-base streams and off-base water bodies including an unnamed tributary to the Androscoggin River, Harpswell Cove, Woodward Cove, and Wharton Point.
- The PFAS RI Report is currently being drafted.
- PFAS RI results were briefed during the May 2024 RAB meeting, slides available on the Navy's website and shared with MEDEP, USEPA, and BACSE.

# ***Major Site Activity Updates***

## ***Historical & Ongoing Navy PFAS Efforts, continued***

















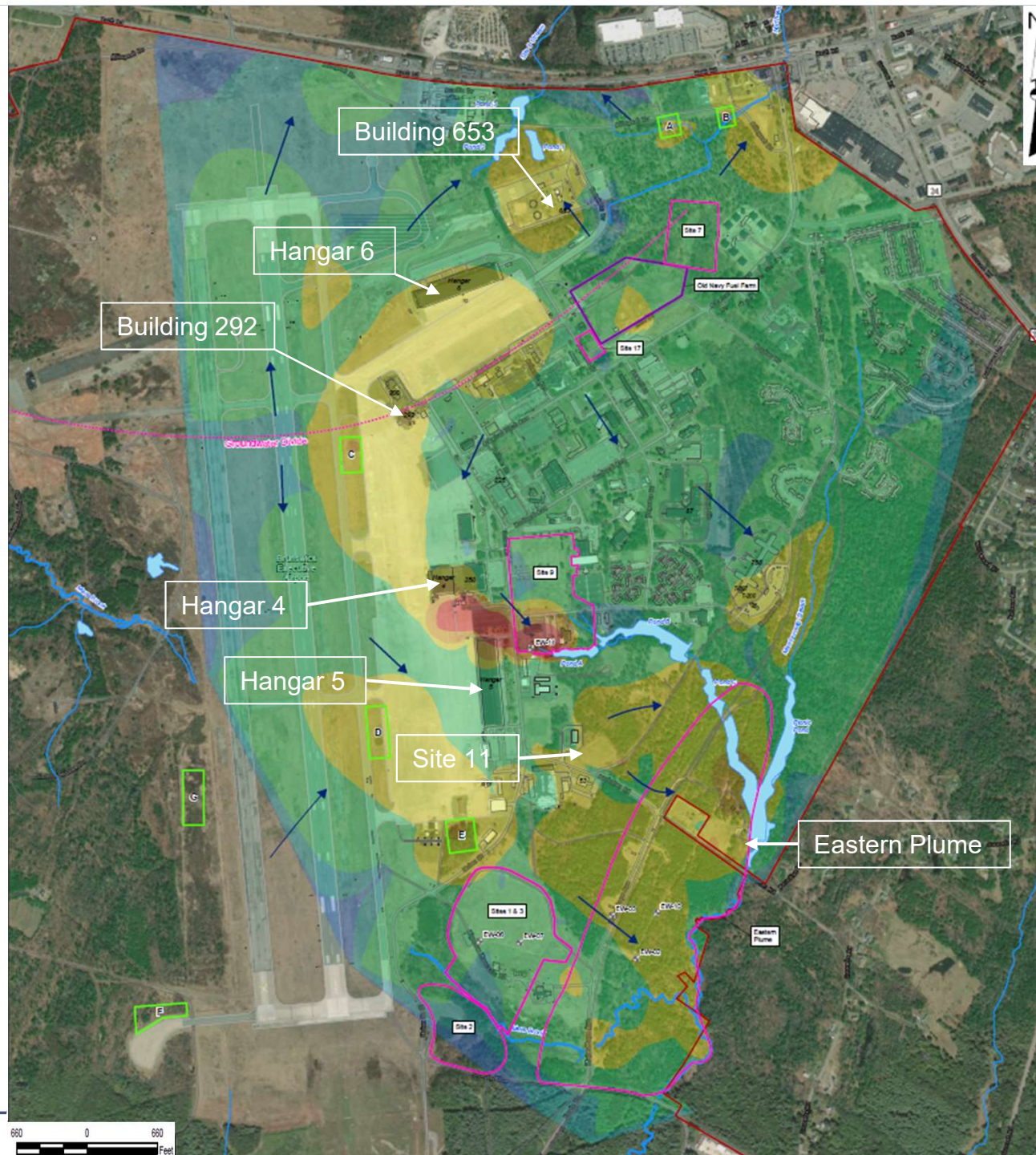
### **PFAS RI Biota Sampling**

- Navy collaborated with local and state organizations (Maine Dept. of Marine Resources, MEDEP, Towns of Harpswell and Brunswick, etc.) to develop the sampling program, and conduct the sampling.
- Navy provided the PFAS results of this sampling effort to MEDEP, who then provided the data to Maine Center for Disease Control and Prevention (Maine CDC) for consideration of potential fish consumption advisories.
  - Review of the data resulted in Maine CDC issuing fish consumption advisories for Picnic Pond, the Site 8 Stream, Merriconeag Stream, and portions of Mere Brook

# **Basewide Groundwater Concentrations Heat Map for the sum of the 8 PFAS with Project Screening Levels (PSLs)**

## **Legend**

-  Extraction Well Location
-  Groundwater Flow Direction
-  Approximate AFFF Discharge Area
-  IR Program Site
-  Petroleum Oil Lubricant Site
-  Installation Boundary
-  Building
-  Historic Buildings
- PFAS Concentrations (ng/L)
  -  0 - 4
  -  4.1 - 40
  -  40.1 - 400
  -  400.1 - 4,000
  -  4,000.1 - 40,000
  -  > 40,000.1





# ***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. Preconstruction submittals are underway and starting construction in Fall 2024.

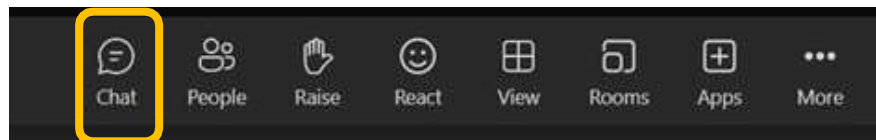
### **Hangar 4 Aqueous Film-Forming Foam (AFFF)**

- Remaining AFFF removal underway.

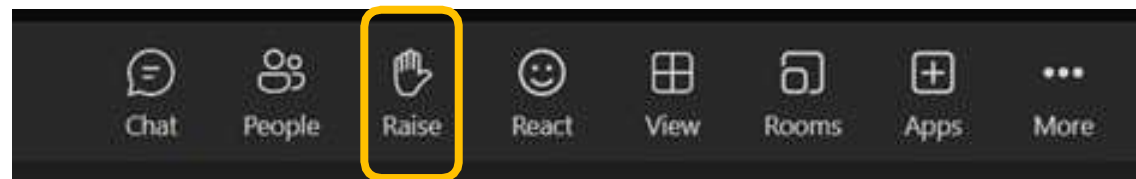
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# ***Major Site Activity Updates***

## ***Land Use Control (LUC) Compliance Activities***



### **LUC Compliance**

- Certification forms for the 2024 calendar year will be mailed by the end of January 2025. The purpose of the form is for property owners to acknowledge and adhere to existing conditions associated with the property (i.e., LUCs).
  - A LUC Fact Sheet will be provided along with the certification form.
- A LUC Open House is scheduled to be held in early 2025, during which the Navy, USEPA, and MEDEP will be available to discuss with property owners the LUCs associated with individual properties, the construction permission process, and other property owner questions and concerns.
- For properties on Brunswick Landing where construction activities are planned, there is a permission process to obtain approval before construction activities can begin.
- The Navy requests that the completed and signed certification form be sent back by late March 2025. Forms can be returned by:
  - The self-addressed pre-paid envelope is provided with the certification form, or
  - Scanned and emailed to the email address provided on the certification form.

# **Major Site Activity Updates**

## ***LUC Compliance Activities, continued***



### ***CERCLA LUC Inspections***

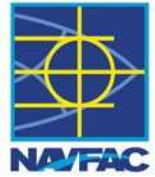
- Annual inspections are performed to confirm compliance with the LUCs required per each site's ROD and determine if any corrective actions are required (e.g., fence repair).
- The following CERCLA sites require LUC inspections:
  - Sites 1 & 3, Site 2, Site 7, Site 9, Site 12, Site 17, Eastern Plume, and Quarry Area
- The Draft 2023 LUC Inspection Report was submitted in February 2024.
  - Recommended well repairs were conducted and additional No Trespassing signs have been ordered



***No Trespassing Sign***

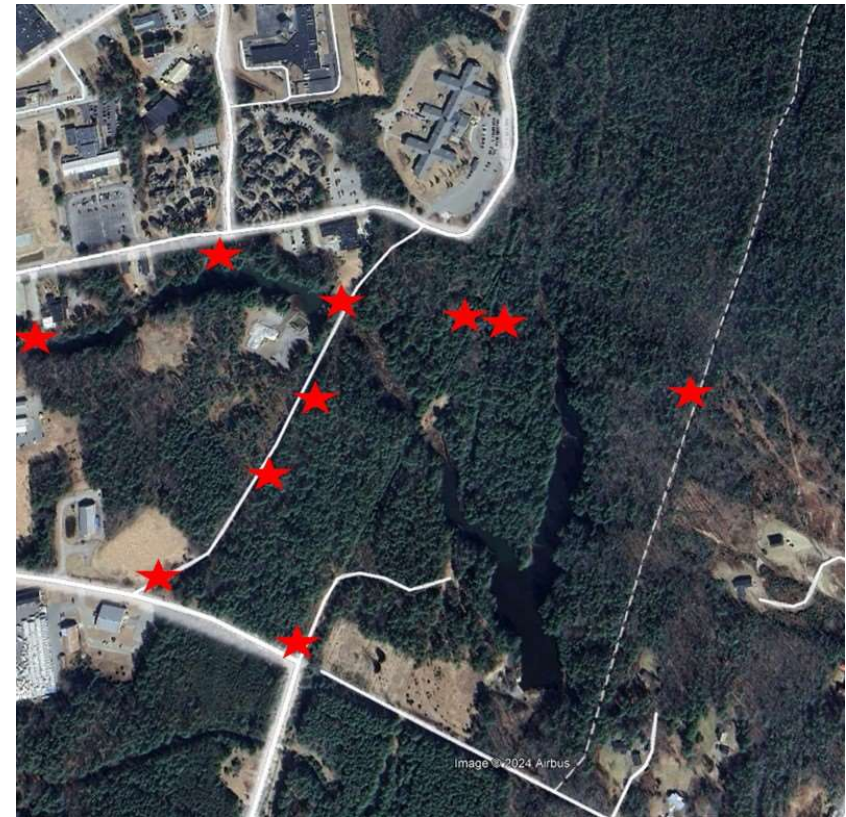
# **Major Site Activity Updates**

## ***LUC Compliance Activities, continued***



### ***CERCLA LUC Inspections, continued***

- The Navy's Site Caretaker is present at the former base and aids in monitoring noncompliant activities.
  - Monitoring for trespassing activities, damage to property, and/or vandalism to Navy property.
- Additional No Trespassing signs have been identified in the areas shown in the figure.
  - These signs are in addition to the recommended signs from the 2023 Annual LUC Inspections.



***Proposed No Trespassing Sign Locations***

## ***Major Site Activity Updates***

### ***LUC Compliance Activities, continued***



### ***CERCLA LUC Inspections, continued***

- Annual 2024 LUC inspections are planned for October.
  - Draft 2024 LUC Inspection Report is anticipated in February 2025.

# **Major Site Activity Updates**

## ***LUC Compliance & Redevelopment Activities***



### **Reminder for Construction Permission process**

- For properties within Brunswick Landing, if planned construction activities involve any soil displacement and/or potential contact with groundwater, the Navy, in consultation with USEPA and MEDEP, must provide approval before the Town of Brunswick will approve a construction permit.
- Applicants are required to complete the Brunswick Landing Construction Permission Request form available from the Navy or on the Permits and Applications page of the Town of Brunswick Planning & Development website:

<https://www.brunswickme.org/235/Permits-Applications>

- Completed forms are submitted to MRRA for initial review. MRRA will forward the request to the Navy for review and approval. The Navy will notify MRRA when all permissions have been acquired.
- To date, 44 forms have been submitted and approved.

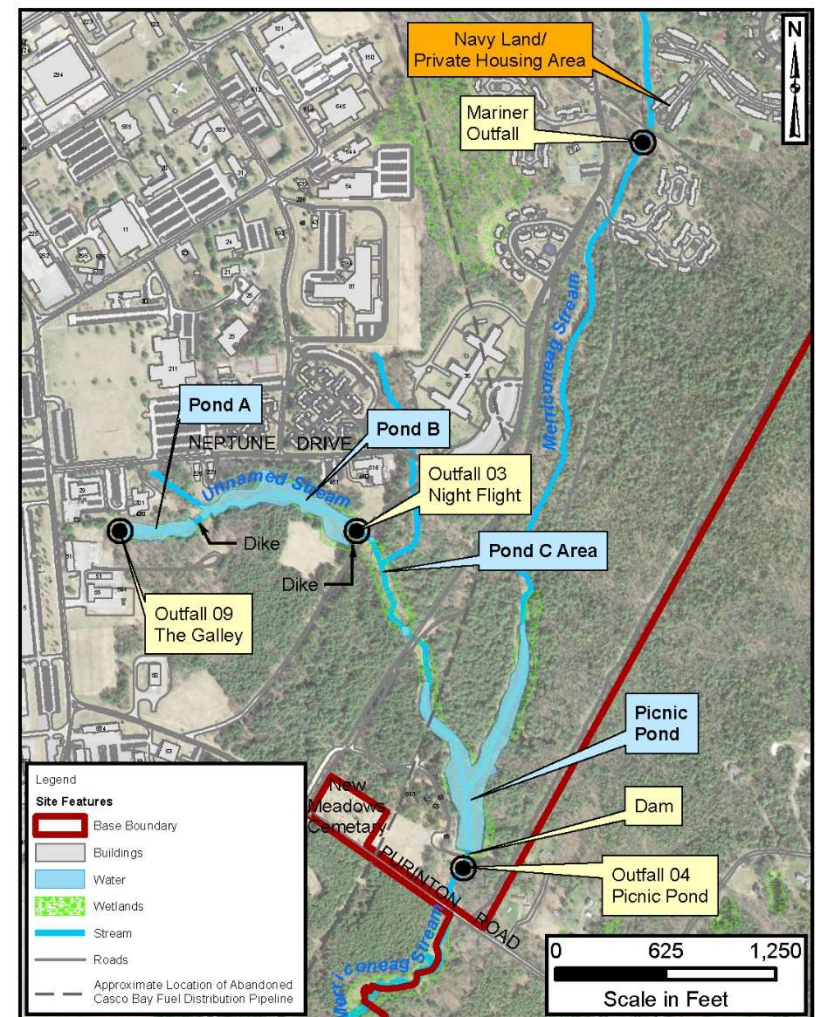


# Major Site Activity Updates

## Picnic Pond Sediment Remedial Action



- September 2020 ROD:
  - Sediment removal of impacted material in Ponds A, B and Picnic Pond and replace with clean fill
- Note: PFOS and PFOA were evaluated as part of the Human Health Risk Assessment (HHRA)
- PFOS and PFOA did not warrant additional action:
  - USEPA Risk-based sediment screening levels for a recreational user
  - Maine Center for Disease Control and Prevention's recommended sediment screening levels for a recreational user.
- HHRA identified polycyclic aromatic hydrocarbons (PAHs), pesticides, and lead as the COCs in sediment.



# Major Site Activity Updates

## *Picnic Pond Sediment Remedial Action, continued*

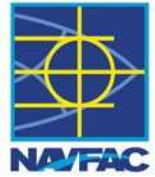


- Dredging was conducted between 2022 and 2023. To date, a total of 9,635 tons of material from Ponds A and B has been dredged and disposed off-site as a RCRA Subtitle C Landfill. 1,292 cubic yards of material from Picnic Pond has been dredged and stabilized. This material is awaiting disposal.
- Water generated during the dredging work was containerized on-site, stabilized, and then treated at the construction dewatering system.
- Post-dredging confirmatory sample results from Pond A and Picnic Pond indicated that the Remedial Goals for the project were met and no further dredging would be necessary.

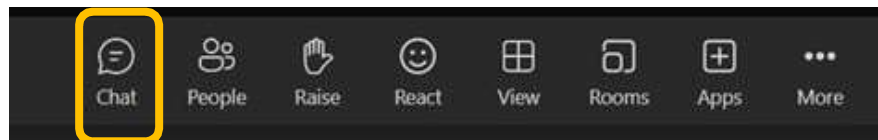
| Pond        | Sediment Volume Removed (cubic yards) | Dredging Complete? | Remedial Goals Met? | Dredging Water Treated? | Sediment Disposal Complete? |
|-------------|---------------------------------------|--------------------|---------------------|-------------------------|-----------------------------|
| Pond A      | 3,020                                 | Yes                | Yes                 | Yes                     | Yes                         |
| Pond B      | 3,443                                 | Yes                | Yes*                | Yes                     | Yes                         |
| Picnic Pond | 1,292                                 | Yes                | Yes                 | Yes                     | No                          |

\* - Initial results showed post-construction levels in Pond B to be above remedial goals. Additional risk assessment evaluation initially indicates no risk is associated with remaining sediment in Pond B.

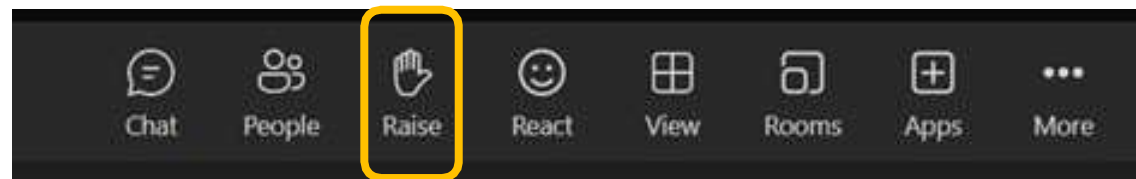
# Q&A



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# Other Activities



## Five Year Review

- Under CERCLA, if a remedial action results in CERCLA hazardous substances, pollutants or contaminants remaining at a site at levels that do not allow for unlimited use and unrestricted exposure, the site must be reviewed every five years.
- Prior Five-Year Review Reports were signed in 2000, 2005, 2010, 2015, and 2020.
- Preparation of Sixth Five-Year Review Report began in August 2024.
- Per USEPA guidance, review includes all CERCLA sites with signed RODs to ensure that implemented remedies remain protective of human health and the environment. Sites will include:
  - Sites 1 & 3, Site 2, Site 7, Site 9, Site 12, Eastern Plume, Quarry Area, and the Picnic Pond Stormwater Retention System

## ***Other Activities, continued***



### **Five Year Review, continued**

- Will include document review, site inspections, and additional evaluation to evaluate protectiveness.
- Site inspections planned for October 2024.
- Public Notice:
  - Published in The Times Record September 17 and 24
  - Published in The Northern Forecaster September 19 and 26
  - Published in Midcoast Go September 20 and 27
  - Posted to the Navy website September 5
  - Provided to the GovDelivery mailing list September 5
  - Newspaper digital ads appeared daily beginning September 10

## *Other Activities, continued*



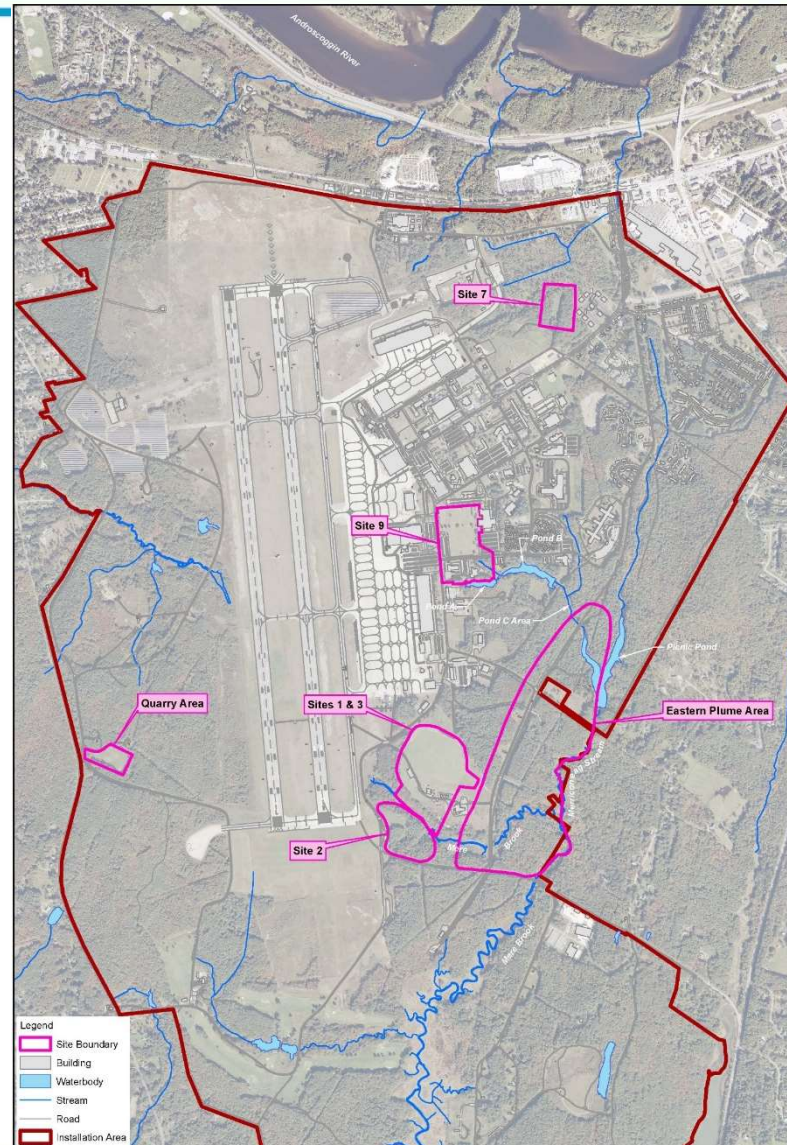
### **Five Year Review, continued**

- Questionnaire has been distributed and the Navy asks that responses are provided by October 31, 2024.
- Data review and technical assessments are currently underway.
- Reporting:
  - Internal Draft Report anticipated in late December 2024
  - Draft Report anticipated in late March 2025
  - Draft Final Report anticipated late June 2025
  - Final Report to be signed by late September 2025

## Other Activities, continued



### Long-Term Monitoring (LTM) CERCLA Sites



## *Other Activities, continued*



### **CERCLA LTM Sampling**

- Spring 2024 LTM event conducted and includes the Eastern Plume.
  - Data currently being validated
- Fall 2024 LTM event planned for October 2024 and will include:
  - Sampling at Sites 1 & 3, Site 2, Site 7, Site 9, and Eastern Plume
- Reporting:
  - 2022 Annual LTM Report was issued as Draft in February 2024
  - 2023 Annual LTM Report was issued to Navy in early July 2024
  - Draft 2024 Annual LTM Report anticipated in March 2025

## *Other Activities, continued*



### **CERCLA LTM Sampling**

- Concurrent with the CERCLA LTM, groundwater sampling is also conducted at the Quarry Area.
- The 2017 ROD for the Quarry Area states that groundwater monitoring will be conducted to confirm that groundwater contaminants are not migrating from the Waste Disposal/Fill Area.
  - ROD indicates sampling for polycyclic aromatic hydrocarbons (PAHs), metals, and explosives semi-annually for two years.
- Sampling was first conducted in 2020, and the groundwater monitoring program was added to the 2022 CERCLA LTM Sampling and Analysis Plan (SAP).
  - Sampling frequency was changed to annual sampling for four consecutive years.
  - Also indicated that the first year of annual sampling began in 2022.
  - After four years of sampling, the monitoring program would be evaluated to determine if LTM was necessary.



## *Other Activities, continued*



### **Non-CERCLA (Petroleum) LTM Sampling**

- Old Navy Fuel Farm (ONFF) and Naval Exchange (NEX) Service Station undergoing LTM in accordance with MEDEP remediation guidelines for Petroleum Contaminated Sites.
- Biennial sampling was completed in early June 2024
  - Maintenance items (replacement of well caps and locks, removing silt from around well, monitoring well redevelopment) identified during the 2022 biennial sampling event were completed during the June 2024 sampling event.
- Reporting:
  - 2022 Draft ONFF and NEX LTM Report was issued in March 2023
  - 2024 Draft ONFF and NEX LTM Report anticipated in March 2025

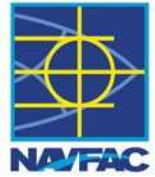
## *Other Activities, continued*



### **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 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.
  - Recent evaluation was conducted to optimize the extraction wells in PFAS-impacted areas.
- The GWETS also treats PFAS in groundwater at the Eastern Plume.
  - Additional PFAS treatment for construction related activities.

## *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
- The six PFAS that are compared to the MEDEP Interim Drinking Water Standard (June 2021) were not detected in system effluent
- Reporting:
  - Annual GWETS PFAS Report for July 2023 – June 2024 anticipated to be issued to Navy in October 2024
  - Draft report anticipated in late Fall 2024

## *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.



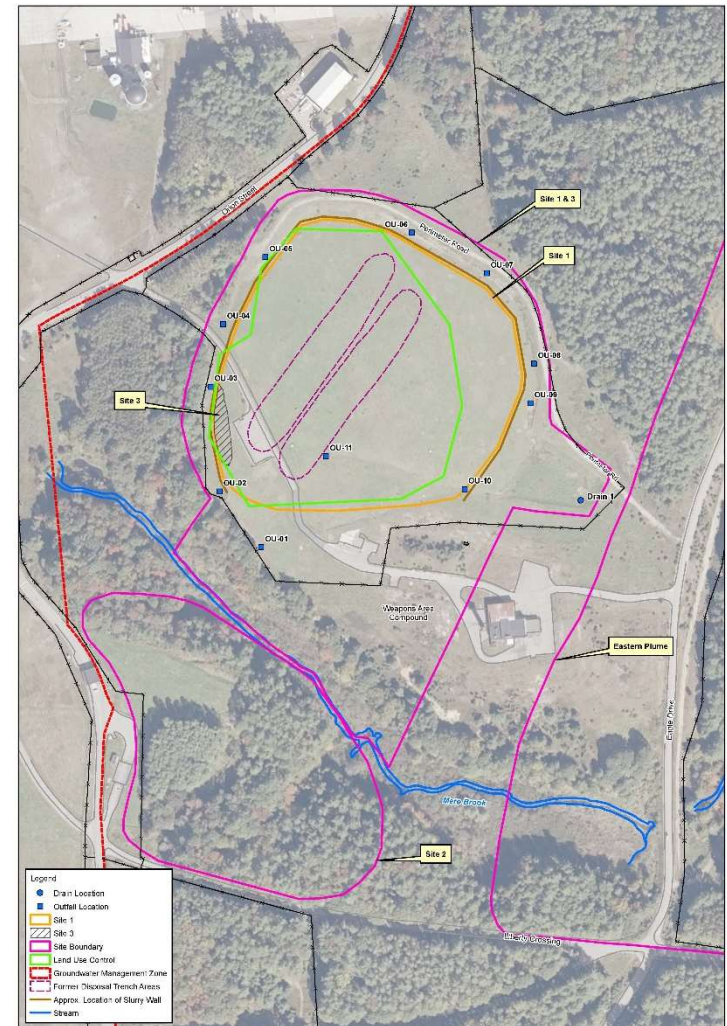


# Other Activities, continued



## Radiological Material

- The Navy completed a Historical Radiological Assessment (HRA) in 2014
  - Identified Sites 1 & 3 as having elevated activity at several landfill outfalls.
- Radioactive material is believed to be naturally occurring material that has been concentrated and disposed of at Sites 1/3.
- Radiological program overseen by the following:
  - Nuclear Regulatory Commission
  - Navy Radiological Affairs Support Office (RASO)
  - USEPA
  - Maine Center for Disease Control and Prevention, Radiation Control Program



Sites 1 & 3

## *Other Activities, continued*



### **Sites 1 & 3 Radiological History**

- In 2014 and 2015, radiological surveys were conducted at all the landfill outfalls and identified elevated levels of radionuclides at several of the outfalls; however, soil samples and surveys did not detect elevated readings downgradient of the outfalls.
- In 2016, a limited removal action was conducted to remove impacted soils from outfalls with elevated activity (OF-01 to OF-06, OF-11, and an area west of OF-04).
- In 2017, radiological surveys were conducted again at all the outfalls as well as soil samples from the remediated outfalls.
- In 2022, additional radiological surveys were conducted in the remediated areas. Results indicated a slight increase in activity in a few outfall locations from prior sampling events.
- Physical access restricted by gated fencing (Land Use Control); it is **not** publicly accessible.
- Contamination is not leaving the site and appears to be settling out at the outfall locations.

## ***Other Activities, continued***



### **Ongoing Surveys at Sites 1 & 3**

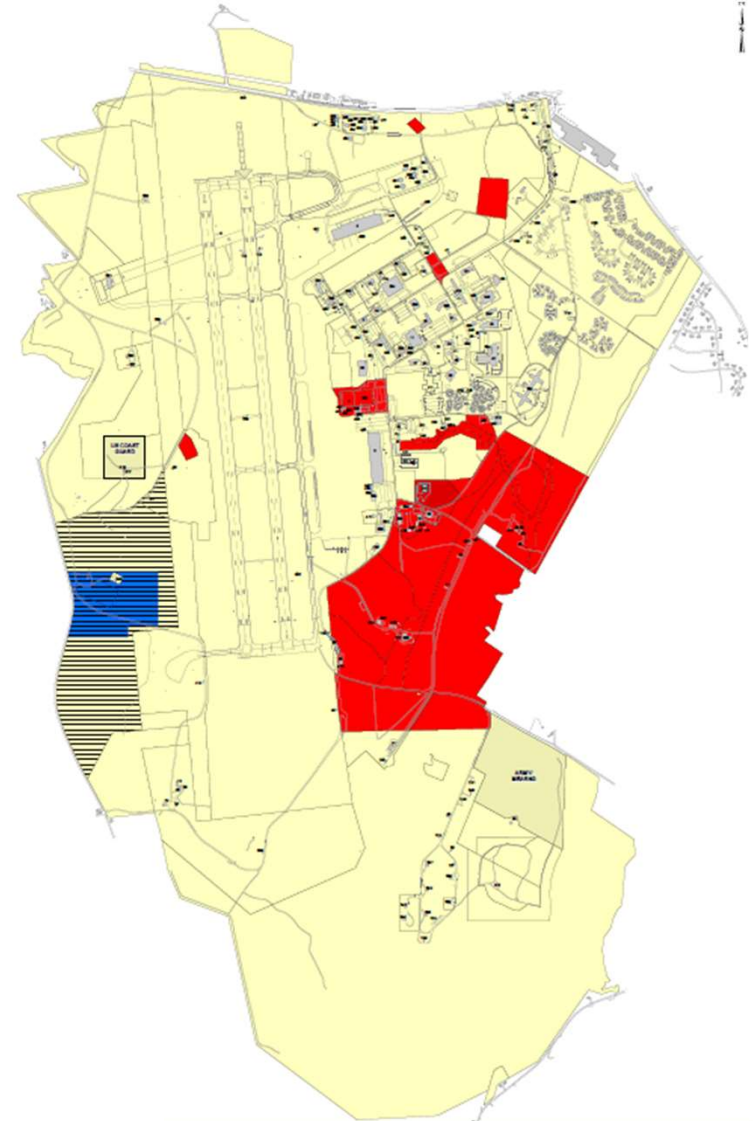
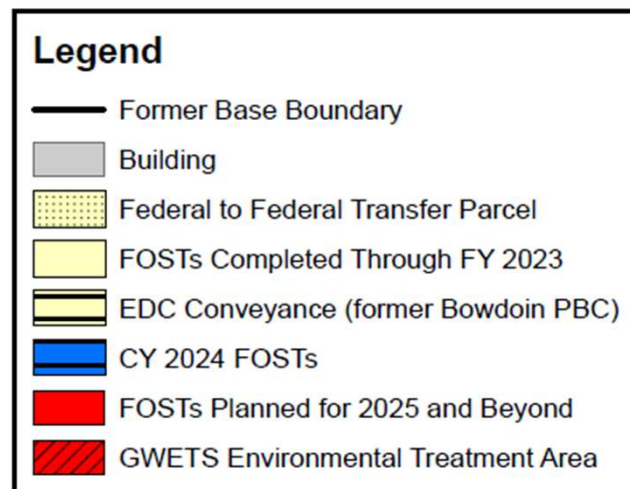
- The planned radiological assessment will include:
  - Sampling & Analysis Plan (SAP) under development, expected completion is 4<sup>th</sup> Quarter of 2024.
  - Survey will include surface scans to determine the presence of residual impacts and to identify surface soil sample locations.
  - Soil samples collected where elevated radioactivity is detected.

# Other Activities, continued



## Findings of Suitability to Transfer (FOSTs)

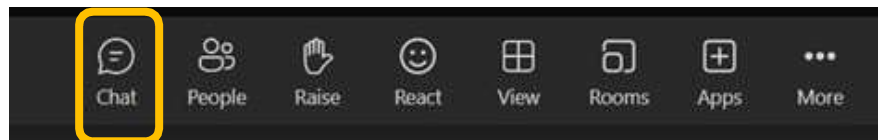
- Quarry, 4<sup>th</sup> Quarter of 2024
  - Transfer planned for CY2025
- AIR-16
- Public Works
- Hangar 4



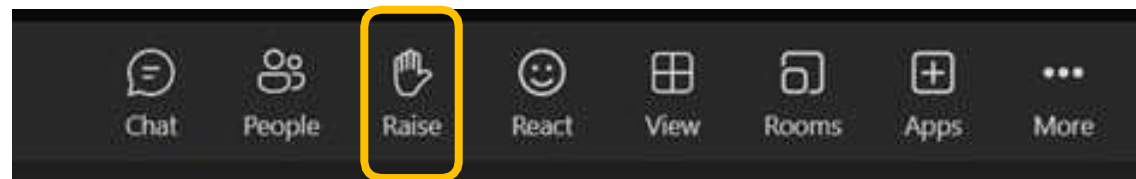
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***Thank You!***



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

**Next RAB Meeting: Tentatively  
planned for January 2025  
at 6:00 pm  
Virtual Meeting**

# 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>CDC</b>    | <b>Center for Disease Control and Prevention</b>                             |
| <b>CDWTS</b>  | <b>Construction Dewatering Treatment System</b>                              |
| <b>CERCLA</b> | <b>Comprehensive Environmental Response, Compensation, and Liability Act</b> |
| <b>CIP</b>    | <b>Community Involvement Plan</b>                                            |
| <b>COC</b>    | <b>Chemical of Concern</b>                                                   |
| <b>COVC</b>   | <b>Chlorinated Volatile Organic Compounds</b>                                |
| <b>CSM</b>    | <b>Conceptual Site Model</b>                                                 |
| <b>CY</b>     | <b>Calendar Year</b>                                                         |
| <b>DoD</b>    | <b>Department of Defense</b>                                                 |
| <b>ESCA</b>   | <b>Environmental Services Cooperative Agreement</b>                          |
| <b>FOST</b>   | <b>Finding of Suitability to Transfer</b>                                    |
| <b>FS</b>     | <b>Feasibility Study</b>                                                     |
| <b>GWETS</b>  | <b>Groundwater Extraction Treatment System</b>                               |
| <b>HHRA</b>   | <b>Human Health Risk Assessment</b>                                          |
| <b>LTM</b>    | <b>Long-Term Monitoring</b>                                                  |

## ***Acronyms (continued)***



|              |                                                     |
|--------------|-----------------------------------------------------|
| <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>NPL</b>   | <b>National Priorities List</b>                     |
| <b>OF</b>    | <b>Outfall</b>                                      |
| <b>ONFF</b>  | <b>Old Navy Fuel Farm</b>                           |
| <b>PA</b>    | <b>Preliminary Assessment</b>                       |
| <b>PAH</b>   | <b>Polycyclic Aromatic Hydrocarbons</b>             |
| <b>PFAS</b>  | <b>Per- and Polyfluoroalkyl Substances</b>          |
| <b>PFBA</b>  | <b>Perfluorobutanoic Acid</b>                       |
| <b>PFBS</b>  | <b>Perfluorobutane Sulfonate</b>                    |
| <b>PFHxA</b> | <b>Perfluorohexanoic Acid</b>                       |
| <b>PFHxS</b> | <b>Perfluorohexanesulphonic Acid</b>                |
| <b>PFNA</b>  | <b>Perfluorononanoic Acid</b>                       |
| <b>PFOA</b>  | <b>Perfluorooctanoic Acid</b>                       |
| <b>PFOS</b>  | <b>Perfluorooctanesulfonic Acid</b>                 |
| <b>PRAP</b>  | <b>Proposed Remedial Action Plan</b>                |

# *Acronyms (continued)*



|                |                                                      |
|----------------|------------------------------------------------------|
| <b>Q&amp;A</b> | <b>Question &amp; Answer</b>                         |
| <b>QR</b>      | <b>Quick Response</b>                                |
| <b>RA</b>      | <b>Remedial Action</b>                               |
| <b>RAB</b>     | <b>Restoration Advisory Board</b>                    |
| <b>RASO</b>    | <b>Radiological Affairs Support Office</b>           |
| <b>RCRA</b>    | <b>Resource Conservation and Recovery Act</b>        |
| <b>RD</b>      | <b>Remedial Design</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>SARA</b>    | <b>Superfund Amendments and Reauthorization Act</b>  |
| <b>SI</b>      | <b>Site Inspection</b>                               |
| <b>TAPP</b>    | <b>Technical Assistance for Public Participation</b> |
| <b>USEPA</b>   | <b>United States Environmental Protection Agency</b> |

# Base Map with CERCLA Sites

