Pease RAB Meeting

05 December 19

Agenda

- **Welcome, Introduction, RAB Business – Ona Ferguson (Consensus Building Institute)**
- **Air Force Cleanup Update – Roger Walton (AFCEC)**
  - *DOD Review of State Regulations*
  - *Expanded Site Inspection Finalization*
  - *Remedial Investigation Scoping Process*
  - *Five-Year Review*
- **Open Discussion Time**
- **New Hampshire Fish & Game Update – Glenn Normandeau (NHF&G)**
- **City of Portsmouth Update - Brian Goetz (City of Portsmouth)**
- **Public Comments**
- **Open Discussion Time**
- **Meeting recap, upcoming meeting date – Ona Ferguson**
- **Adjourn**

Welcome & Introduction

Ona Ferguson
Consensus Building Institute

RAB Business

- **Expiring Terms:**

Andrea Amico	Dec. 2019
Susan Chamberlin	Dec. 2020
Ted Connors	Dec. 2020
Peggy Lamson	Dec. 2019
Dennis Malloy	Dec. 2019
Mark Mattson	Dec. 2019
Mindi Messmer	Dec. 2019
Jameson Paine (Community Co-Chair)	Dec. 2020
Lulu Pickering	Dec. 2019
Gene Schrager	Dec. 2019

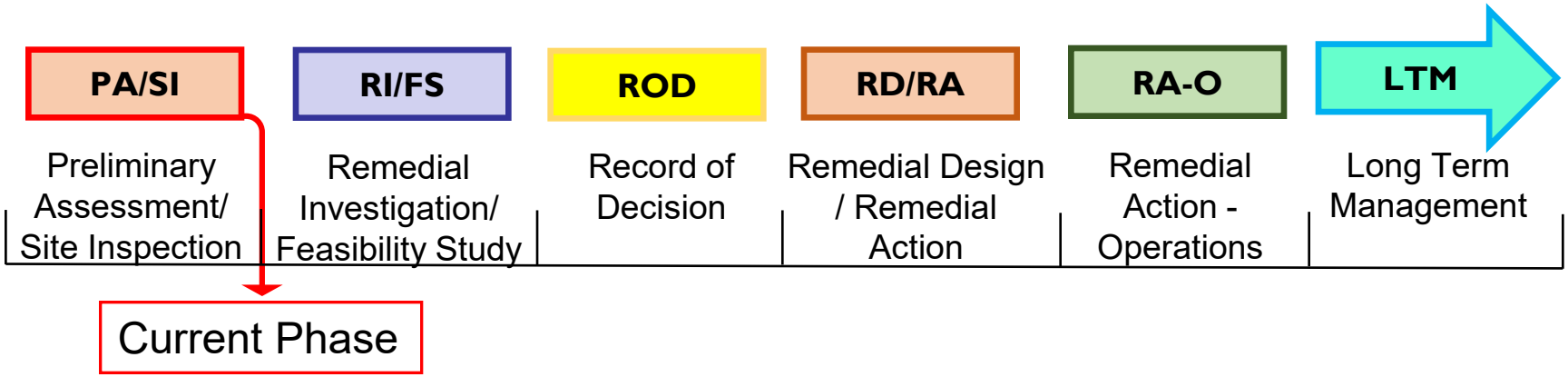
- **Selection of new community co-chair**
- **Applications for 2020 appointments (March)**

Roger Walton
Air Force Civil Engineer Center

DOD Review of State Regulations

- The Department of Defense evaluates state laws and regulations regarding PFAS for applicability and consistency of response actions among the military services
- The Air Force will continue to address PFOS and PFOA in drinking water from Air Force activities under the federal cleanup law (CERCLA) using EPA's lifetime health advisory. When public or private drinking water wells have PFOS or PFOA levels above the EPA lifetime health advisory from Air Force (AF) activities, the AF provides alternate drinking water, which includes installing treatment systems to remove PFOS/PFOA to below the EPA advisory levels or connection to municipal water

CERCLA Overview



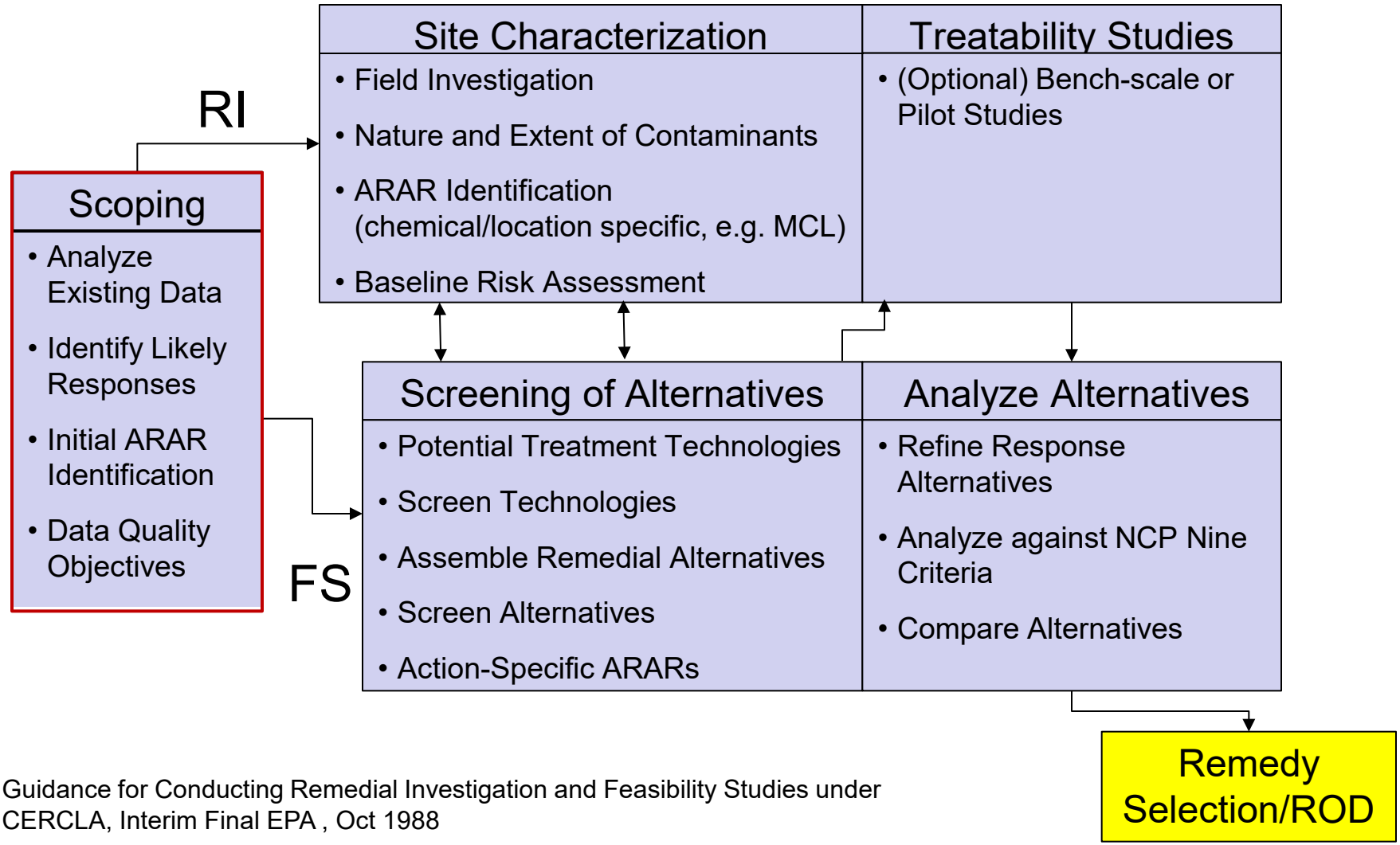
Expanded Site Inspection

- Draft final submitted to regulators on 8 November 2019
- Updated data provided to RAB during week of 18 November
  - Link to complete document provided on 22 November
- Regulator comments are due in mid-December 2019
- Document will become final and released to the public upon resolution of regulator comments

Expanded Site Inspection

- **Under the Defense Environmental Restoration Program (DERP), there are three possible outcomes from the Site Inspection Phase:**
  - *There is no need for action (all contaminants detected lower than screening values set at Hazard Index of 0.1)*
  - *There is a need for immediate action (contamination detected at levels that present an imminent hazard to human health)*
  - *There is a need for remedial investigation*
- **The draft final ESI documents exceedances of one or more screening levels for PFOS or PFOA, but not at levels warranting immediate action**
- **Recommendation is to proceed to Remedial Investigation phase consistent with DERP, CERCLA, the NCP, and the Pease Federal Facilities Agreement**

CERCLA RI/FS Process



Guidance for Conducting Remedial Investigation and Feasibility Studies under CERCLA, Interim Final EPA , Oct 1988

Scoping Process

- **Analyze Existing Data**
  - Conceptual Site Model
  - Identify Data Needs
- **Identify Likely Responses**
  - Potential Technologies
  - Identify Treatability Study Needs
- **Initial ARAR* Identification**
  - Chemical Specific
  - Location Specific
- **Data Quality Objectives**
  - Site Characterization
  - Risk Assessment

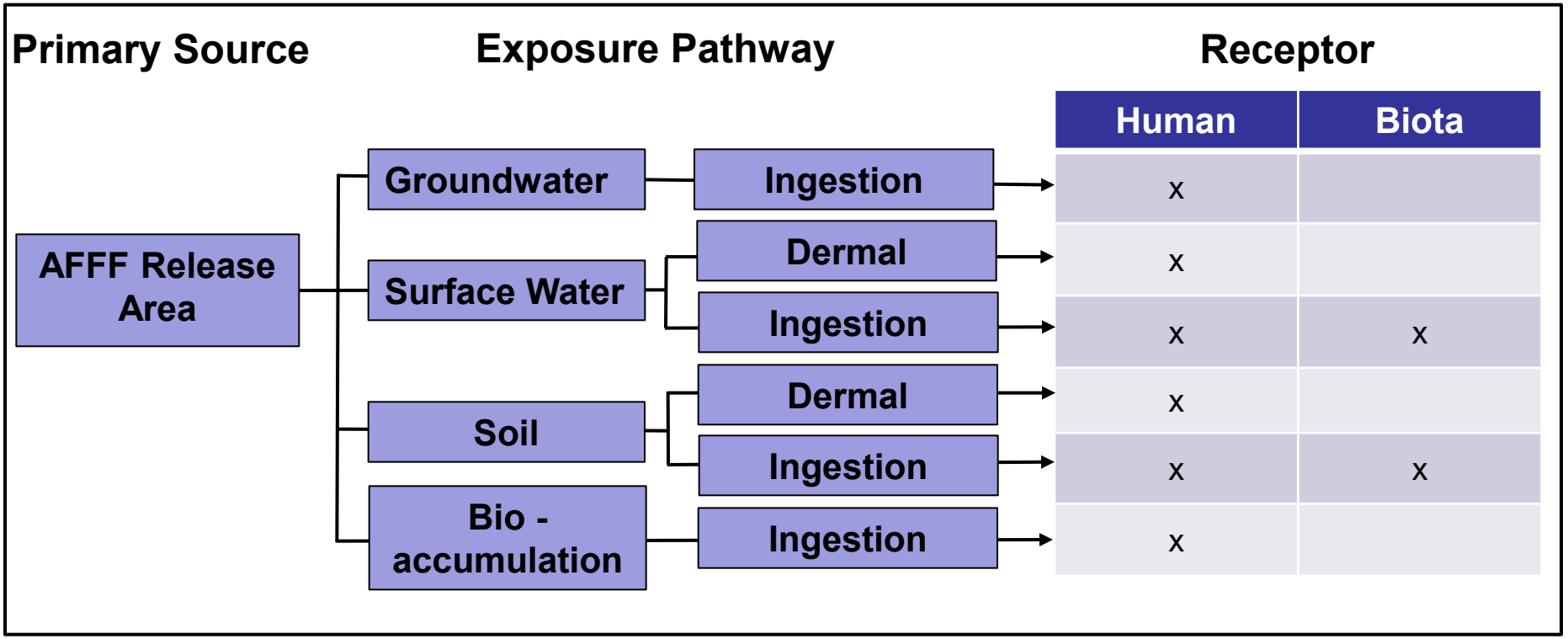
**Applicable or Relevant and Appropriate Requirement*

Conceptual Site Model (CSM)

- **Numerous options**
  - Pathway-Receptor Diagram
  - Pictorial
  - GIS-Based
- **Developed iteratively to:**
  - Ensure completeness of site evaluation
  - Identify data gaps and needs
  - Identify and manage uncertainty
  - Support risk assessment and remedy decisions

Preliminary CSM

- **Often uses pathway-receptor network diagram or Site Conceptual Exposure Model (SCEM)**



CSM Example

Fire Foam

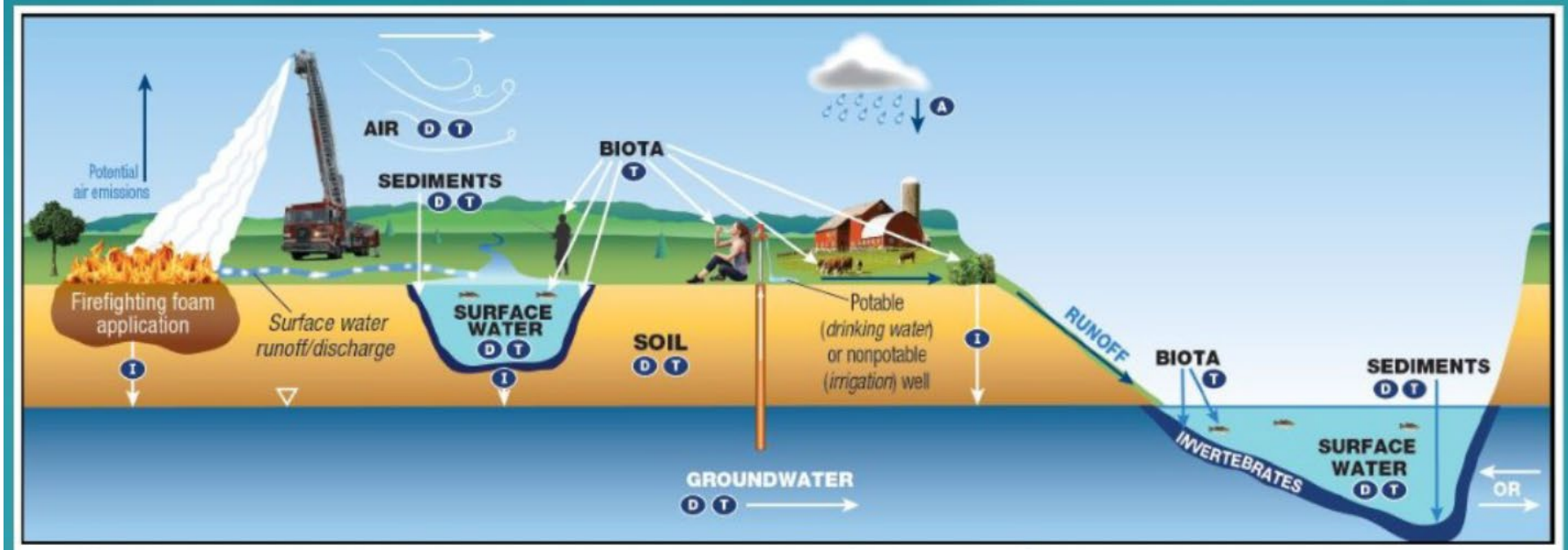


Figure 1. Conceptual site model for fire training areas.

Developing Data Needs

- **Use pathway analysis and baseline CSM**
  - Complete or potentially complete pathways
  - Eliminate incomplete pathways from further analysis
- **Identify media of interest**
  - Soil
  - Groundwater
  - Surface Water
  - Biota
- **Gather data to evaluate possible response technologies**
- **Seek regulatory agreement on data uses prior to sampling**
  - Minimize re-collection
  - Definitive data for risk assessments

RI Work Plan

- **Used to document the decisions made during scoping**
- **Summarizes site background**
- **Presents the working CSM**
- **Provides rationale for sampling**
- **Supplement with:**
  - Field Sampling Plan(s)
  - Quality Assurance Project Plan

Five-Year Review

- **Per section 300.430(f)(4)(ii) of NCP, the DoD Component shall conduct a 5-year review if a selected remedial action results in any hazardous substances or pollutants or contaminants remaining at the site above levels that allow for UU/UE***
- **First review triggered by the initiation of the first remedial action that leaves waste in place**
  - Pease review triggered by Landfill 5 Record of Decision – September 1994
  - First Five-Year Review completed in September 1999
- **Current review is the fifth Five-Year Review**
  - Completed 24 Sept 2019
  - EPA concurrence with protectiveness statements provided on 26 Sept 2019
  - Public notice of availability of the document published on 11 October 2019

UU/UE = Unlimited Use and Unrestricted Exposure

Five-Year Review

- **Sites Reviewed:**
  - **Zone 1 – Landfill 5 (Site 5), Railway Ditch, Pauls Brook (Site 23), and Flagstone Brook (Site 26);**
  - **Zone 2 – Burn Area 1 (Site 22), Leaded Fuel Tank Sludge Area (Site 10), Peverly Ponds and Bass Pond (Site 24), and Burn Area 2 (Site 37);**
  - **Zone 3 – Building 113 (Site 32), Building 229 (Site 33), Building 222 (Site 34), Building 226 (Site 35), Building 119 (Site 36), Building 120 (Site 38), Building 227 (Site 39), Former Building 22 (Site 49), and Building 234 (Site 73);**
  - **Zone 4 – Landfill 6 (Site 6) and Grafton Ditch (Site 20);**
  - **Zone 5 – Fire Department Training Area 2 (Site 8) and Knights Brook and Pickering Brook; and**
  - **Zone 7 – Old Jet Engine Test Stand (Site 45)**

Five-Year Review Results

- **All CERCLA remedies are currently protective of human health and the environment**
- **Issues and Recommendations**
  - Zone 3, Site 39 – Vapor Intrusion potential; complete ROD Amendment by December 2020
  - Zone 5, Site 8 – Nature and Extent of PFOS/PFOA; prepare a new ESD to revise the groundwater management zone by December 2020
  - Long-term monitoring should continue for each Zone/site.
  - Benzene concentrations remain elevated in Site 10 groundwater, despite the sulfate-enhanced bioremediation pilot study completed in 2016 with performance monitoring conducted from November 2016 to June 2018. Long-term monitoring should continue in Zone 2 to evaluate additional progress
  - Performance monitoring should continue in Zone 3 (Sites 32, 36, and 49) to evaluate pilot study efforts. These data should be reviewed to identify ways to further optimize remedial activities

Five-Year Review Results

- **Issues and Recommendations (cont.)**
  - An Explanation of Significant Differences or ROD Amendment should be prepared to document the elimination of groundwater extraction and treatment as a component of the remedy at Zone 3, Sites 32/36
  - The effect of extraction and reinjection of groundwater within Zone 3 for PFOS/PFOA treatment should be evaluated for Zone 3 long-term monitoring sites (Sites 32, 36, 39, 49, 73), and Zone 5/Site 8
  - A modification to the Zone 3 ROD should be prepared to address all site contaminants, including the newly discovered PFOS/PFOA, through the operation of the Airfield Interim Mitigation System
  - A modification to the relevant RODs should be prepared to change the groundwater CGs for arsenic to the Pease background concentration at Landfill 5, Sites 10/22, Landfill 6, and Site 8; for manganese to the Pease background concentration at Site 8 and Site 45; and for vanadium to 86 micrograms per liter based on risk for Zone 3

Open Discussion Time

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

New Hampshire Fish & Game

Glenn Normandeau

Director, New Hampshire Fish & Game

Pease Tradeport
Water Treatment System Update

Pease Restoration Advisory Board

December 5, 2019

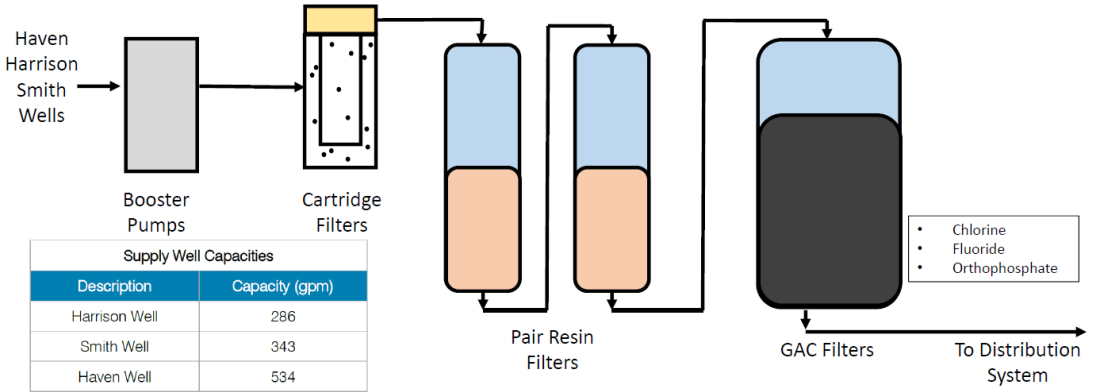
Grafton Road Well Treatment System:

Final Design and Treatment Components

<u>Dual Filtration System</u>:

- Resin Filters
- Activated Carbon Filters

Final Design Process Schematic



Supply Well Capacities

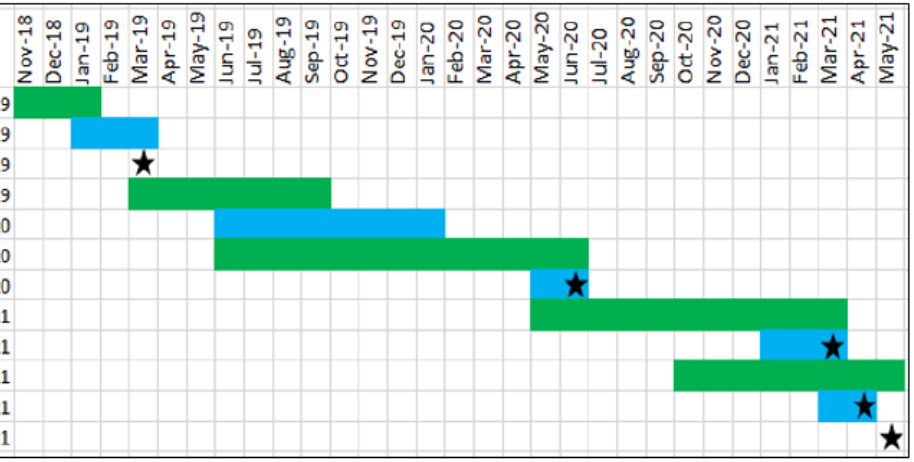
Description	Capacity (gpm)
Harrison Well	286
Smith Well	343
Haven Well	534
TOTAL	1,163

Pease Water Treatment Facility - Construction In Progress:

New Carbon Filter Building - Delivery and Installation – October/November 2019

Construction Schedule:

Activity	Duration	Start	Finish
Bidding	61	11/15/2018	1/15/2019
Contract Award	56	1/15/2019	3/12/2019
Notice to Proceed	0	3/12/2019	3/12/2019
Submittals	181	3/13/2019	9/10/2019
Equipment Procurement	224	6/4/2019	1/14/2020
Phase 1 - Building Addition & GAC Filters	379	6/10/2019	6/23/2020
GAC Filters On-Line with Smith & Harrison	27	5/27/2020	6/23/2020
Phase 2 - Resin Skid, Cartridge Filters, Booster Pumps	279	5/29/2020	3/4/2021
Full System Start-Up with Smith & Harrison	48	1/15/2021	3/4/2021
Phase 3 - Admin Area, Site Work, Haven Well Online	200	10/15/2020	5/3/2021
Full System Start-Up with Haven	42	3/4/2021	4/15/2021
Final Completion	4	4/29/2021	5/3/2021



Milestones:

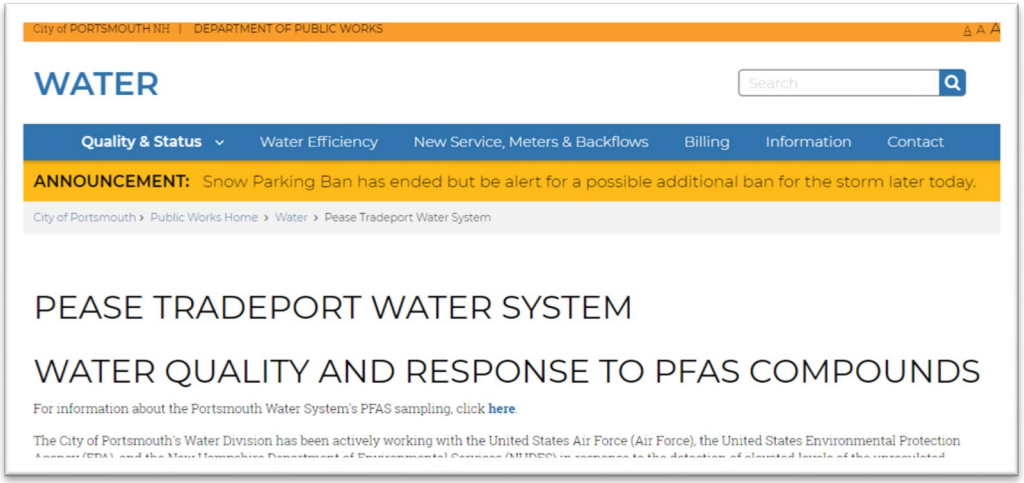
- Spring 2019 – Begin Construction
- June 2020 – New GAC Filters (switchover of Harrison/Smith Wells)
- Spring 2021 – Startup with Resin/GAC filters (Harrison/Smith Wells)
- Summer 2021 – Haven Well Startup

Next Significant Milestone –
New GAC Filters

Demonstration Filter Carbon Changeout: November 2019

Water Supply and Quality Updates

www.cityofportsmouth.com/publicworks/water/pease-tradeport-water-system



City of PORTSMOUTH NH | DEPARTMENT OF PUBLIC WORKS

WATER

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ANNOUNCEMENT: Snow Parking Ban has ended but be alert for a possible additional ban for the storm later today.

City of Portsmouth › Public Works Home › Water › Pease Tradeport Water System

PEASE TRADEPORT WATER SYSTEM

WATER QUALITY AND RESPONSE TO PFAS COMPOUNDS

For information about the Portsmouth Water System's PFAS sampling, click here.

The City of Portsmouth's Water Division has been actively working with the United States Air Force (Air Force), the United States Environmental Protection

City of Portsmouth
Department of Public Works

October 28, 2019

PEASE TRADEPORT WATER SUPPLY UPDATE

The City's engineering consultant continues to sample the performance of the activated carbon filters based on the amount of water treated. With the newly adopted New Hampshire Maximum Contaminant Levels (MCLs) for PFOA, PFOS, PFHxS and PFNA in place we are now sampling at the recommended lab detection limit which goes down to 2 ppt. Per NHDES, any sample with "estimated numbers below the reporting limit are considered non-detects." Due to the loss of the Haven Well, in order to meet the Pease Tradeport Water System demand, water from the Portsmouth water system is boosted into the Pease system and blended with the treated water from the Harrison and Smith wells. The following table provides a summary of the most recent treatment system testing results. Comprehensive sample data since the filters were changed out in November 2018 is attached. Per NHDES rules, after October 1, 2019, we will begin to report the data as a 4-quarter rolling average.

PFAS Sampling for September 20, 2019

Sample Point	PFHxS	PFNA	PFOS	PFOA
NH MCLs (ppt)	18	11	15	12
Grafton Road Treatment	ND	ND	ND	ND

e October 1, 2019) reporting limit are

r supply wells in the s consultant samples onitor for any PFAS line, the supply wells mpling data is posted ineering consultant.

1

Well Type	Sample Location	Sample ID	Collection Date	6:2 Fluorotelomer sulfonate (6:2 FTS)	8:2 Fluorotelomer sulfonate (8:2 FTS)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	N-Methyl Perfluorooctane Sulfonamide (MeFOSA)	N-Methyl Perfluorooctane Sulfonamidoethanol (MeFOSE)	Perfluorobutanesulfonic acid (PFBS)	Perfluorobutanoic acid (PFBA)	Perfluorodecane sulfonate (PFDS)	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoA)	Perfluoroheptane sulfonate (PFHpS)	Perfluoroheptanoic acid (PFHpA)	Perfluorohexanesulfonic acid (PFHxS)	Perfluorohexanoic acid (PFHxA)	Perfluorononanoic acid (PFNA)	Perfluorooctane sulfonamide (PFOSA)	Perfluorooctanesulfonic acid (PFOS)	Perfluorooctanoic acid (PFOA)	Perfluoropentanoic acid (PFPeA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnA)	PFOS+PFOA
USEPA Health Advisory (HA):				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.07	0.07	-	-	-	-	0.07
Production Well	Harrison Well	HARRISON-GW_20190917	17-Sep-19	ND	ND	ND	ND	ND	ND	ND	0.0093 J	ND	ND	ND	0.0044 J	0.013 J	0.099	0.030	ND	ND	0.044	0.028	0.028	ND	ND	ND	0.072
	Smith Well	SMITH-GW_20190917	17-Sep-19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.025	0.0068 J	ND	ND	0.010 J	ND	0.0067 J	ND	ND	ND	0.010 J
	Collins Well	COLLINS-GW_20190917	17-Sep-19	ND	ND	ND	ND	ND	ND	0.016 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Portsmouth Well	PORTSMOUTH-GW_20190917	17-Sep-19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0047 J	ND	ND	ND	ND	ND

Parameters for Final System Operations

- Proposing additional piloting of Haven well water prior to 2021 startup of that well to better predict changeout frequency for resin/GAC filters

Thank You

Brian Goetz, Deputy Director of Public Works

Al Pratt, Water Supply Operations Manager

Public Comment

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

- **Process:**
  - **Public members fill out a comment card if you wish to speak.**
  - **3 min limit per speaker.**
  - **Speakers will be notified when they have 30 seconds remaining & at the 3 min mark.**

Open Discussion Time

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

RAB Meeting Recap

- Meeting Recap
- Action Items
- Next Steps
- Next meeting – March 2020

Adjournment


AIR FORCE CIVIL ENGINEER CENTER