

# **Air Force Civil Engineer Center**

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## **Community Information Question & Answer Session**

**Former Pease AFB, NH  
PFAS Remedial  
Investigation**

**19 May 2021**

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***Battle Ready...Built Right!***



## Presenters

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**Val de la Fuente**  
BRAC Program Manager  
Air Force Civil Engineer Center  
(AFCEC)



**Hank Andolsek, CG, PG**  
Senior Hydrogeologist  
Wood plc



**Amy Quintin**  
Human Health Risk Assessor  
Wood plc



# Pease Site History Overview

Former Pease Air Force Base in Portsmouth, New Hampshire:

- USAF operated 1956 to 1991
- 21 February 1990 - National Priority Listed Superfund Site for solvent and fuels related contamination
- Eleven Records of Decisions (ROD) between 1993 and 1997
- PFAS sampling began in 2013

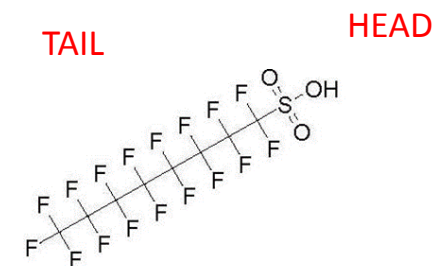




# What is PFAS?

Per- and Polyfluoroalkyl Substances (PFAS):

- Carbon chains (alkanes) of various lengths (C3-C20+) with variable fraction of fluorination
- Compounds have a head (hydrophilic) and a tail (hydrophobic and lipophobic)
- Aqueous Fire Fighting Foam (AFFF) products are typically a mix of poly- and per-fluorinated compounds
- Over 3000 PFAS compounds identified to date





# Pease PFAS Investigation History

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## 2014 – Drinking Water

- Haven Well Water supply well taken off-line by City when PFOS detected above provisional health advisory level
- Private well inventory and private well/municipal well/sentry well monitoring initiated

## 2015 - Preliminary Assessment

- Identified 21 potential AFFF release areas and down-gradient drinking water wells and surface water bodies

## 2016-2017 - Site Inspections

- Basewide site inspections conducted to assess the presence of PFAS compounds
  - 66 new monitoring wells; 149 groundwater samples; 32 porewater samples; 7 surface water samples; 87 soil samples







# Pease PFAS Investigation History

## 2018-2019 - Expanded Site Inspection

- Additional site inspection conducted to reduce uncertainties
- 32 new wells; 55 groundwater samples; 46 surface water samples; shellfish sampling (mussels, oysters, and clams)



## Fall 2020 - Pre-RI Scoping Sampling

- Further refined extent of contamination and improved Conceptual Site Model





## Public Outreach – Questionnaire Links

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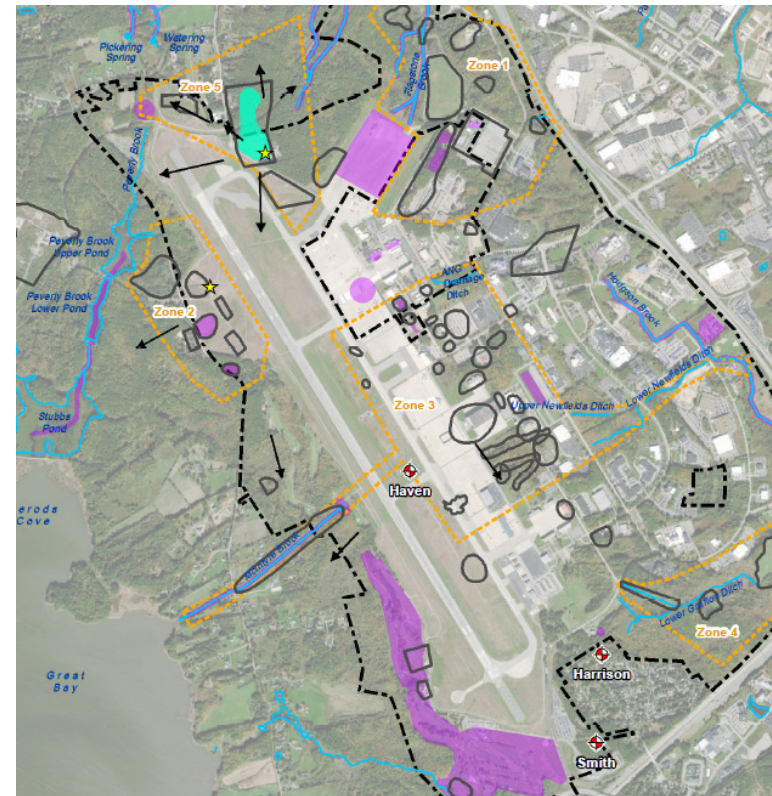
- Outreach continues to identify groundwater and surface water uses on private land in Newington, Greenland, and Portsmouth. **Questionnaires are open and responses are encouraged:**
  - [Questionnaire A](#) - If your property has not previously been inventoried.
  - [Questionnaire B](#) - If your property has an existing well and has previously been inventoried.
- BRAC Website: <https://www.afcec.af.mil/Home/BRAC/Pease.aspx>
- Newington News: <https://www.newington.nh.us/node/111/news>



# Pease Interim Actions for PFAS

## Summary of Interim Actions:

- 2014 - Private Well mitigation actions begin
- 2016 - Demonstration filters on Harrison & Smith Wells
- 2018 - Site 8 groundwater treatment plant began operating to prevent offsite migration of PFAS
- 2019 – Airfield Interim Mitigation System (AIMS) groundwater treatment plant began operating to reduce migration of PFAS to Haven Well & south
- 2020 – City of Portsmouth Grafton Road drinking water plant upgraded to provide resin/carbon treatment for Haven, Smith & Harrison supply wells





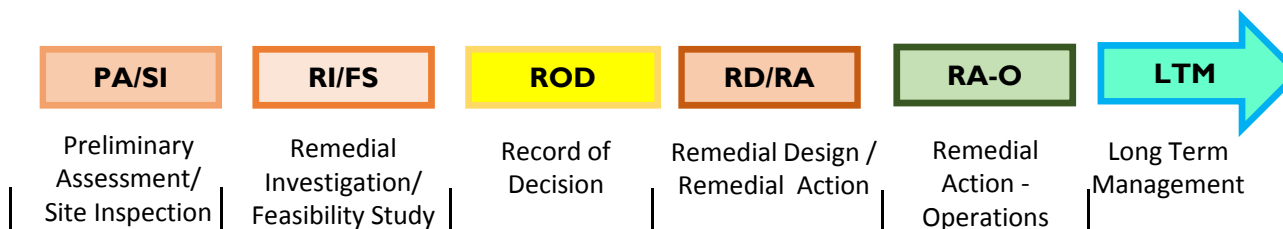


# CERCLA Overview

## Conceptual Overview of the Process



## CERCLA Nomenclature used to describe the Conceptual Process Above



Field Work Begins Spring 2021

*Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)*



# Remedial Investigation

## RI/FS

## Remedial Investigation/ Feasibility Study

- Characterize site conditions,
- Determine the nature of the waste,
- Assess risk to human health and the environment, and
- Conduct treatability testing to evaluate the potential performance and cost of the treatment technologies that are being considered

## Field work for the Remedial Investigation:

- Will be starting in the area in May 2021
- Will continue into Fall 2021
- May continue in Spring 2022

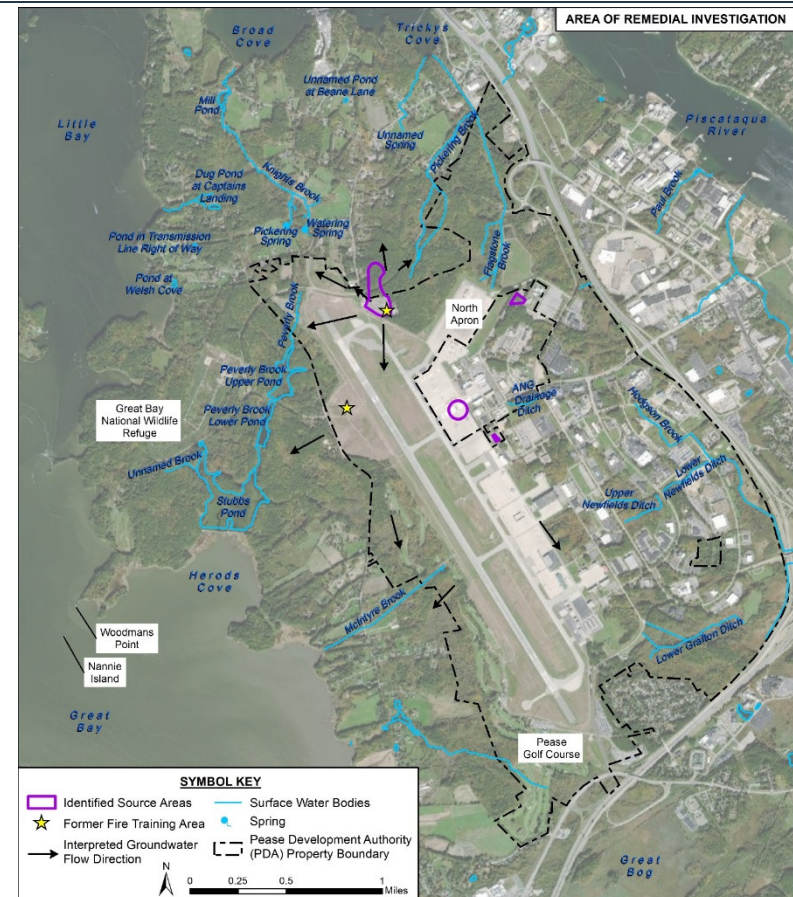




# Remedial Investigation - Nature & Extent

Overview of planned characterization activities:

- Investigate existing and potential source areas
- Identify and sample migration pathways including springs, surface water, groundwater, and storm sewers
- Evaluate potential receptors





## Remedial Investigation - Soil

Approximately 400 soil samples are planned, includes surface soil and subsurface soil

Soil sampling includes locations identified in hydric or low-lying soils that are not considered sediment

A mobile drilling rig will be in the area, which is used to collect soil samples below the surface





## Remedial Investigation - Groundwater

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28 new monitoring wells and 128 groundwater samples from new and existing wells are planned

A mobile drilling rig will be in the area, which is used to install new monitoring wells







## Remedial Investigation – Surface Water & Sediment

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Approximately 25 surface water and sediment samples are planned

Members of our team will collect samples from streams, drains, and sediment





## Remedial Investigation – Spring and Seep Sampling

Approximately 22 seep samples planned

Members of our team will collect samples from groundwater seeps and springs







## Remedial Investigation – Storm Water & Sediment

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Approximately 90 storm water samples are planned

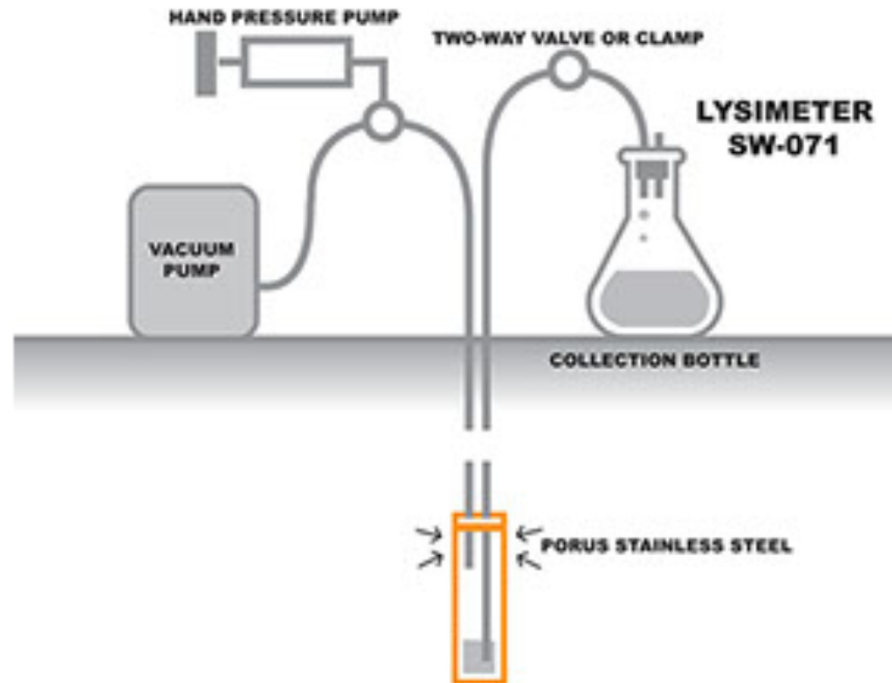
Members of our team will collect samples from storm water sediment





## Remedial Investigation – Lysimeter

- To evaluate PFAS transport in unsaturated soil, 30 lysimeters will be installed above the water table and sampled
- Lysimeters will be installed in source areas within the PDA
- Lysimeters are flush mounted and will not be visible



Cartoon from Soil Measurement System website



## Remedial Investigation - Next Steps

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- Additional work plans in preparation
  - Human Health Risk Assessment Methodology
  - Ecological Risk Assessment Methodology
- Follow-on sampling will be driven by data collected and analyzed in this initial field mobilization
  - Biota Sampling (game, produce, agricultural products) based on soil/groundwater/surface water sample results and community responses
  - Other data gaps identified from this field mobilization





## Pease Remedial Investigation - Contact Us

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Sign up to be notified of future updates on the Pease RI:

By email: [afrpa.west.pa@us.af.mil](mailto:afrpa.west.pa@us.af.mil)

To ask specific questions or provide input:

Wood PLC Contact Information

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# Pease Remedial Investigation - Questions

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Remedial  
Investigation  
Field Work 2021

Questions?

