

RESTORATION ADVISORY BOARD (RAB) MEETING

Former Fort Devens Army Installation
November 9, 2023



U.S. ARMY



US Army Corps
of Engineers
New England District



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WELCOME!



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- This call is being recorded to help develop meeting minutes.
- Unless speaking, please remain on mute to reduce background noise.
- There is time for Q&A, but you can ask a question via the chat box or utilize the raise hand button at any time during the meeting and speakers will respond as time allows.
- If you need to leave the call, click “Leave.”



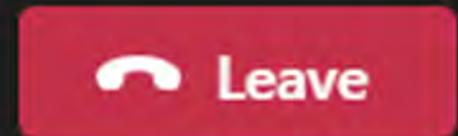
CHAT
BOX



RAISE
HAND



MUTE/
UNMUTE





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WELCOME!



Thank you for joining us tonight.

U.S. Army and Support:

Thomas Lineer
U.S. Army HQDA/ODCS G-9
Base Realignment and Closure
(BRAC) Environmental Coordinator
(BEC)
Penelope Ready
U.S. Army Corps of Engineers
(USACE) New England District
Dan Groher, P.E.
USACE New England District
Andy Vitolins, Steve Perry, Mark
Pasquarello, Amy Henschke,
and Zachary Smith
SERES-Arcadis JV Team

Regulatory and Other Board Members:

Michael Daly
Shawn Lowry
U.S. Environmental Protection
Agency (USEPA) Region 1
ZaNetta Purnell
USEPA Community
Involvement Coordinator
Joanne Dearden
Massachusetts Department of
Environmental Protection (MassDEP)

Community Board Members:

Julie Corenzwit
Amy McCoy
Dave McCoy
Chris Mitchell
Laurie Nehring: Co-Chair
Alix Turner: Co-Chair



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WELCOME!



Tonight's topics

1

**Project
Updates &
Upcoming Work**

2

**Area 1 PFAS RI
Update**

3

**Shepley's Hill
Landfill**

4

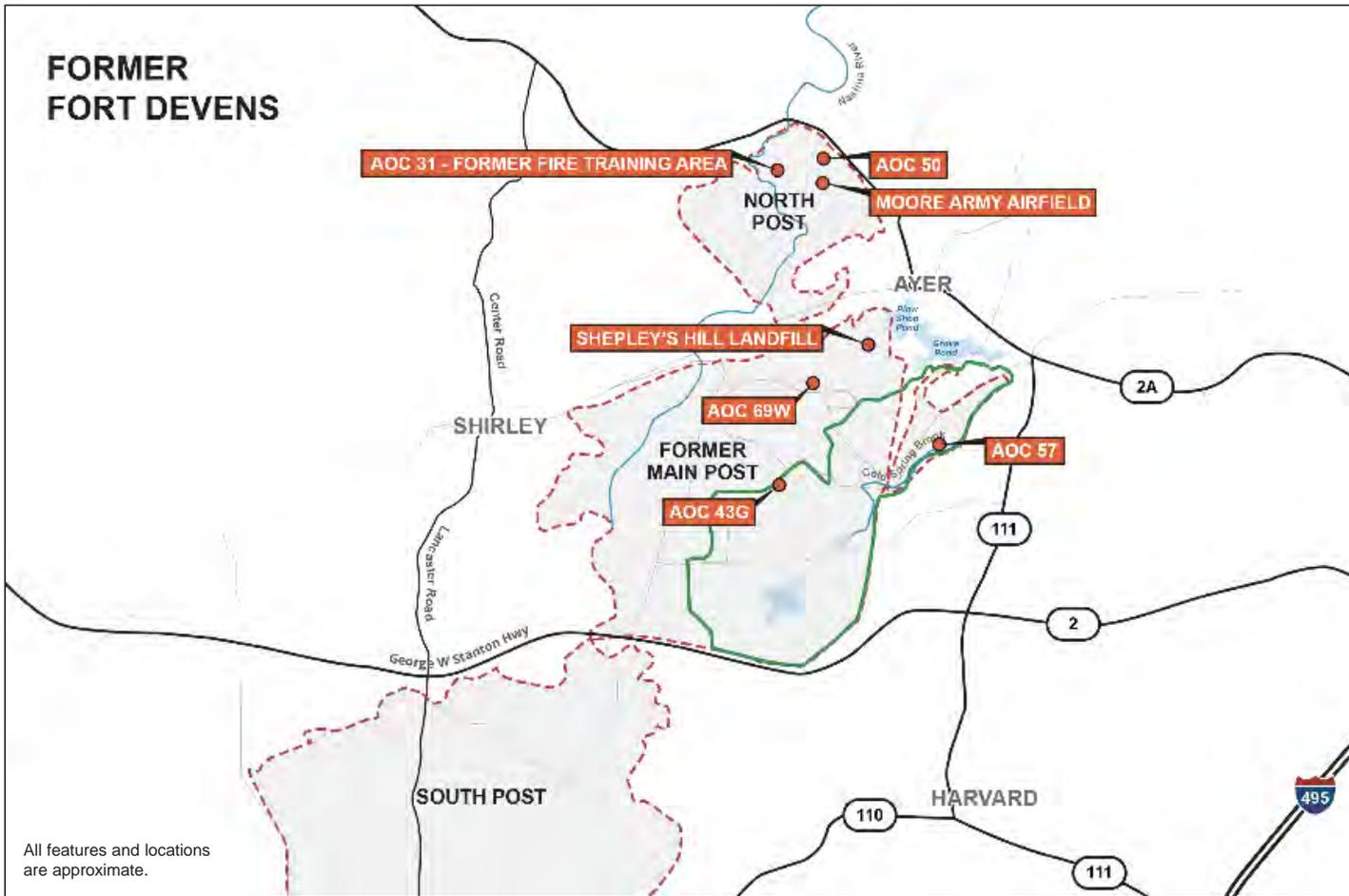
**Community
Involvement
& RAB Update**

5

**Questions
& Answers**



1 | PROJECT UPDATES & UPCOMING WORK



- Discussion Areas
- ▭ PFAS Area 1
- - - Former Fort Devens Boundary



1 | PROJECT UPDATES & UPCOMING WORK



- **Area 1 Phase 2 Per- and Polyfluoroalkyl Substances (PFAS) Remedial Investigation (RI) – more details later in presentation**
- **Shepley’s Hill Landfill – more details later in presentation**
- **Nashua River Military Munitions Update**
 - Work completed in the river in September 2023 indicated that field conditions prevent the use of underwater geophysical digital mapping to reliably evaluate anomalies
 - Army plans to move forward with the analog method for the geophysical survey in spring 2024
- **Supplemental Post-Record of Decision (ROD) RIs for Areas of Contamination (AOCs) 69W, 57, and 43G**
 - Soil borings, vertical aquifer profiling (VAP), and monitoring well installation completed August 2023
 - Baseline groundwater sampling completed August 2023
 - Quarterly groundwater sampling to be conducted in November 2023, February 2024, and May 2024
- **Moore Army Airfield (MAAF) Former Fire Training Area (FFTA) PFAS Pre-RI Data Collection Treatability Study**
 - Lysimeters installed August 2023 and sampling to be conducted November 1-3, 2023; additional sampling to be conducted in February 2024, May 2024, and August 2024
 - Soil treatability testing results in spring 2024



1 | PROJECT UPDATES & UPCOMING WORK



- **Land Use Control Implementation Plans (LUCIPs)**

- Draft Final LUCIPs for AOCs 44/52, AOC 69W, AOC 57, and Study Area (SA) 71 approved by USEPA and MassDEP
- LUCIP for DCL Contributor Sites AOC 9, AOC 40, and SA 13 to be prepared winter 2023/2024

- **Fall 2023 Community Update Fact Sheet**

- Fact Sheet providing project updates and highlighting Plow Shop Pond sent in September 2023



1 | PROJECT UPDATES & UPCOMING WORK



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- **Draft Documents Submitted to USEPA and MassDEP Since Last RAB Meeting**
 - Draft Debris Pile C Summary Report
- **Response to Comments/Revised Documents Submitted to USEPA and MassDEP Since Last RAB Meeting**
 - Draft Focused Feasibility Study – Shepley’s Hill Landfill Groundwater Remedy (Responses to Comments on Draft)
 - Draft Final Work Plan – Area 1 Phase 2 PFAS Remedial Investigation
- **Draft Final Documents Sent to RAB for Review Since Last RAB Meeting**
 - Draft Final Work Plan – Area 1 Phase 2 PFAS Remedial Investigation
 - Draft Final LUCIPs for AOCs 44/52, AOC 57, and SA 71
- **Documents Posted to Website Since Last RAB Meeting**
 - LUCIPs for AOCs 44/52, AOC 57, and SA 71
 - SHL Performance Monitoring Work Plan (Third Extraction Well Evaluation)
 - SHL Report on the Evaluation of Site-Specific Arsenic Background Concentrations in Groundwater
 - 2022 Annual Reports



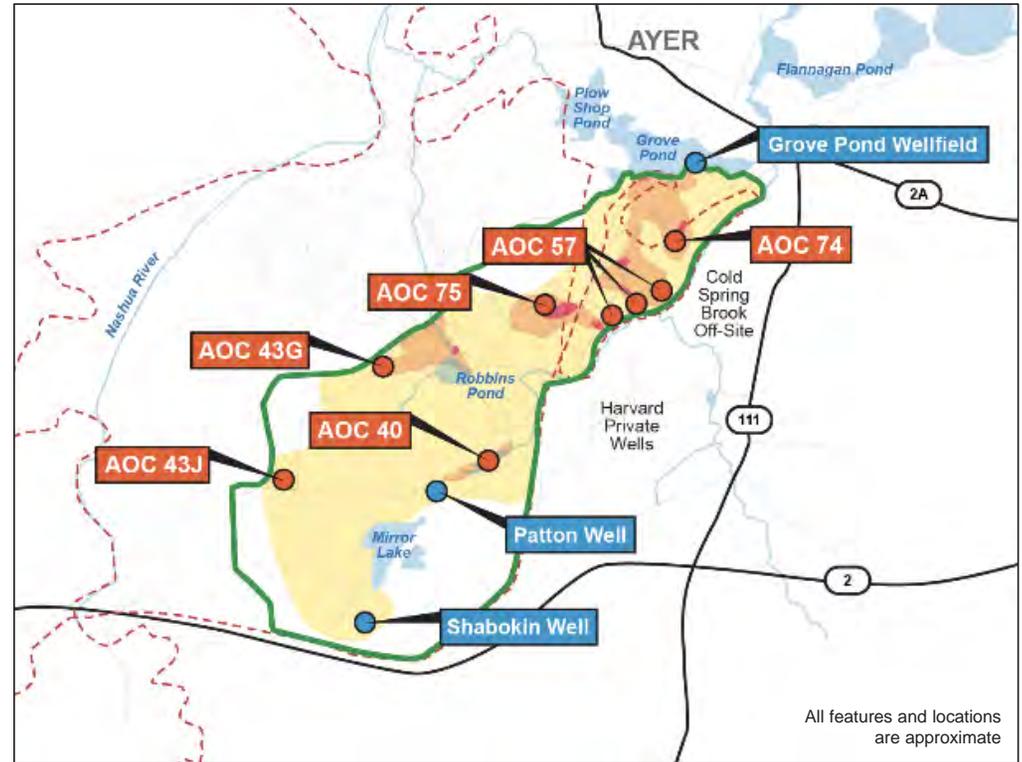
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2 | AREA 1 PFAS RI

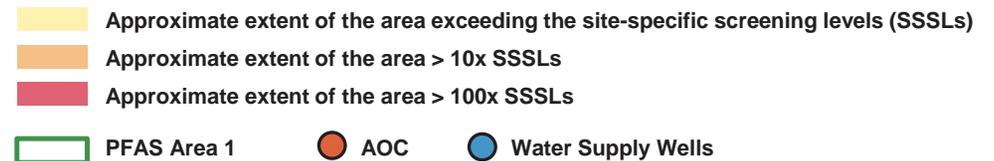


Area 1 Phase 2 PFAS RI Update

- Draft Final Work Plan approved by USEPA and MassDEP September 2023
 - Sent to RAB for review before final document is issued
- Current Activities
 - Field Work Planning
 - Draft Right of Entry (ROE) letters requesting access to properties outside of former Fort Devens (5 properties)
 - Draft notification letters to property owners within former Fort Devens (Army has access) (34 properties)
 - Tentative field work scheduling
 - Dependent on access agreements



All features and locations are approximate





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2 | AREA 1 PFAS RI

Area 1 Phase 2 PFAS RI Update

- **Phased Approach** – Each step builds upon the previous step to achieve RI objective

1. Initial Phase

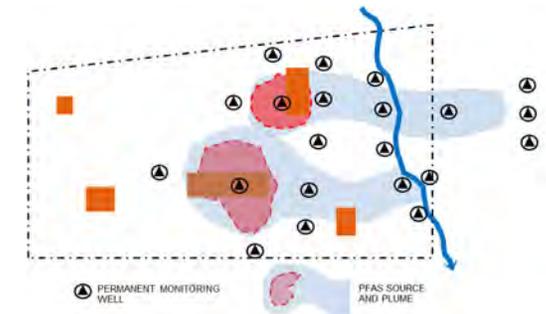
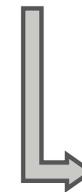
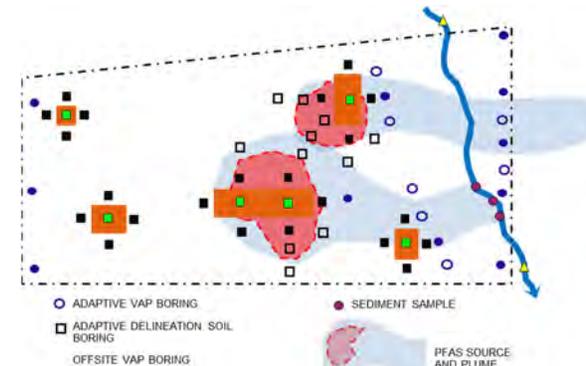
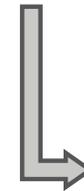
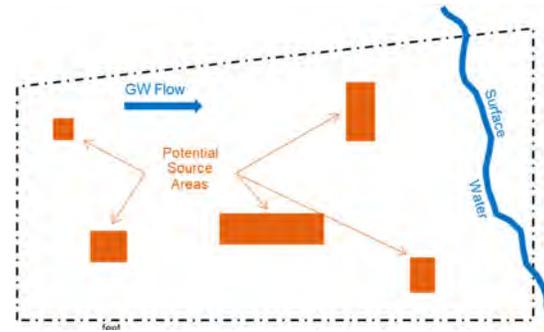
- Initial investigation of area of impacts and sources—soil borings, vertical aquifer profile groundwater samples, surface water sampling, and geophysical investigations

2. Adaptive Phase

- Delineate sources, determine source strength, and define geometry of plume
- Evaluate potential impacted human and ecological receptors
- Permanent monitoring wells (overburden and bedrock)

3. Final Delineation Phase

- Monitoring to confirm nature and extent (groundwater and surface water)





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2 | AREA 1 PFAS RI

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Area 1 Phase 2 PFAS RI Update

- **Tentative Remedial Investigation Schedule**
 - ROE Agreements: Fall/winter 2023/2024
 - Initial Phase Sampling: Winter/spring 2024 (weather dependent)
 - Soil borings
 - VAP sampling
 - Surface water and sediment sampling
 - Adaptive Phase Sampling: Spring/summer 2024
 - Overburden and bedrock monitoring well installation
 - Fish tissue sampling
 - Final Delineation Phase Sampling: Summer 2024 through winter 2025
 - Groundwater monitoring (2 rounds)
 - Draft RI Report: 2025



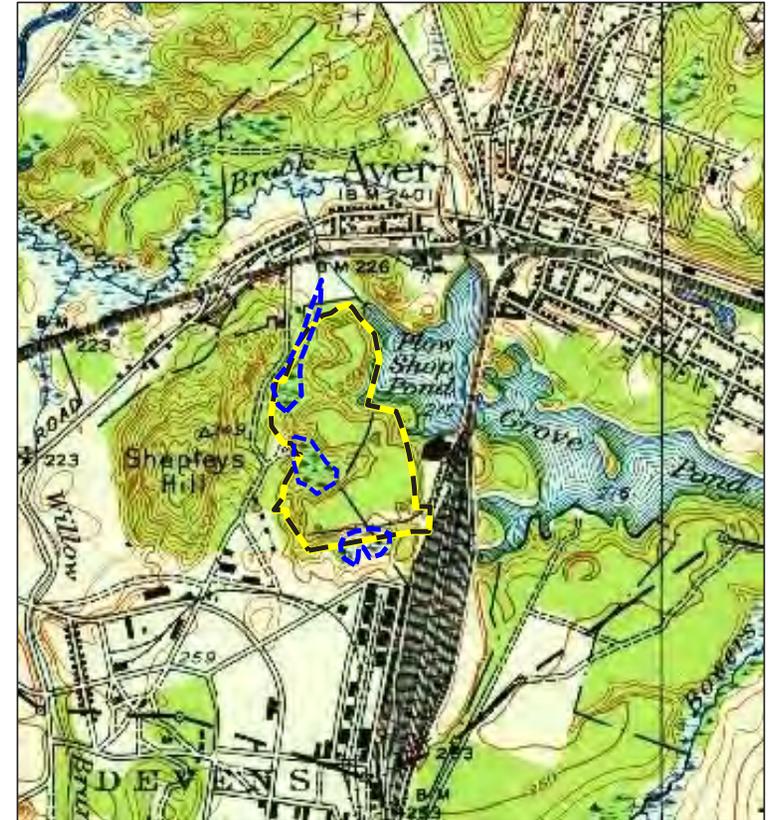
3 | SHEPLEY'S HILL LANDFILL



Shepley's Hill Landfill Summary

History

- **Pre-1940s:** Sporadic dumping primarily in low-lying wetland areas
- **1940s:** Army begins active landfilling in area (municipal solid waste, construction debris, and incinerator ash)
- **1986:** Landfill closed (total 1.5 million cubic yards of waste; 11% below water table)
- **1987-1993:** Landfill closure (capping in five phases)
- **1993-1995:** CERCLA RI
- **1995:** CERCLA ROD
- **2005:** Explanation of Significant Differences (ESD) (Arsenic Treatment Plant [ATP] construction and operation)
- **2012:** Barrier wall installation
- **2013:** ESD No. 2 (land use controls [LUCs])



1939 Topographic Map

USGS 7.5 Minute Series – Ayer, MA Quad.
Surveyed 1923, 1935, 1944, 1950 (rev.)

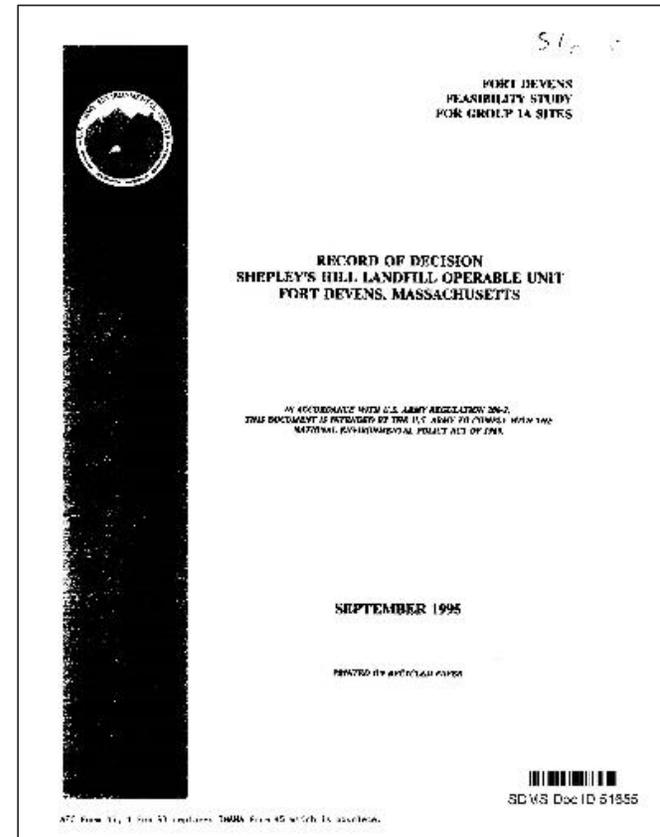


3 | SHEPLEY'S HILL LANDFILL



Shepley's Hill Landfill 1995 ROD

- **Contaminants of Concern:** Arsenic in groundwater
- **Remedy Requirements:**
 - Complete closure of Shepley's Hill Landfill (SHL) in accordance with Massachusetts Solid Waste Regulations
 - Landfill cover and gas collection system maintenance
 - Annual groundwater monitoring and reporting
 - Five-Year Reviews
 - Contingency groundwater extraction and treatment system if arsenic concentrations remain elevated



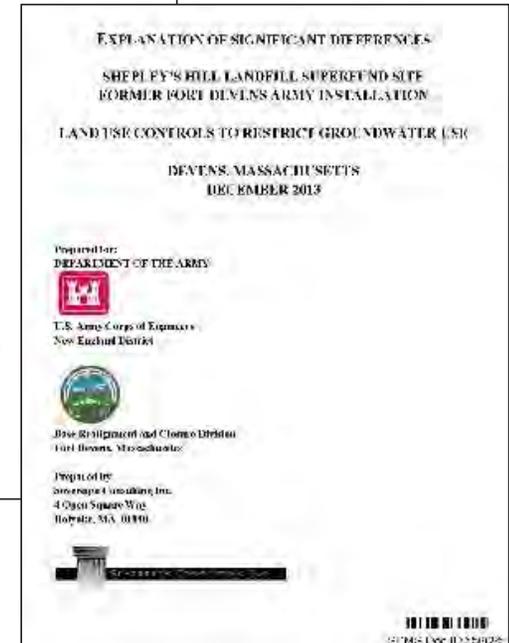
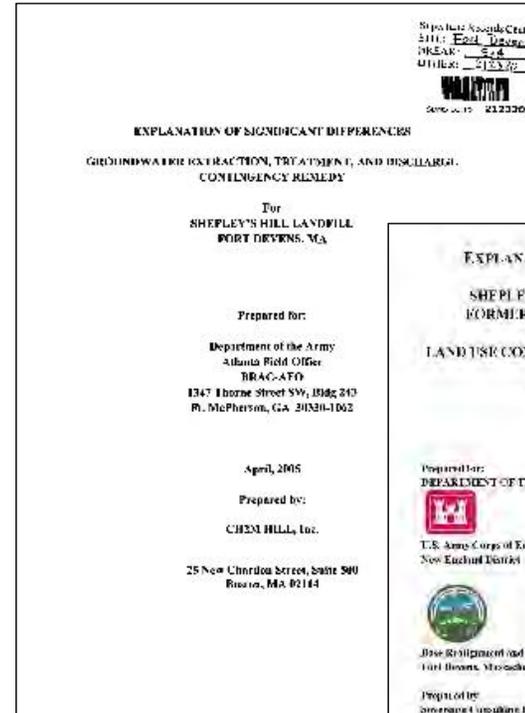


3 | SHEPLEY'S HILL LANDFILL



Shepley's Hill Landfill 2005 and 2013 ESDs

- **ESD No. 1 (2005):**
 - Implements contingency groundwater extraction and treatment system remedy
 - Modifies contingency remedy to include pre-treatment of groundwater before discharge
- **ESD No. 2 (2013):**
 - Implements LUCs to prohibit the use of groundwater as a potable water source in areas downgradient (north) of SHL where arsenic concentrations exceed the USEPA maximum contaminant level (MCL) of 10 µg/L (parts per billion)
 - Requires preparation and implementation of LUCIP
 - Includes annual notifications to property owners within the LUC boundaries



Features and locations are approximate.



3 | SHEPLEY'S HILL LANDFILL

Shepley's Hill Landfill Remedy - Current Status

- **Landfill Cap**
 - In-place; maintenance continues
- **Groundwater Extraction System Operation and Maintenance**
 - Recent upgrades and pilot testing – more details later in presentation
- **Barrier Wall**
 - Performance evaluation ongoing (Plow Shop Pond surface water, sediment, and pore water sampling)
- **Long Term Groundwater Monitoring**
 - Ongoing; sampling in spring and fall of each year



Features and locations are approximate.

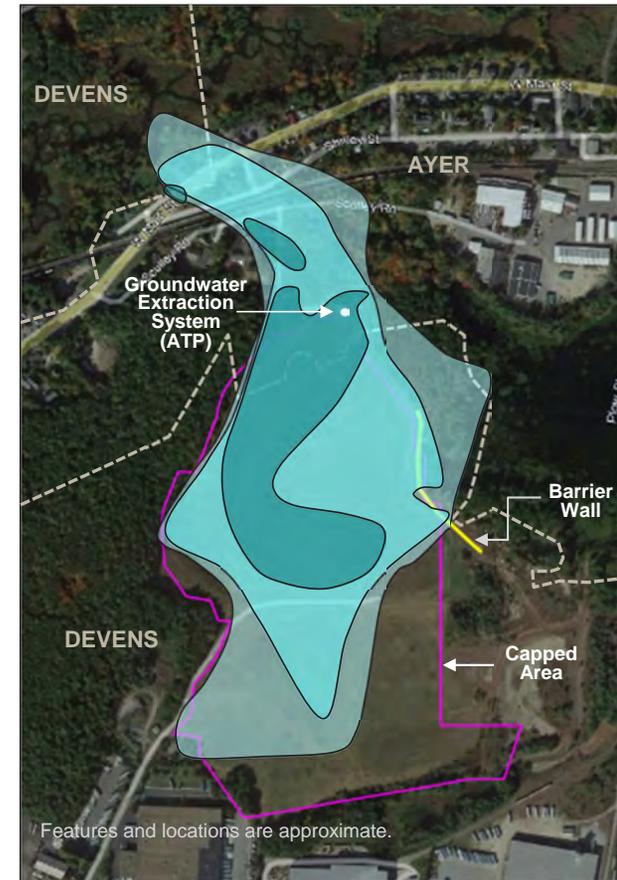




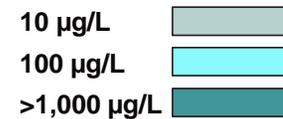
3 | SHEPLEY'S HILL LANDFILL

Shepley's Hill Landfill - Remedy Evaluation

- **Focused Feasibility Study**
 - Evaluation performance of current remedy as it relates to cleanup objectives
 - Prevent exposure to groundwater migrating from the landfill containing arsenic in excess of the MCL
 - Prevent impacted groundwater from contributing to the contamination of Plow Shop Pond sediments



Current Concentrations of Arsenic in Groundwater





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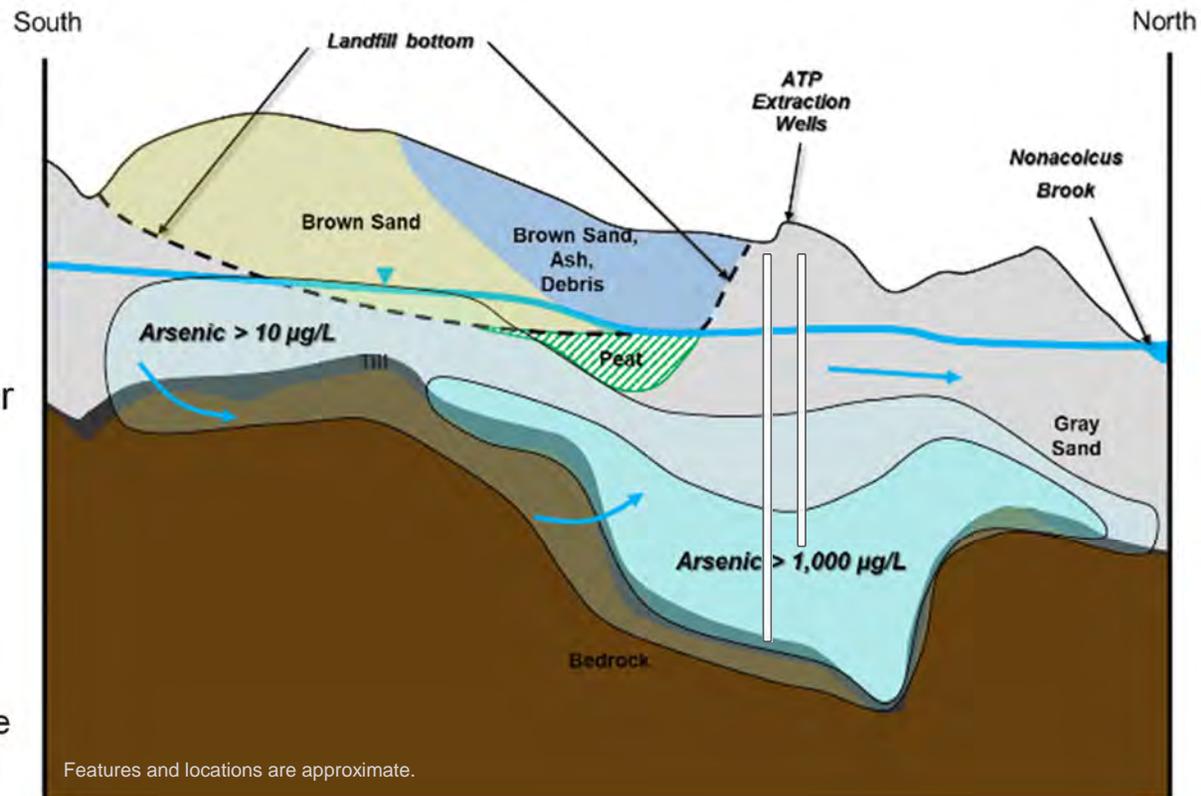
3 | SHEPLEY'S HILL LANDFILL



Shepley's Hill Landfill - Remedy Evaluation

Source of Arsenic Impacts Remedy Effectiveness

- Arsenic Transport
 - Arsenic is only mobile in groundwater under reducing (i.e., no oxygen) geochemical conditions
- Potential Arsenic Sources in Groundwater
 1. Landfill waste (anthropogenic)
 2. Natural source
 - Naturally occurring in bedrock and overburden materials (geogenic)
 3. Combination
 - Present in one or both and/or landfill creates reducing conditions that cause release from natural source





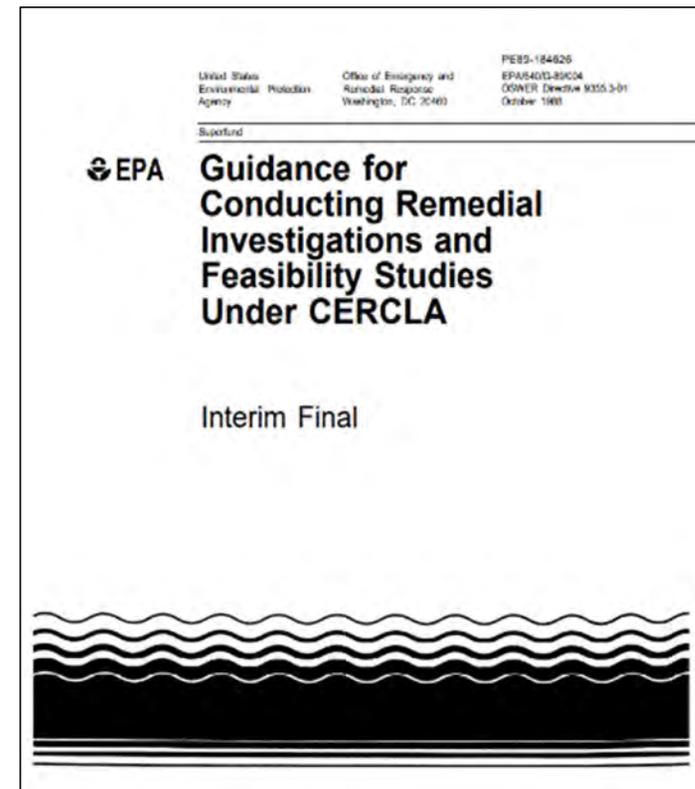
3 | SHEPLEY'S HILL LANDFILL



Shepley's Hill Landfill - Remedy Evaluation

Focused Feasibility Study - Evaluate potential cleanup options in accordance with USEPA CERCLA guidance

- **Threshold Criteria:**
 1. Overall protection of human health and the environment
 2. Compliance with Applicable or Relevant and Appropriate Requirements (ARARs) (regulations)
- **Balancing Criteria:**
 1. Long-term effectiveness
 2. Reduction of toxicity, mobility, and volume
 3. Short-term effectiveness
 4. Implementability
 5. Cost
- **Modifying Criteria:**
 1. State acceptance
 2. Community acceptance





3 | SHEPLEY'S HILL LANDFILL



Shepley's Hill Landfill – Remedy Evaluation Schedule

Focused Feasibility Study

- Draft Final to USEPA, MassDEP, and RAB – November 2023

Barrier Wall Performance Evaluation

- Plow Shop Pond Sampling – November 2023
- Water Level Monitoring – Winter/spring/summer 2024
- Draft Report – Fall 2024

Third Extraction Well Evaluation

- Monitoring Well Installation – October 2023
- Groundwater Sampling – November/December 2023
- Water Level Monitoring – Winter/spring/summer/fall 2024
- Draft Evaluation Report – Fall 2024



3 | SHEPLEY'S HILL LANDFILL



Shepley's Hill Landfill Remedy - Recent Groundwater Extraction/Treatment System Updates

ATP treatment process modification

- New system to oxidize/precipitate iron in extracted water completed October 2023
- Safer (removes chlorine gas) and should be online more frequently
- Testing (for leaks, oxidant dosing, etc.) is ongoing

Third extraction well and additional monitoring wells installed in September and October 2023

- Third extraction well installed to improve confidence in capture of landfill affected groundwater
- New monitoring wells to assess improvement in capture
- 10 rounds of measurements in new wells to evaluate performance over next year starting in November 2023

System startup in November 2023





4 | COMMUNITY INVOLVEMENT & RAB UPDATE



Navigating the Former Fort Devens Website

US Army Corps of Engineers New England District Website

FORMER FORT DEVENS
ENVIRONMENTAL CLEANUP

Welcome to the Former Fort Devens Environmental Cleanup Website

This website contains valuable information about the environmental activities planned and implemented for this former military installation, and how you can get involved.

Features

- Administrative Record
- Community Involvement Plan

Public Information

The Army holds quarterly Restoration Advisory Board (RAB) meetings to update the public on the status of the cleanup at Former Fort Devens. The next RAB meeting is scheduled for **November 9, 2023, at 6:30 p.m. and will be in person with a virtual option. The meeting will be held at the Mass Development Offices in the Vicksburg Conference Room - 33 Andrews Pkwy, Devens, MA**

What's New?

For the Former Fort Devens RAB, we've set up a dedicated email address: FormerFortDevensRAB@arcadis.com. Please feel free to email us at this address with questions or



4 | COMMUNITY INVOLVEMENT & RAB UPDATE



Navigating the Former Fort Devens Website

Searching for Documents

- Features**
- Administrative Record
- Community Involvement Plan
- Document Repository
- Environmental Cleanup
- Explosive Safety
- History
- Project Photo Gallery
- Restoration Advisory Board (RAB)

Public Information

The Army holds quarterly Restoration Advisory Board (RAB) meetings to update the public on the status of the cleanup at Former Fort Devens. The next RAB meeting is scheduled for **November 9, 2023, at 6:30 p.m. and will be in person with a virtual option. The meeting will be held at the Mass Development Offices in the Vicksburg Conference Room - 33 Andrews Pkwy, Devens, MA 01434.** The Army invites the local community to take part in the review process by joining the Former Fort Devens RAB and attending the RAB meetings. For the February meeting, we will discuss community involvement, RAB activities, project updates, upcoming technical work, and next steps. As always, we will have a live Q&A session after the presentation of information. We encourage all participants to bring questions for our Q&A.

We look forward to your participation! Please email us at FormerFortDevensRAB@arcadis.com if you would like to be included in our RAB mailing list and receive RAB meeting invitations and information. You can also email us with any comments or questions.

What's New?

For the Former Fort Devens RAB, we've set up a dedicated email address: FormerFortDevensRAB@arcadis.com. Please feel free to email us at this address with questions or requests.

Website Suggestions

For website suggestions please [email us](#).

All Project Topics [here](#).

Contact Us

Please contact Mr. Tom Lineer at thomas.a.lineer.civ@army.mil if you would like to request a document or have questions about the environmental cleanup.



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4 | COMMUNITY INVOLVEMENT & RAB UPDATE



Navigating the Former Fort Devens Website

Administrative Record

- An Administrative Record (AR) is a collection of documents containing the information that was used to select the remedy at a site.
- The AR includes the following sections:
 - Site Management Records
 - Removal Response
 - Remedial Investigation (RI)
 - Feasibility Study (FS)
 - Record of Decision (ROD)/Decision Documents (DD)
 - Remedial Design (RD)

The screenshot shows the website's navigation menu with options: About, Business With Us, Missions, Locations, Careers, Media, and Contact. Below the menu is the breadcrumb trail: Missions / Projects/Topics / Former Fort Devens Environmental Cleanup / Administrative Record. The main heading is "Former Fort Devens Administrative Record (AR)". The text explains that the AR is a collection of documents used for selecting response actions at environmental restoration sites. A link is provided for the index to the administrative record file. Below this is a section titled "01 Site Management Records" which lists various document categories such as Correspondence, ASR, Scopes of Work/Contractual Document, Site Photographs and Maps, Site Descriptions and Chronologies, Reference Documents, Federal, State, Local Technical Records, INPR, PA Report, and SI Documents.



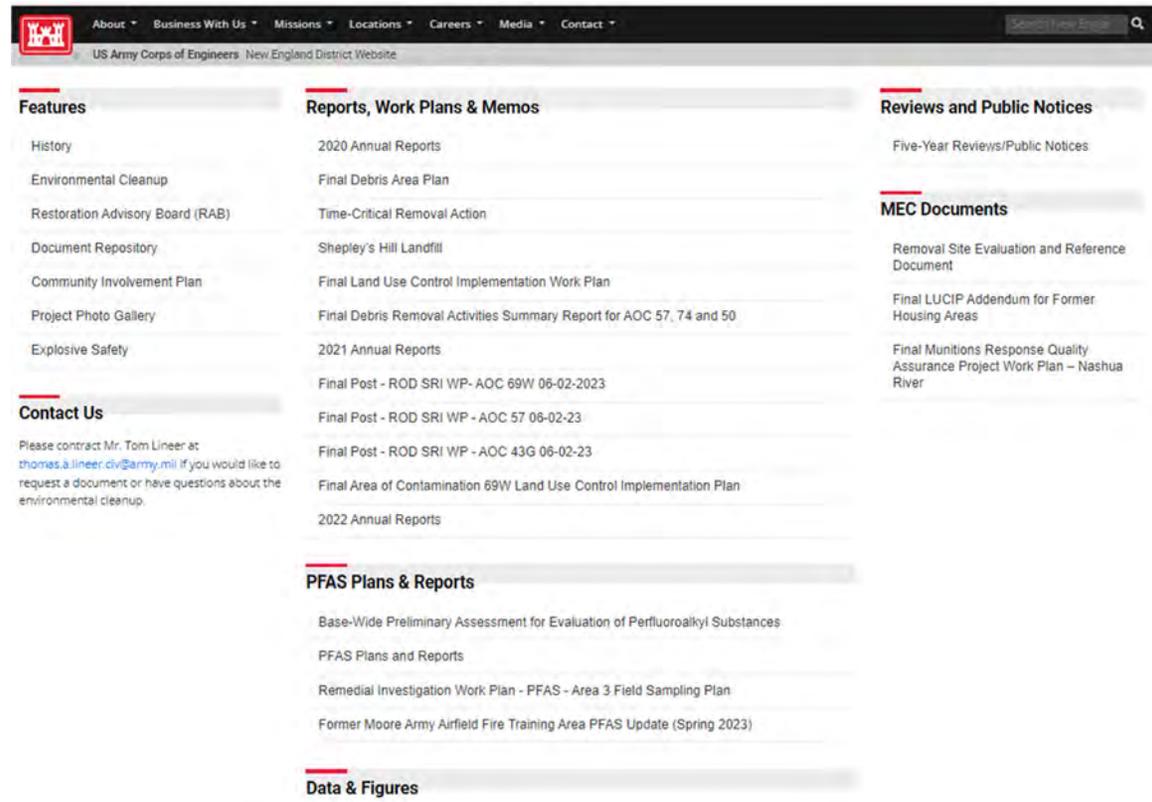
4 | COMMUNITY INVOLVEMENT & RAB UPDATE



Navigating the Former Fort Devens Website

Document Repository

- The document repository is a collection of all current documents
- This section includes:
 - Reports, Work Plans, & Memos
 - PFAS Plans & Reports
 - Data & Figures
 - Reviews and Public Notices
 - Military Munitions Documents





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4 | COMMUNITY INVOLVEMENT & RAB UPDATE



Navigating the Former Fort Devens Website

RAB Related Documents

- All RAB presentation slides and meeting minutes are located in this section
- Community update fact sheets can also be found in the RAB document repository section

Recent Document Uploads

- Aug 31, 2023: RAB slides
- Aug 31, 2023: RAB meeting minutes
- September 2023: Community update fact sheet

The screenshot shows a website navigation menu with options: Home, Locations, Careers, Media, and Contact. Below the menu is a search bar and a breadcrumb trail: Environmental Cleanup / Restoration Advisory Board. The main content area features a section titled "Restoration Advisory Board (RAB)" with a red underline. The text describes the RAB's role in environmental restoration at the former Fort Devens and announces a meeting on November 9, 2023, at 6:30 p.m. A sidebar on the right, titled "Document Repository" and highlighted with a yellow border, lists several document types: Fact Sheets, RAB Meeting Minutes, RAB Presentations, RAB Meeting Agenda, and Latest News from Former Fort Devens – September 2023. At the bottom of the main content area, there is a contact email: FormerFortDevensRAB@arcadis.com.



4 | COMMUNITY INVOLVEMENT & RAB UPDATE



Navigating the Former Fort Devens Website

Home Screen

To return to the home page, click the link that says “Former Fort Devens Environmental Cleanup” at the top of the page.

The screenshot shows the website's navigation menu with the following items: About, Business With Us, Missions, Locations, Careers, Media, and Contact. Below the menu is the text "US Army Corps of Engineers New England District Website". A breadcrumb trail includes "Missions / Projects/Topics / Former Fort Devens Environmental Cleanup / Administrative Record". The "Former Fort Devens Environmental Cleanup" link is highlighted with a yellow box and a red arrow. The main content area features a section titled "Former Fort Devens Administrative Record (AR)" with a description: "The AR is a collection of documents that form the basis for the selection of a response action at an environmental restoration site. The documents include code and are identified with unique numbers to assist in tracking and retrieval of the documents." Below this is a link: "The index to the administrative record file is linked [HERE](#)." A second section is titled "01 Site Management Records" and contains a list of items: 1.01 Correspondence, 1.02 ASR, 1.03 Scopes of Work/Contractual Document, 1.04 Site Photographs and Maps, 1.05 Site Descriptions and Chronologies, 1.06 Reference Documents, 1.07 Federal, State, Local Technical Records, 1.08 INPR, and 1.09 PA Report.



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4 | COMMUNITY INVOLVEMENT & RAB UPDATE

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Navigating the Former Fort Devens Website

Key Proposed Updates

- Update Document Repository section to include RAB documents and fact sheets
- Update the Features column to make site navigation easier
- Add introductions/summaries to each section to outline what can be found on the page



4 | COMMUNITY INVOLVEMENT & RAB UPDATE



Community update fact sheet distributed in September 2023



Digital AR continues to be populated with project documents; website updates are in progress



Military munitions annual notifications sent in June 2023



The next quarterly RAB meeting will be February 8, 2024 **(virtual)**

The Community Involvement Plan (CIP) and other information is available on the Fort Devens Environmental Cleanup website at:

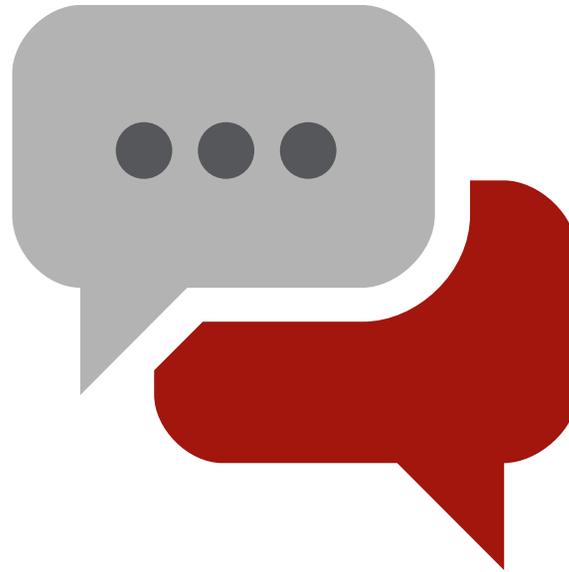
<https://www.nae.usace.army.mil/missions/projects-topics/former-fort-devens-environmental-cleanup/>

Digital AR link is now live and initial documents are available at:

<https://www.nae.usace.army.mil/Missions/Projects-Topics/Former-Fort-Devens-Environmental-Cleanup/Administrative-Record/>



5 | QUESTIONS & ANSWERS





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THANK YOU!
YOUR PARTICIPATION IS APPRECIATED!

NEXT RAB MEETING IS:
FEBRUARY 8, 2024

(Second Thursday of the month)