

Air Force Civil Engineer Center



Pease RAB Meeting

Former Pease AFB, NH

14 September 2021

Battle Ready...Built Right!



Agenda

- **Welcome, Introduction, RAB Business** – Ona Ferguson (Consensus Building Institute)
- **Air Force Cleanup Update** – Val de la Fuente (AFCEC)
- **Open Discussion Time**
- **Drinking Water Update** – Brian Goetz (City of Portsmouth)
- **Public Comments**
- **Meeting recap and Next Steps** – Ona Ferguson (Consensus Building Institute)
- **Adjourn**



Public Comment

Goal: Provide opportunity for members of the public to comment.

Process:

- Public members e-mail Linda Geissinger by 6:45 PM ET if you would like to make public comment:
linda.geissinger@us.af.mil
- 3 min limit per speaker.
- Speakers will be notified when they have 30 seconds remaining & at the 3 min mark.



Welcome

Chris King

**New Pease BRAC Environmental Coordinator
(BEC)**



RAB Member Business

Introductions

Approve June 2021 meeting summary

Review membership process

Air Force Civil Engineer Center



**Remedial Investigation
Update**

Former Pease AFB, NH

14 September 2021

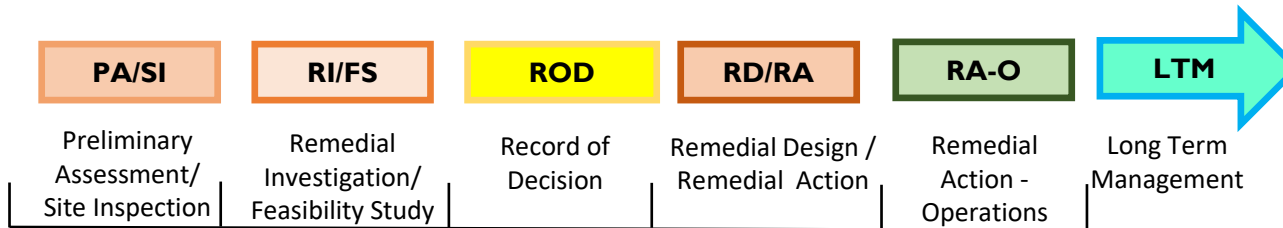


CERCLA Overview

Conceptual Overview of the Process



CERCLA Nomenclature used to describe the Conceptual Process Above



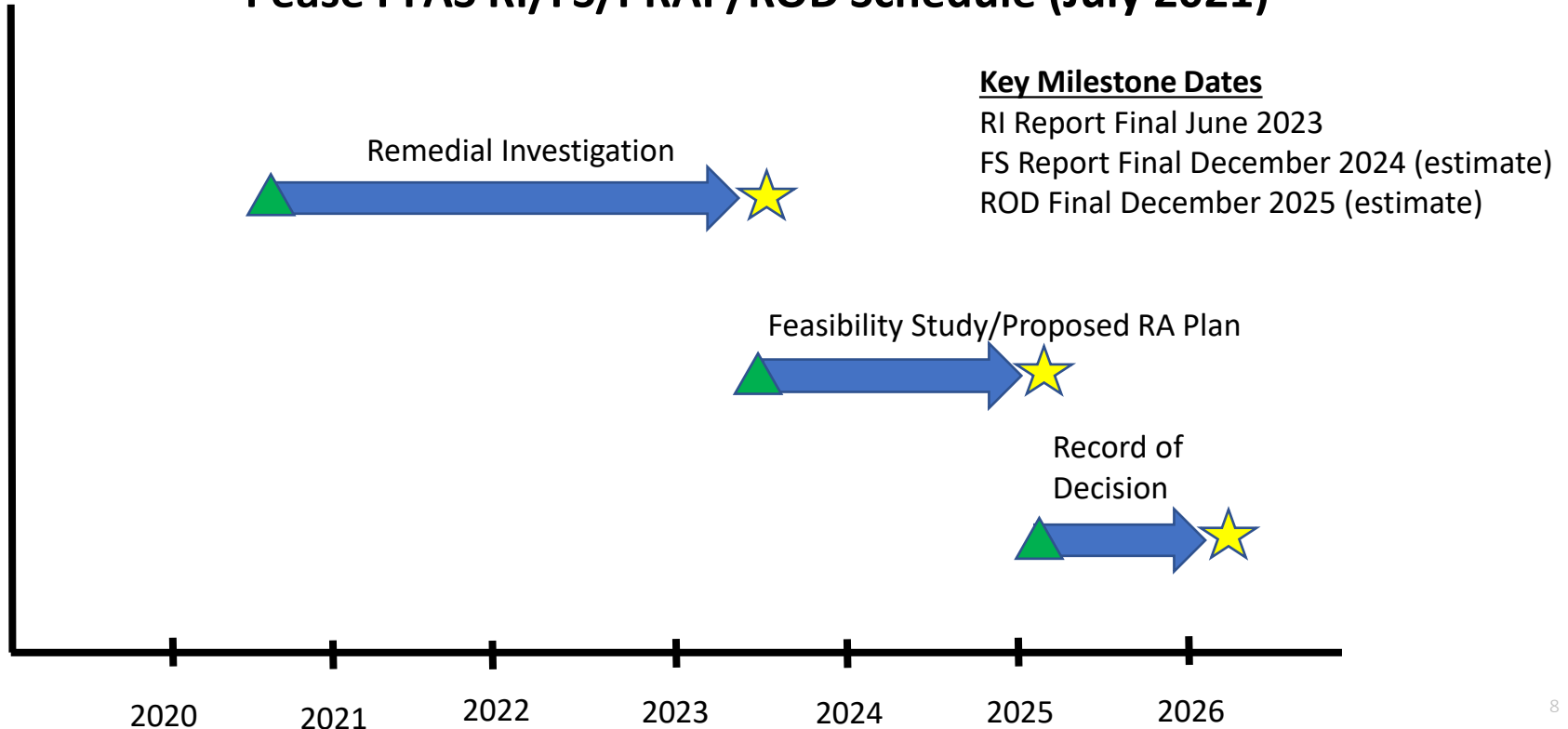

Field Work Ongoing

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



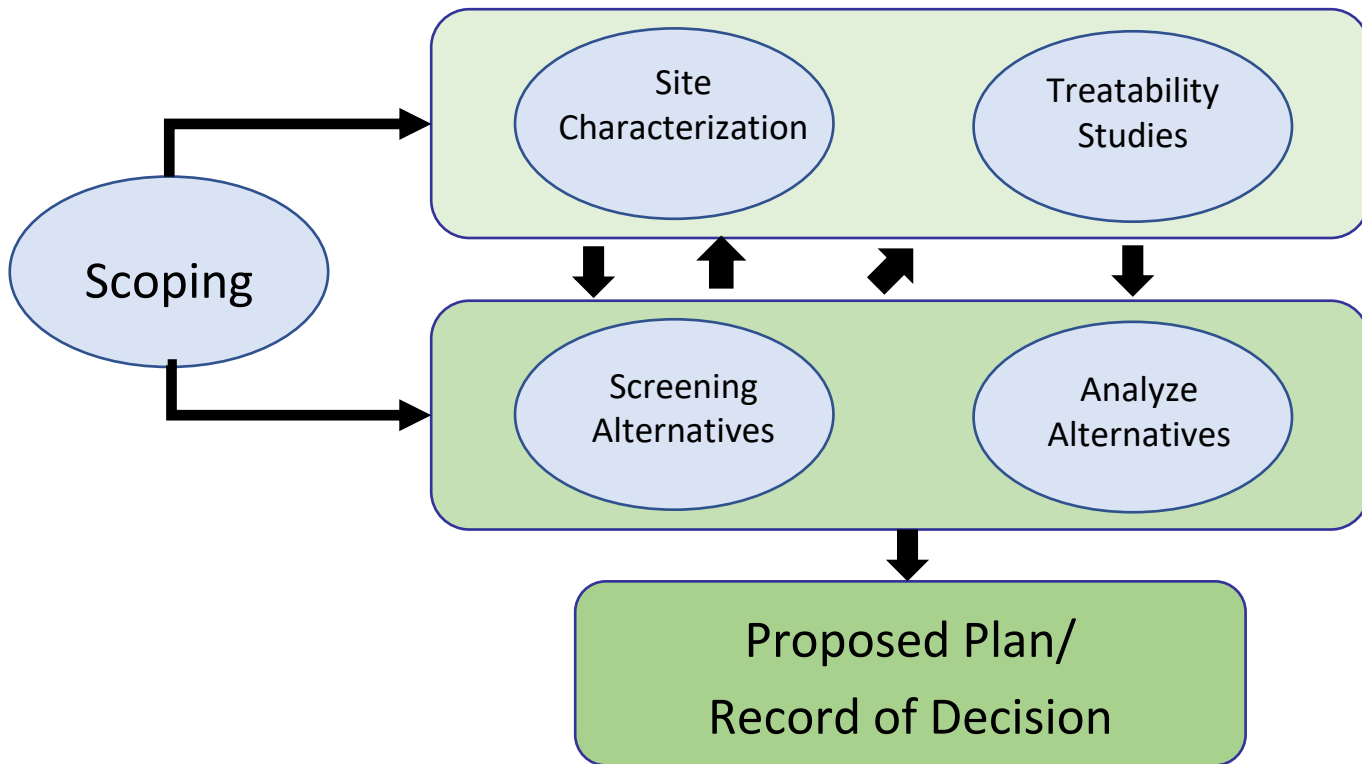
Remedial Investigation (RI) Schedule

Pease PFAS RI/FS/PRAP/ROD Schedule (July 2021)





Remedial Investigation (RI) Update





Remedial Investigation (RI) Update

- RI Work Plan finalized on April 30th following USEPA and NHDES approval
- Field Work began May 3rd
 - First sampling focuses on soil in known and potential source areas, soil-groundwater transport, groundwater, sediment, surface water, and storm water
 - Backyard Produce sampling has been conducted
 - RI is iterative and sampling will include:
 - ❖ Additional Biota Sampling
 - ❖ Data gaps



RI Update – Baseline Human Health Risk Assessment (BHHRA) Work Plan

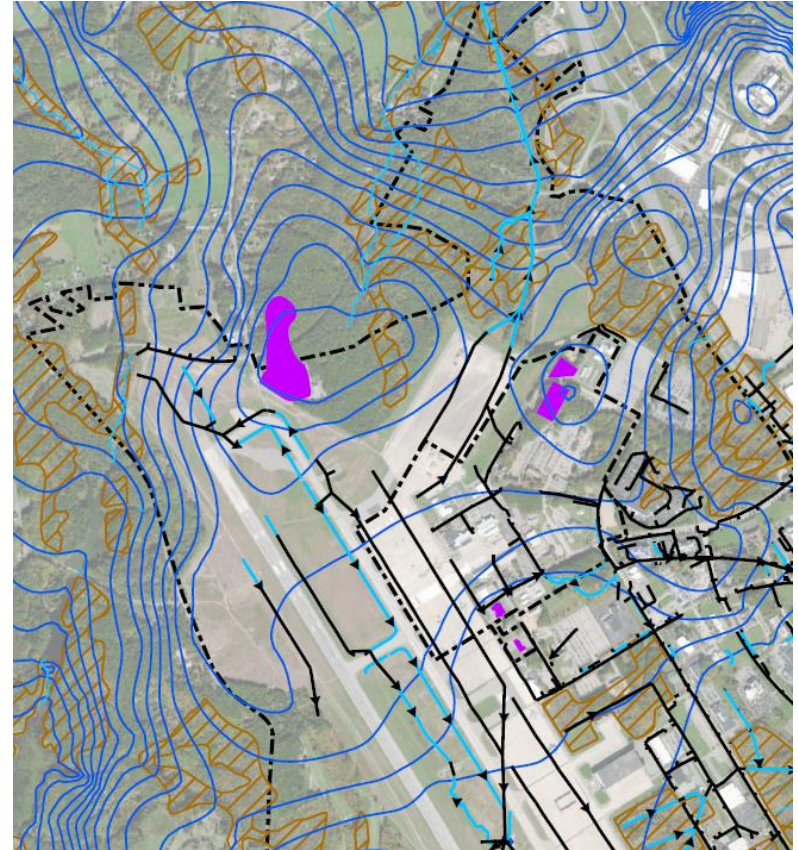
- Human health risk assessment work plan = drafted
 - Being finalized following USEPA and NHDES review
 - Work plan contains methodology to evaluate potential risks to human health including
 - USEPA toxicity values for PFOS, PFOA, and PFBS
 - Exposure scenarios that will be evaluated (residents, farmers, workers, etc)
 - Exposure assumptions that will be used (exposure frequency, ingestion rates, body weights, etc)
 - Equations and methodology that will be used to evaluate risk



RI Overview

Overview of planned investigation:

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





RI Overview

Components of investigation:

- **Direct push subsurface soil investigation** at known source and suspected areas and investigation areas
- **Lysimeter installation** at known source areas for F&T
- **Surface soil sampling** along the airfield and beyond
- **Storm water system** reconnaissance and baseflow sampling
- **Spring/seep** sampling of discharging groundwater
- **Hydric soil and shallow groundwater** sampling
- **Monitoring well** installation and sampling
- **Resampling** of perimeter wells
- **Southern Well Field** Investigation



RI Field Work – Completed and Ongoing Activities



Direct push soil investigation



Lysimeter installation



RI Field Work – Completed and Ongoing Activities



Crash area surface soil sampling



Storm water sampling



RI Field Work – Completed and Ongoing Activities



Surface water & sediment sampling



Shallow groundwater & hydric soils sampling



Seep sampling along the western boundary of the airfield



RI Field Work – Completed and Ongoing Activities



Deep bedrock well packer sampling



Non-potable private well sampling



Monitoring well sampling



RI Field Work – Completed and Ongoing Activities



Monitoring well installation



Surface geophysical surveying



RI Field Work – Completed and Ongoing Activities

Garden sampling

- Sampling started August 23rd
- 12 Properties were sampled out of 16 planned
 - Each property has PFOS, PFOA, PFBS, PFNA and/or PFHxS detected in irrigation water and/or hydric soil
 - Each property either grows edible crops or keeps animals for consumption
- Sampling included:
 - Fruits/vegetables/poultry eggs/pasture grass
 - Co-located irrigation water, garden soil, and/or hydric soil



RI Field Work – Completed and Ongoing Activities



Backyard produce and pasture grass sampling



RI - Upcoming Source Area Fieldwork

- Additional soil sampling in identified or suspected source areas
- Direct push sampling in Great Bay National Wildlife Refuge Fall 2021
- Follow-up subsurface soil sampling at known source areas in Spring 2022





RI - Upcoming Migration Pathway Fieldwork

- Data gap evaluations
- Bedrock subsurface geophysics
- Bedrock packer sampling
- Groundwater monitoring well step-outs Fall 2021
- Deep bedrock well installation
- Monitoring well sampling
- Stormwater system rain event sampling





RI – Upcoming Receptor Fieldwork

- Shellfish sampling
- Freshwater fish sampling
- Evaluation of Other Biota

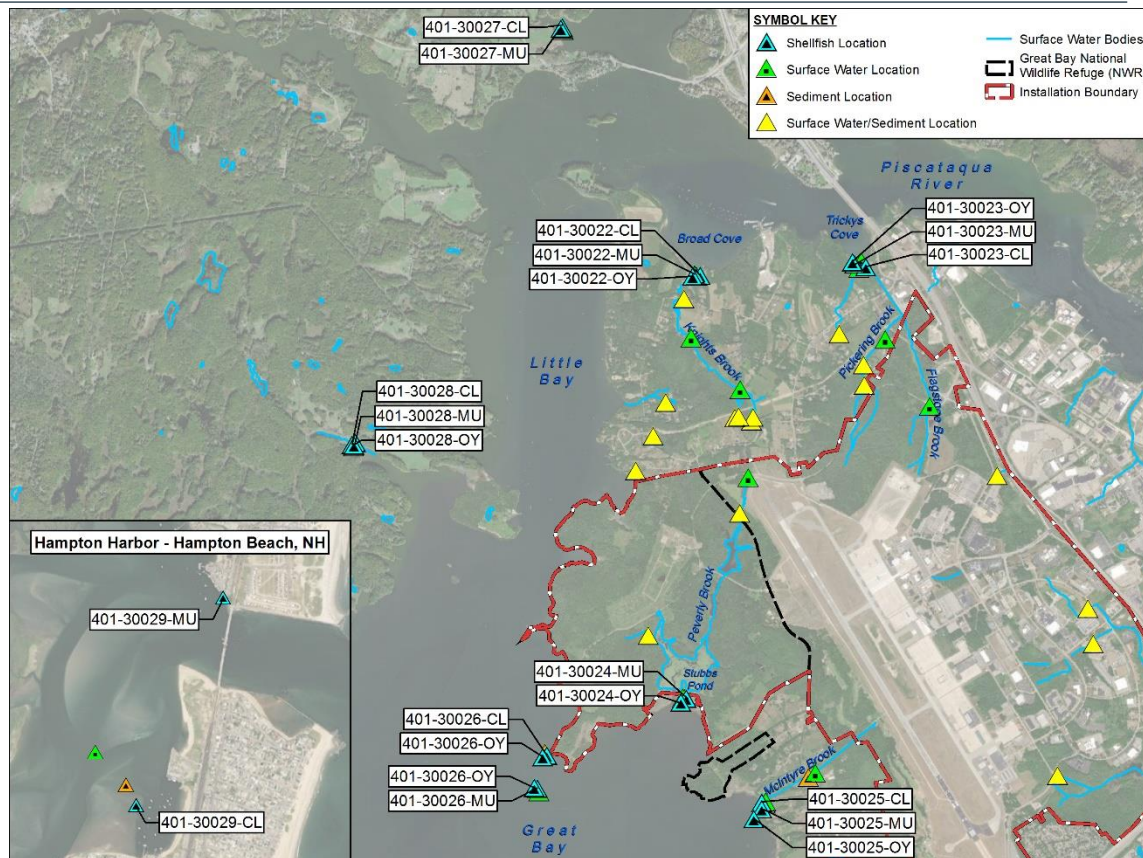




Expanded Site Inspection Bivalve Sampling

➤ Previous Bivalve Sampling

- 2018/2019
- Clam/oyster/mussel





Remedial Investigation – Planned Bivalve Sampling

➤ Bivalves

- Additional bivalve sampling will be conducted
- A work plan is being prepared with execution anticipated this fall
- The work plan will include an evaluation of data gaps based on the previous bivalve sampling
- Sampling will include resampling several drainages, and sampling identified data gaps
- Species anticipated are oysters, clams and mussels





Remedial Investigation – Planned Fish Sampling

➤ Freshwater Fish in Peverly Drainage

- Fishing is currently prohibited within this area, however poaching may occur
- A work plan is being prepared with execution anticipated this fall
- Species anticipated are largemouth bass and sunfish
 - Species may change if recent restoration efforts changed the habitat



Sunfish



Largemouth
Bass





Remedial Investigation – On-Going Biota Evaluation

➤ Maple Sap/Honey - Sampling under evaluation

- Maple Sap - correspondence with VTDEC and NYSDEC
- Further evaluation into potential relevance is on-going



➤ Game sampling is not currently anticipated

- NH Fish & Game deer data exists for Great Bay National Wildlife Refuge
- Further evaluation will be conducted using desktop approaches to assess adequacy of existing deer database, and potential exposure to other types of game including turkeys and waterfowl
- Sampling will be reevaluated following the outcome of the desktop analysis



Remedial Investigation – No Lobster/Bass Sampling

- Further evaluation has been conducted - Lobsters and Striped Bass will not be sampled
 - **Main Outcome = Could not draw conclusions from detections**
 - American Lobster/Striped Bass = migratory/mobile species within the Bays, Piscataqua River, and Atlantic Ocean
http://www.lobsters.unh.edu/offshore_fishery/faq/faq.html
 - Other documented sources of PFAS entering the estuaries (Tavasoli, E., 2020) would make designing a technically sound sampling strategy that could be confidently relied on to assess CERCLA risk posed by the Pease Site difficult or impossible
 - Bivalves remain the best indicator of potential risks to shellfish in the bays as they live directly in sediment and do not migrate



Remedial Investigation Timeline

Field work for the Remedial Investigation:

- Started in May 2021
- Will continue into Fall 2021
- May continue into Spring and Summer 2022

Draft RI Report scheduled December 2022





Open Discussion

- **Opportunity for RAB members to discuss additional topics**



Break

Break

Members of the public who would like to make public comment should email Linda Geissinger by 6:45pm at linda.geissinger@us.af.mil



Pease Water Treatment System Update

September 14, 2021

Pease Restoration Advisory Board

Pease Water Treatment Facility – Two Years of Construction

- Before – April 2019



- After – April 2021

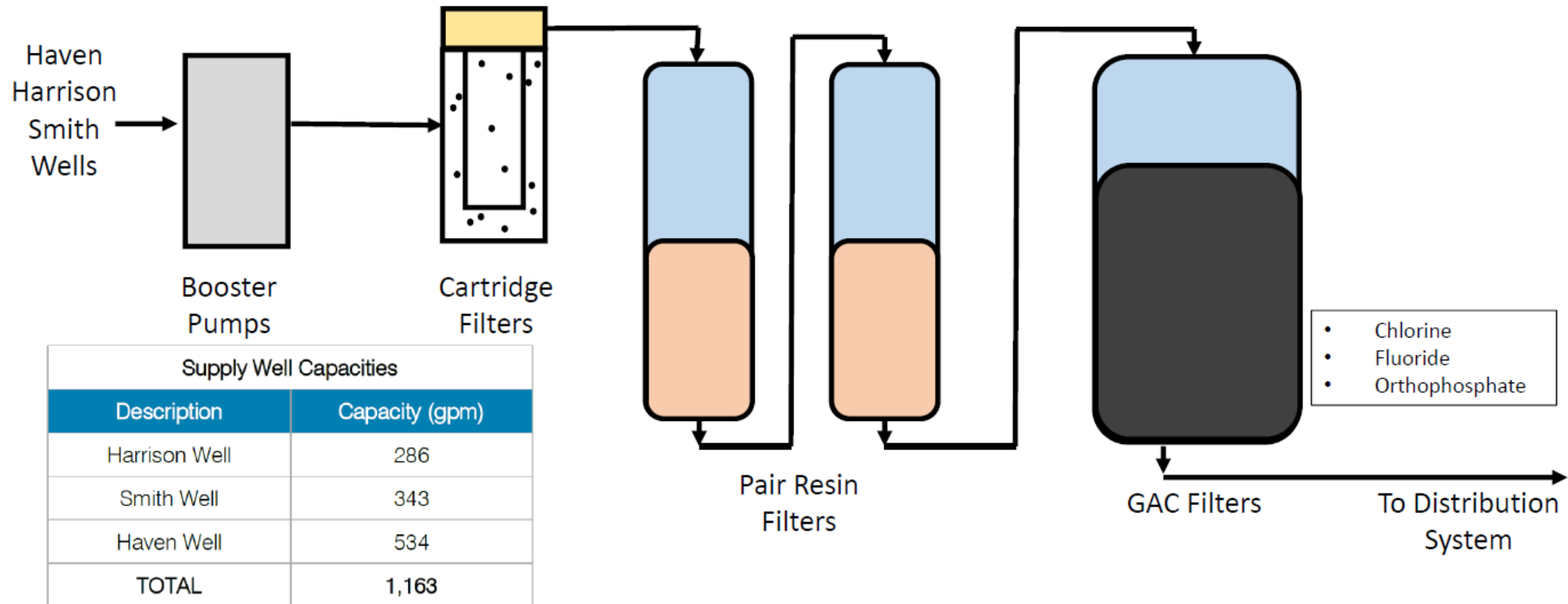


Grafton Road Well Treatment System:

Dual Filtration System:

- Resin Filters
- Activated Carbon Filters

Final Design Process Schematic



Final Pease Water Treatment System Filters

Activated Carbon Filters



Resin Filters



Haven Well Reactivation: Testing in 2021

- Well pumped briefly through Pease Water Treatment Facility (to waste) and sampled for PFAS compounds
 - Non detection after treatment
- 5 Day pump test to AIMS Treatment System – May 3rd to 8th
- Comprehensive Water Quality Analysis Performed at end of test
 - All regulated drinking water contaminant parameters sampled
 - No VOCs, SOCs, detected
 - All other parameters meet drinking water standards

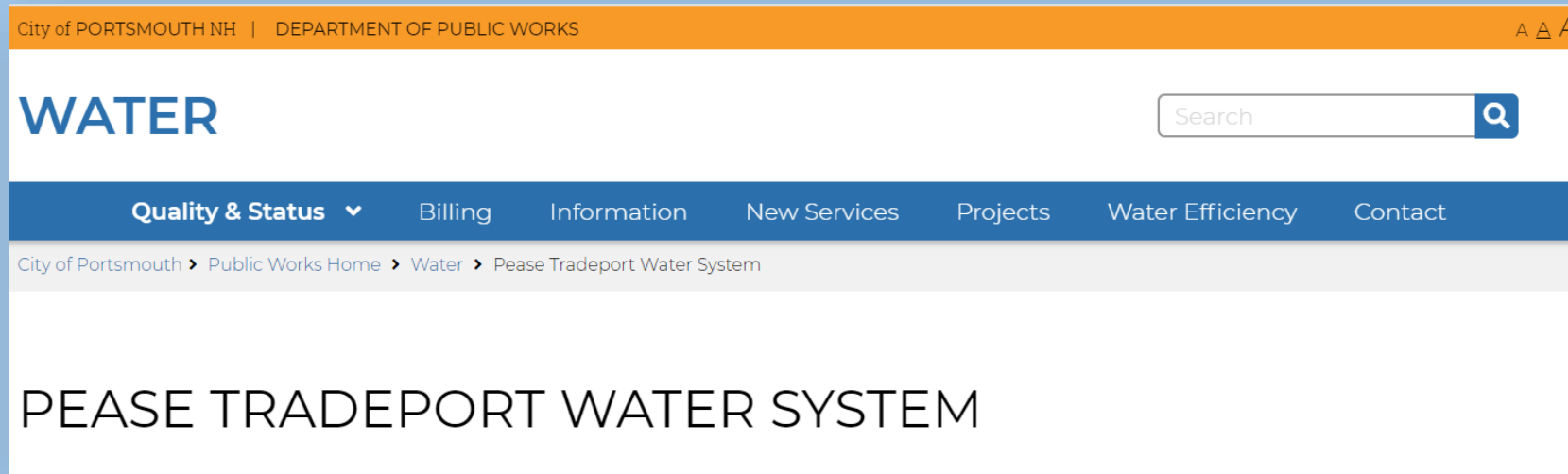
Haven Well PFAS Sample Results

- Significant drop in levels from 2014

	2014 (Ave of 2 Samples) PPT	2021 (Ave of 3 Samples) PPT
PFAS Sampling (New Hampshire Regulated Compounds)		
Perfluorohexanesulfonic Acid (PFHxS)	895	129
Perfluorooctanoic Acid (PFOA)	341	47
Perfluorononanoic Acid (PFNA)	17	4
Perfluorooctanesulfonic Acid (PFOS)	2,450	427

* PPT = Parts per Trillion

Haven Well Approval - Documentation

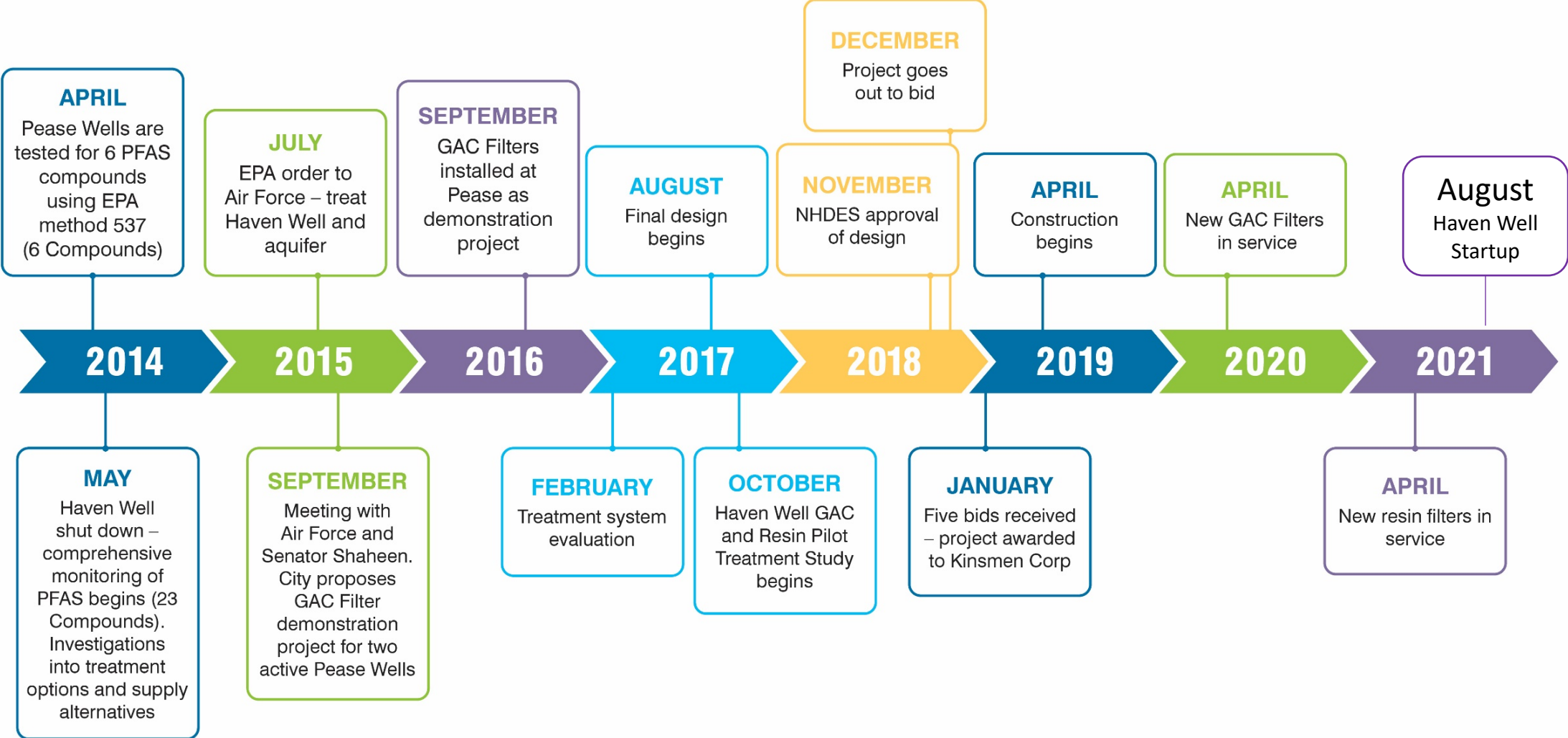


- Haven Well Treatment Certification Letter to NHDES - July 8, 2021
- Haven Well Reactivation Report - July 12, 2021
- NHDES Approval Letter - July 23, 2021

Haven Well Startup – August 3, 2021



PEASE TRADEPORT PFAS TIMELINE:



Questions





Public Comment

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RAB Meeting Recap

- **Meeting Recap**
- **Action Items**
- **Next Steps**
- **Next meeting: Tuesday December 7, from 5-8pm**



Adjournment

