Pease
RAB Meeting

10 October 2018

Agenda

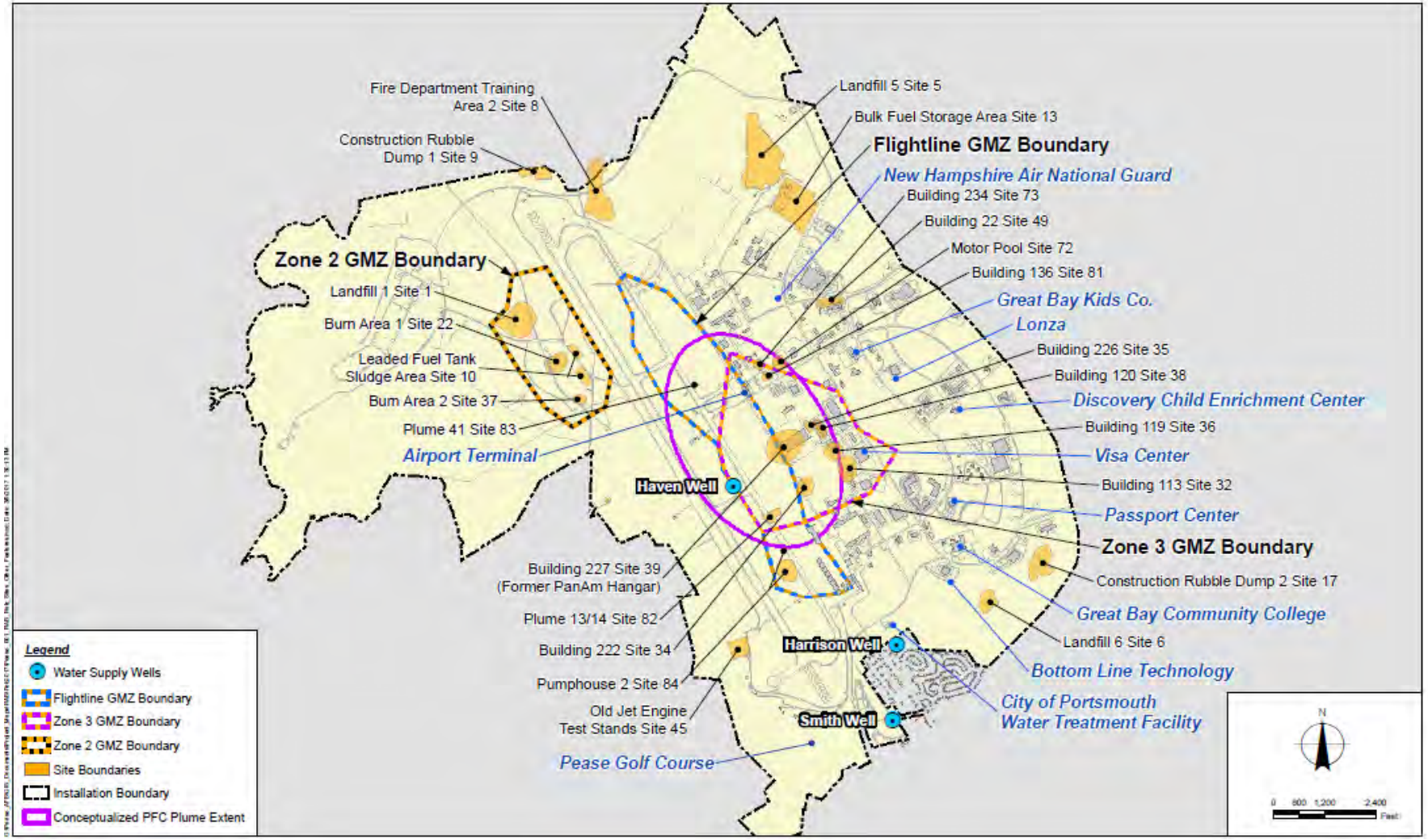
- **Welcome and Introduction** – Ona Ferguson
  - Approve summary from June 2018 RAB meeting
  - Term expirations/notices of intent
- **Air Force Response to PFOS/PFOA** – Roger Walton (AFCEC)
  - Framework of the Program
  - Defense Environmental Restoration Program (DERP)
  - *CERCLA Process*
  - *Review of Process as applied at Pease AFB*
  - *Locations of Historical Data*
- **Supplemental Site Inspection** – Amy Quintin (Wood PLC)
  - Exposure Assessment/Risk Screening
  - Groundwater, Surface Water and Sediment Data
  - Next Steps
- **Portsmouth Water Treatment**
  - Brief update on water treatment activities
- **Public Comments**
  - Members of the general public may request up to 3 minutes to speak.
- **Open Discussion Time**
  - Opportunity for RAB members to discuss additional topics.
- **Meeting recap, upcoming meeting date** – Ona Ferguson
- **Adjourn**

RAB Member Administrative Items

- Approve summary from June 2018 RAB meeting
- Term expirations/notices of intent

Pease Sites Map

As of 2017



Air Force Response to PFOS/PFOA

Roger Walton
Air Force Civil Engineer Center

Framework

The Air Force is using a three-step approach to assess the potential for PFOS/PFOA contamination of drinking water and respond appropriately.

1. Identify
- Determine potential AFFF releases
- Verify releases through sampling
- Determine if contaminant pathways to DW exist

2. Respond
- PFOS/PFOA > HA, provide alternate DW supply
- If PFOS/PFOA < HA, establish monitoring schedule

3. Prevent
- Legacy AFFF disposal
- Transition to new AFFF
- Retrofit fire vehicles

Framework (cont.)

IDENTIFY:

Preliminary Assessment
A base-wide records review identifies fire training areas, crash sites and other areas at installations where AFFF may have been released.

Site Inspection
AFCEC conducts groundwater, surface water, soil and sediment sampling to verify releases, map contamination and potential pathways to drinking water.

If SI sampling indicates potential pathways to drinking water supplies, AFCEC expands the SI footprint and may test public water systems and private wells.

Once SI is complete, AFCEC determines if investigation yielded adequate data to fully map contamination or if more investigation work is needed.

Framework (cont.)

RESPOND:

Mitigation

When AFCEC determines PFOS/PFOA levels exceed the lifetime HA in drinking water, the Air Force will take measures to reduce risk and, if needed, provide an alternate drinking water source, like bottled water, until a permanent solution is in place.

DERP Program Overview

- **Defense Environmental Restoration Program**
  - **10 U.S. Code Sections 2700-2711**
  - **DOD Manual 4715.20**
  - **DOD Instruction 4715.07**
- **Follow CERCLA to address suspected releases***
  - First step is to *identify* the source(s) of a release
  - Then identify if there is an exposure through drinking water
  - If there is exposure, DOD priority is to cut off drinking water exposure
  - Site is then prioritized and will follow CERCLA to fully investigate and determine appropriate cleanup actions

**Deputy Assistant Secretary of Defense (Environment, Safety & Occupational Health), EPA PFAS Summit, May 2018*

CERCLA Process

- Preliminary Assessment (PA)
- Site Inspection (SI)
- Interim Remedial Action (IRA)

Current stage

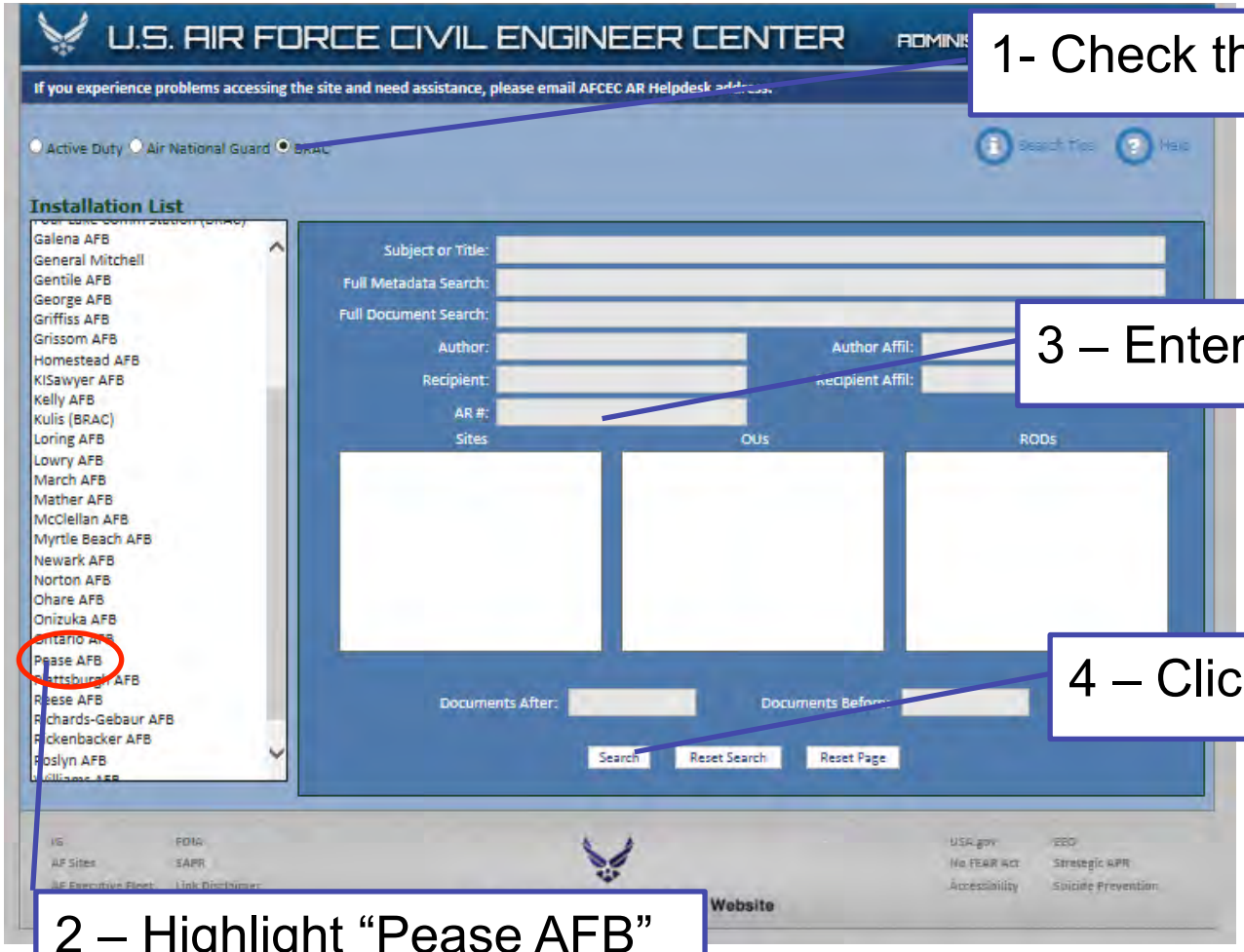
- Remedial Investigation/Feasibility Study (RI/FS)
- Record of Decision (ROD)
- Remedial Design (RD)
- Remedial Action (RA)
- Remedial Action Operations (RA-O)
- Remedial Action Completion (RA-C)
- Long-Term Management (LTM)

Pease-Specific Process

- Sampling for PFOS/PFOA at fire training area in 2013 (*PA*)
- Sampling at Haven, Smith and Harrison municipal wells in 2014 (*PA*)
- Haven Well shut down in May 2014 (*Mitigation*)
- Off-post private well sampling (*PA/SI*)
  - *Bottled water and whole home treatment (IRA)*
- Base-wide preliminary assessment, June 2014 - Dec 2015 (*PA*)
- Administrative Order in August 2015
- Base-wide site investigation, July 2015 - June 2017 *(SI)*
  - Other human exposures identified by USEPA Region 1
  - Pease-specific screening levels provided in Nov 2017

Pease-Specific Process

http://afcec.publicadmin-record.us.af.mil/Search.aspx



1- Check the “BRAC” Box

3 – Enter the AR#

4 – Click Search

2 – Highlight “Pease AFB”

Pease-Specific Process

http://afcec.publicadmin-record.us.af.mil/Search.aspx

Document	Date	AR#
Site 8 Emerging Contaminant Investigation Monitoring Data Memorandum Site 8	01/01/2014	420842
PFC Groundwater Monitoring Data for Tier I, II, and III wells, May 2015	08/16/2015	472319
Perfluorinated Compounds Preliminary Assessment	12/04/2015	469495
PFC Groundwater Monitoring, Tier I, II Wells, December 2015	02/22/2016	472320
Pease Public Water Supply Perfluorinated Compounds Response Activities Summary Report, June 2014 - December 2014	03/25/2016	473056
May 2016 Annual PFC Groundwater Monitoring Data Transmittal	10/06/2016	549278
Perfluorinated Compounds Release Response, Site 8 Investigation Report (Part 1 of 2)	03/01/2017	555567
Perfluorinated Compounds Release Response, Site 8 Investigation Report (Part 2 of 2)	03/01/2017	555567.1
Final Basewide Site Investigation Report PFC Release Response (Part 1 of 3)	06/01/2017	559411
Final Basewide Site Investigation Report PFC Release Response (Part 2 of 3)	06/01/2017	559411.1
Final Basewide Site Investigation Report PFC Release Response (Part 3 of 3)	06/01/2017	559411.2

Pease-Specific Process

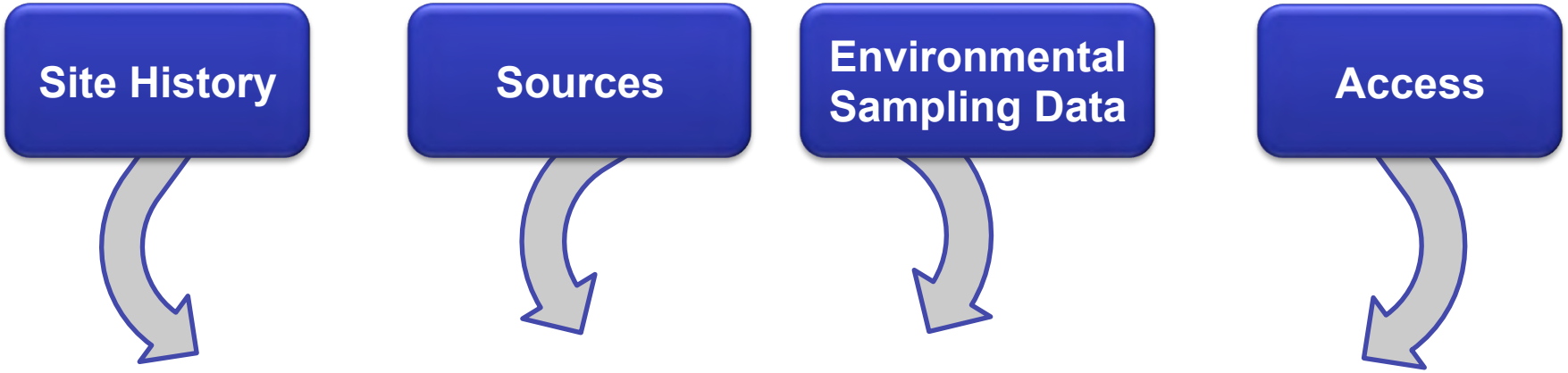
- **Supplemental Site Investigation, On-going *(SI)***
  - **Evaluate select non-drinking water human exposures based on Nov 2017 Pease-specific screening values**
  - **Work plans briefed at RAB in June 2018**
  - **Samples collected in July-September 2018**
  - **Second set of data to be collected based on initial results, community input and targeted areas of potential exposures**
  - **All data will be evaluated in a Pease-specific screening-level risk assessment**
- **Possible outcomes**
  - **Data indicates areas with concentrations below screening values pose no unacceptable human health risk**
  - **Further study for areas with contaminants detected above screening values**
  - **Additional mitigation actions may be necessary**

Supplement Site Inspection

Amy Quintin

Wood PLC

Pease PFOS/PFOA/PFBS Human Health Risk Screening



- Where are PFOS/PFOA/PFBS coming from and going to?
- How and where might people come into contact with PFOS/PFOA/PFBS?
- How much is present at those locations?
- Are the levels at those locations unsafe?

USEPA PFOS/PFOA/PFBS Screening Levels - Pease

Screening levels developed for use at Pease by USEPA for PFOS/PFOA/PFBS – November 2017. Results in parts per trillion (ppt)

Receptor & Exposure Pathway	Adult		Child	
	PFOS/PFOA	PFBS	PFOS/PFOA	PFBS
Child Recreator (wading – sediment ingestion/dermal contact)			609,000	609,000,000
Child Recreator (swimming – surface water ingestion)			2,030	2,030,000
Adult Recreator (swimming – surface water ingestion)	18,300	18,300,000		
Fish Consumption (in fish tissue)	7,220	7,220,000	5,210	5,210,000
Shellfish Consumption (in shellfish tissue)	6,780	6,780,000	5,590	5,590,000
Composite Worker	1,640,000	1,640,000,000		

Field Reconnaissance for Human Exposure Assessment

- **Dug pond at Captain's Landing** - apparent float in pond. Ladder from float into pond suggesting residents may swim in pond.
- **Peverly Brook ponds** - reasonable potential for wading and some potential for swimming.
- **Watering Spring and Pickering Spring** - potential for contact with surface water and sediment by people.
- **Mouth of Knights Brook at Broad Cove** - evidence of boating. Mill Pond, upstream of the mouth of Knights Brook, likely representative of downstream concentrations. Fox Point recreational area further from mouth of Knights Brook.

Expedited Surface Water/Sediment Samples – Collected July/August 2018

- Recommendations were made in Exposure Assessment Work Plan to sample preliminary points of possible exposure identified during site reconnaissance:
  - Dug pond at Captain's Landing
  - Peverly Brook
  - Watering Spring and Pickering Spring and
  - Mouth of Knights Brook (Mill Pond as a surrogate for ease of access)




Community Interview Results

- **Swimming**: Swimming in freshwater on the peninsula is uncommon in public areas. Privately owned land may be an exception (dug pond at Captain's Landing).
- **Wading**: No specific high frequency areas for wading in freshwater in public areas on the peninsula. Privately owned land is an exception.
- **Freshwater Finfishing**: Fishing in freshwater on the peninsula is uncommon (previously trout was stocked, not stocked now).
- **Saltwater Finfishing and Oysters/Clams/Mussels**: Striped bass is the major finfish caught in Great Bay/Little Bay. "Locally caught fish and shellfish" are popular and may be sold at local restaurants and a local market.
- **Lobster**: Lobster pots visible along the coast of the peninsula in Great Bay and Little Bay.

Community Interview Results

Other noted concerns

- **Residential/Farm Use**: Living near/working in sediments from Pickering and Watering Springs
- **Consuming Vegetables**: Home gardens irrigated with potentially impacted water
- **Consuming Game**: Deer and turkey uptake through potentially impacted surface water
- **Consuming dairy products/beef**: Cows watered with potentially impacted water
- **Transient drinking/bathing**: Displaced persons using Great Bog swamp water

Comparative Pathways

Community Concern	Similar EA Pathway(s)	Rationale	Analysis of Data Gaps
Residential/ Farm Use	Composite Worker	Accounts for 100 mg/day soil/ sediment ingestion, 250 days per year for 25 years. Skin surface may be greater for farm worker, but frequency of exposure likely lower	No significant data gaps – Pathway comparison appropriate
Consuming Vegetables	Fish/Shellfish Consumption	All potential exposures are the result of consumption	Uptake and Accumulation of contaminants in plants and other animals not well studied, frequency of exposure unknown
Consuming Game		Fish/Shellfish have values on uptake and accumulation in tissue	
Consuming Dairy/Beef		Screening values based on 350 days of ingestion per year for 6 years	
Transient Drinking/ Bathing	Adult Recreator	Accounts for incidental ingestion (0.07 L/day) for 45 days per year for 20 years	Unknown how much bog water is consumed, or whether bog is impacted

USEPA PFOS/PFOA/PFBS Screening Levels - Pease

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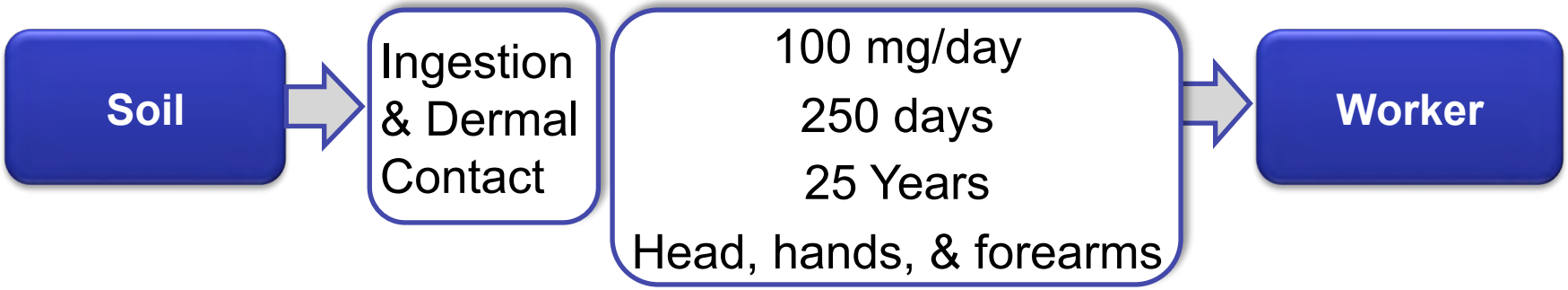
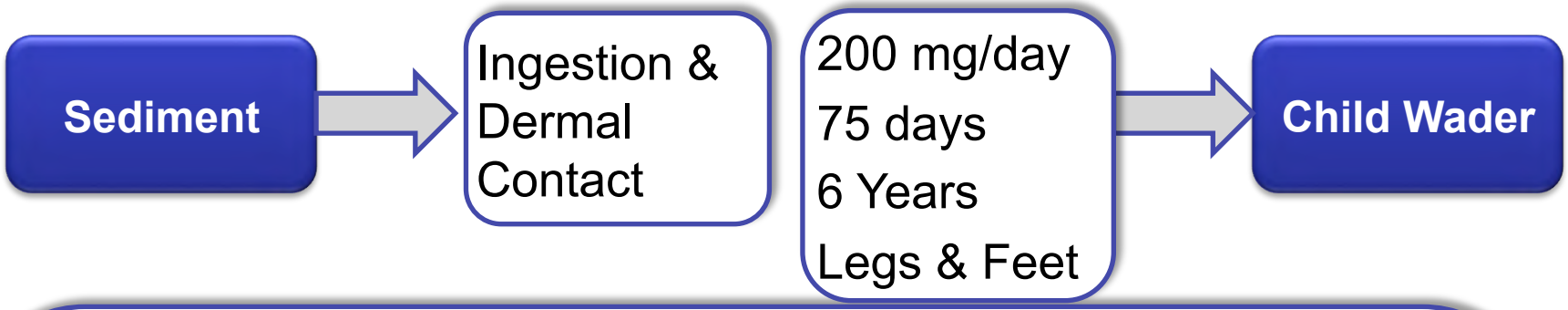
Composite Worker	1,640,000	1,640,000,000		

Risk Screening – Worker Results



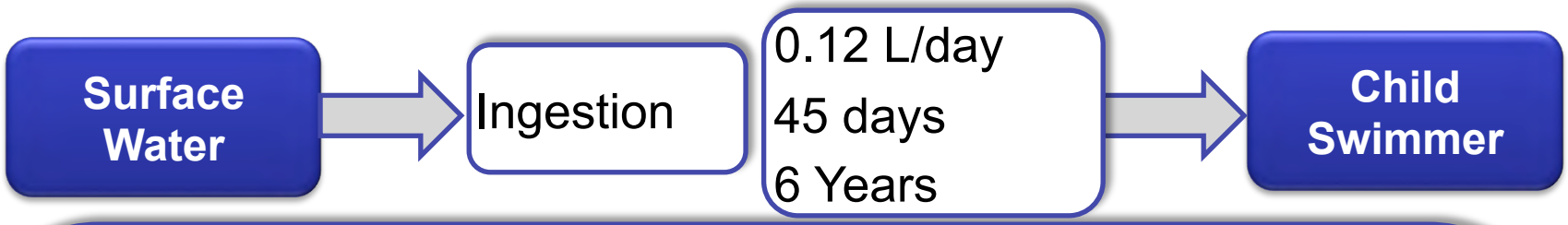
- Soil samples collected at locations where AFFF use was suspected (based on PA)
- Out of 87 soil samples - One concentration of PFOS (1,900,000 ppt) above the worker screening level of 1,640,000 ppt
- **Screening level set at 10% safe concentration**
  - Soil is safe for workers – based on current science

Risk Screening – Child Recreator (Wading) Results



- Concentrations of PFOS/PFOA/PFBS all below the child recreator (wading) screening level
- No evidence of regular wading in publically accessible drainage features
- Frequently overgrown, muddy, and not attractive to wading
- Private land is the exception - Pickering Spring and Watering Spring
  - Wading potential = Limited for public access points, moderate for Pickering Spring and Watering Spring
- Sediment is safe for wading – based on current science

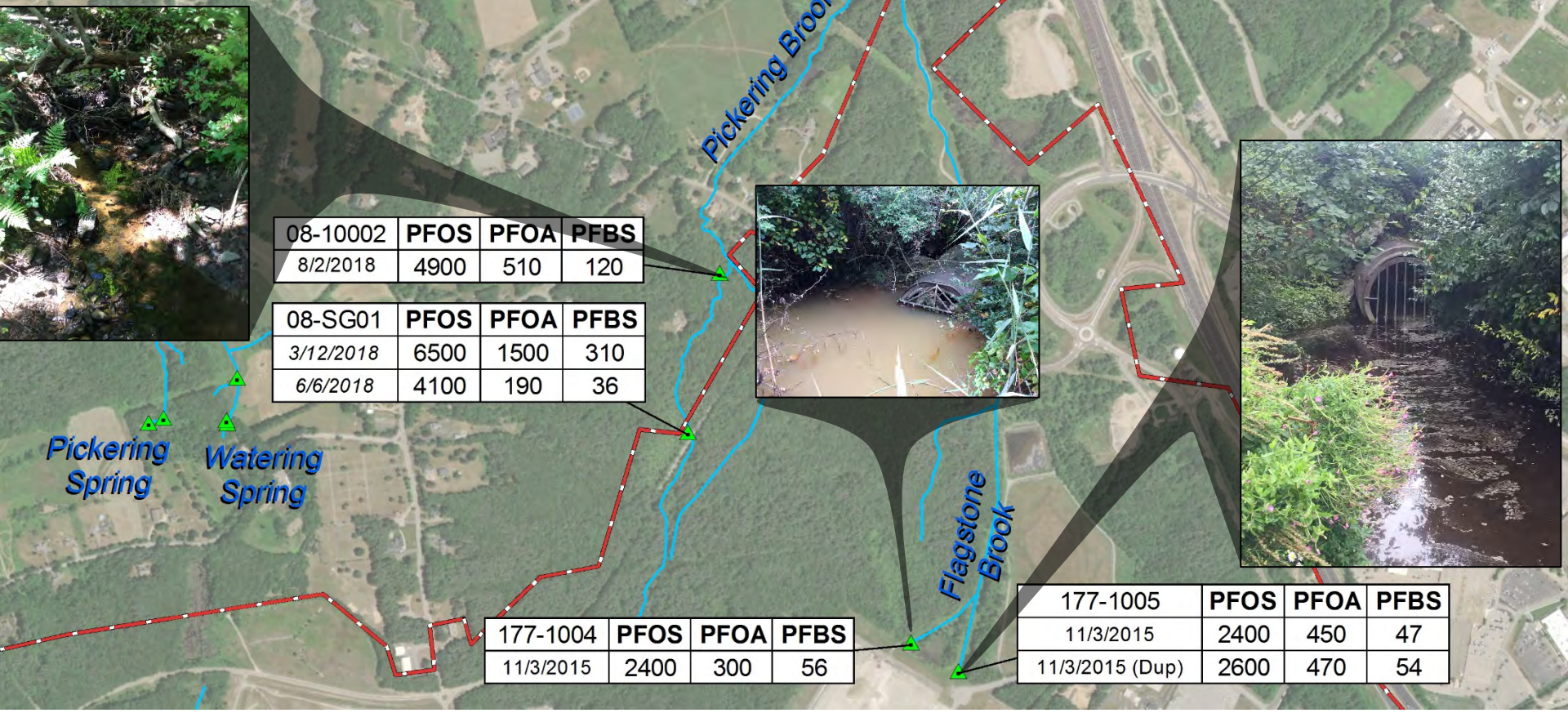
Risk Screening – Child Recreator (Swimming) Results



- Concentrations of PFOS above the child recreator (swimming) screening level of 2,030 ppt in Watering Spring (2,300 to 6,000 ppt), Pickering Brook (4,100 to 6,500 ppt), and Flagstone Brook (2,400 to 2,500 ppt)
- No evidence of regular swimming in publically accessible drainage features
- Typically shallow and not attractive to swimming
- Private land is the exception – Dug pond at Captain's Landing
  - Potential for Swimming= Limited for public access points, high for dug pond at Captain's Landing
- No swimming at these locations and screening level set at 10% safe concentration. No concentrations above adult swimming level
  - Surface water is safe for swimming – based on current science

Flagstone Brook and Pickering Brook

USEPA Screening Levels - Receptor/Pathway (ppt)	PFOS	PFOA	PFBS
Child Recreator (swimming - surface water ingestion)	2,030	2,030	2,030,000
Adult Recreator (swimming - surface water ingestion)	18,300	18,300	18,300,000



08-10002	PFOS	PFOA	PFBS
8/2/2018	4900	510	120

08-SG01	PFOS	PFOA	PFBS
3/12/2018	6500	1500	310
6/6/2018	4100	190	36

177-1004	PFOS	PFOA	PFBS
11/3/2015	2400	300	56

177-1005	PFOS	PFOA	PFBS
11/3/2015	2400	450	47
11/3/2015 (Dup)	2600	470	54

Pickering Spring, Watering Spring, and Knights Brook

USEPA Screening Levels - Receptor/Pathway (ppt)	PFOS	PFOA	PFBS
Child Recreator (swimming - surface water ingestion)	2,030	2,030	2,030,000
Adult Recreator (swimming - surface water ingestion)	18,300	18,300	18,300,000

Dug Pond at Captain's Landing and Pond at Welsh Cove

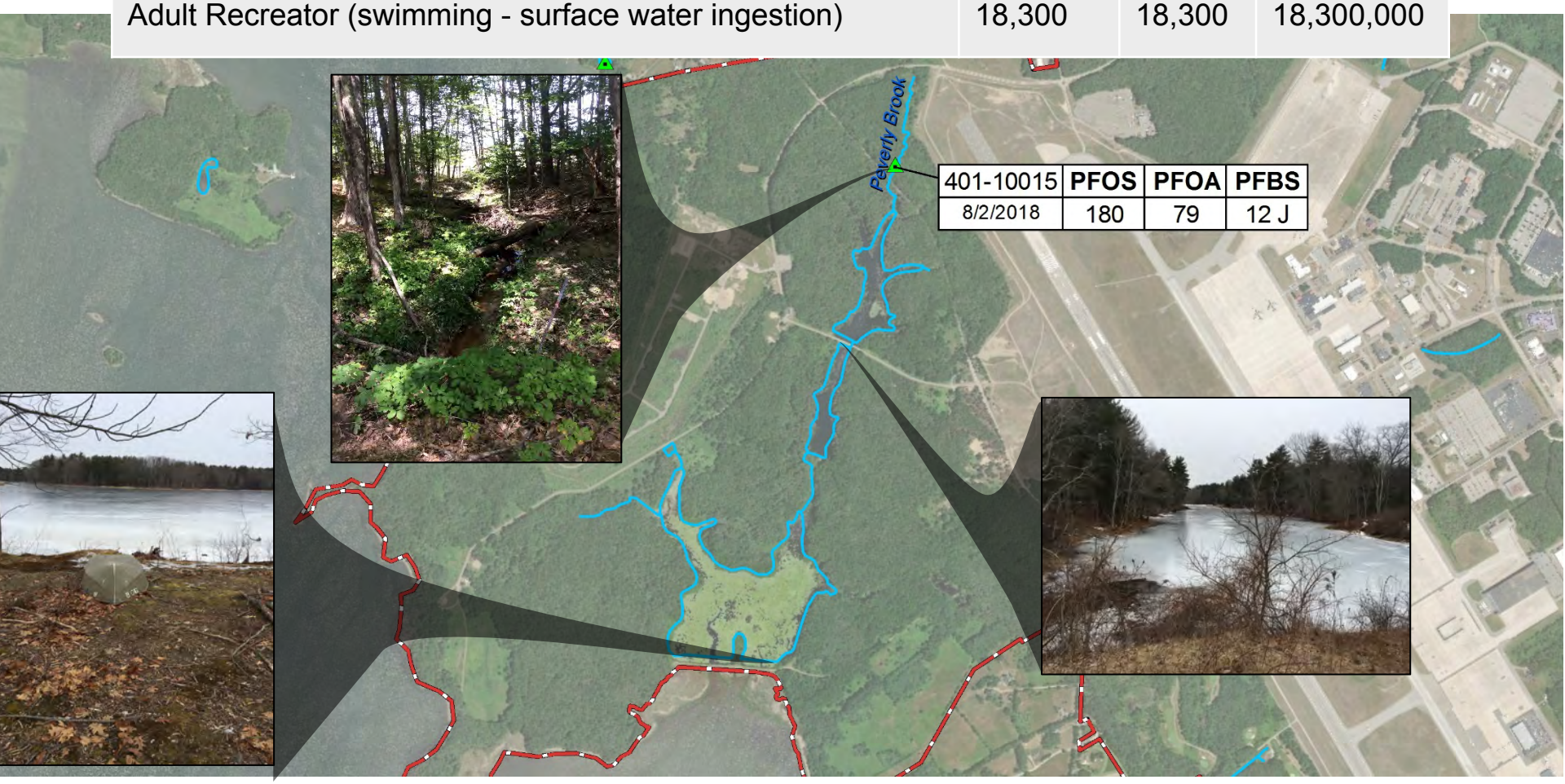
USEPA Screening Levels - Receptor/Pathway (ppt)	PFOS	PFOA	PFBS
Child Recreator (swimming - surface water ingestion)	2,030	2,030	2,030,000
Adult Recreator (swimming - surface water ingestion)	18,300	18,300	18,300,000

08-10019	PFOS	PFOA	PFBS
8/2/2018	15 U	4 J	15 U

08-10021	PFOS	PFOA	PFBS
8/2/2018	7.2 J	10 U	15 U

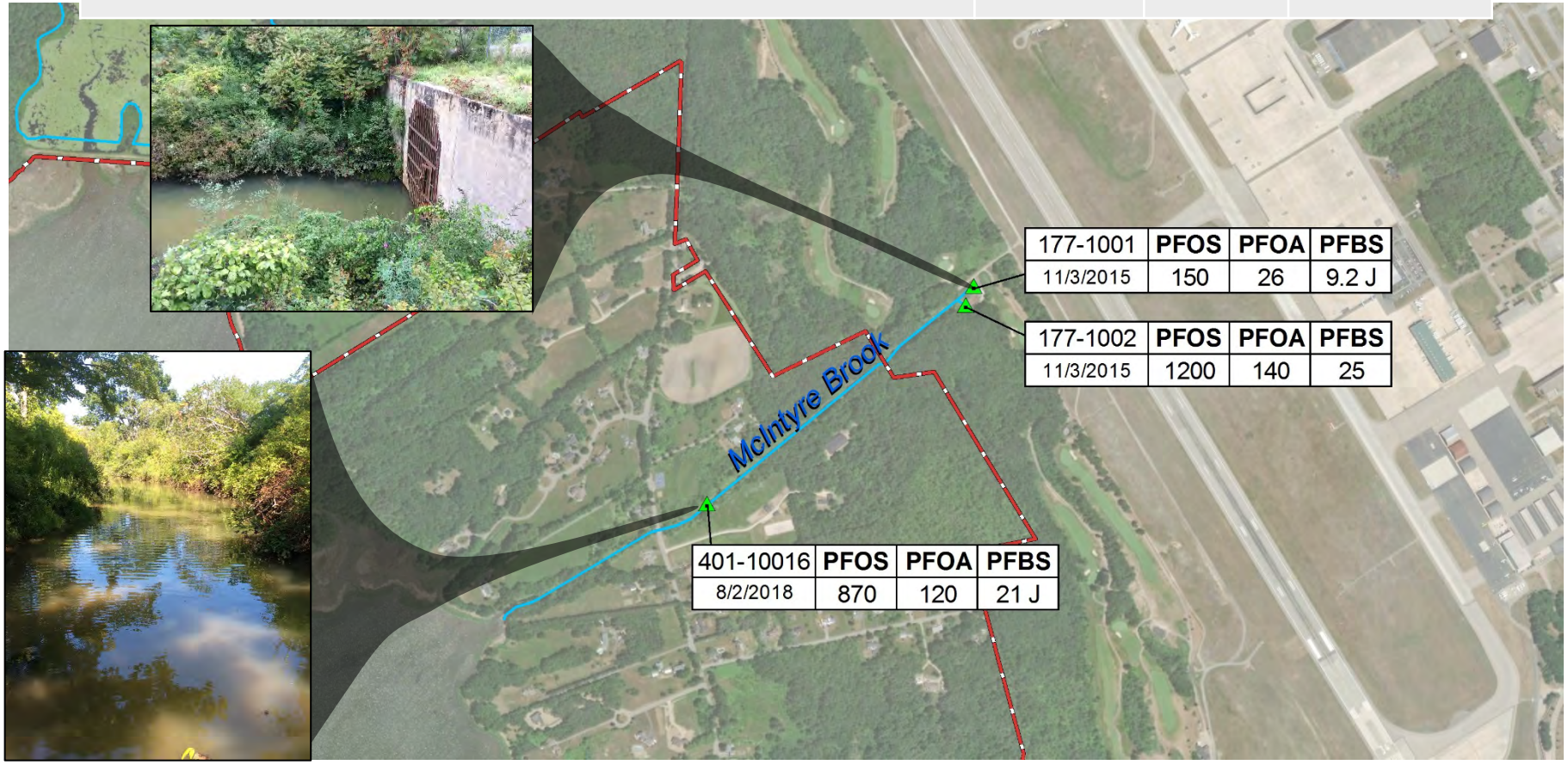
Peverly Brook

USEPA Screening Levels - Receptor/Pathway (ppt)	PFOS	PFOA	PFBS
Child Recreator (swimming - surface water ingestion)	2,030	2,030	2,030,000
Adult Recreator (swimming - surface water ingestion)	18,300	18,300	18,300,000



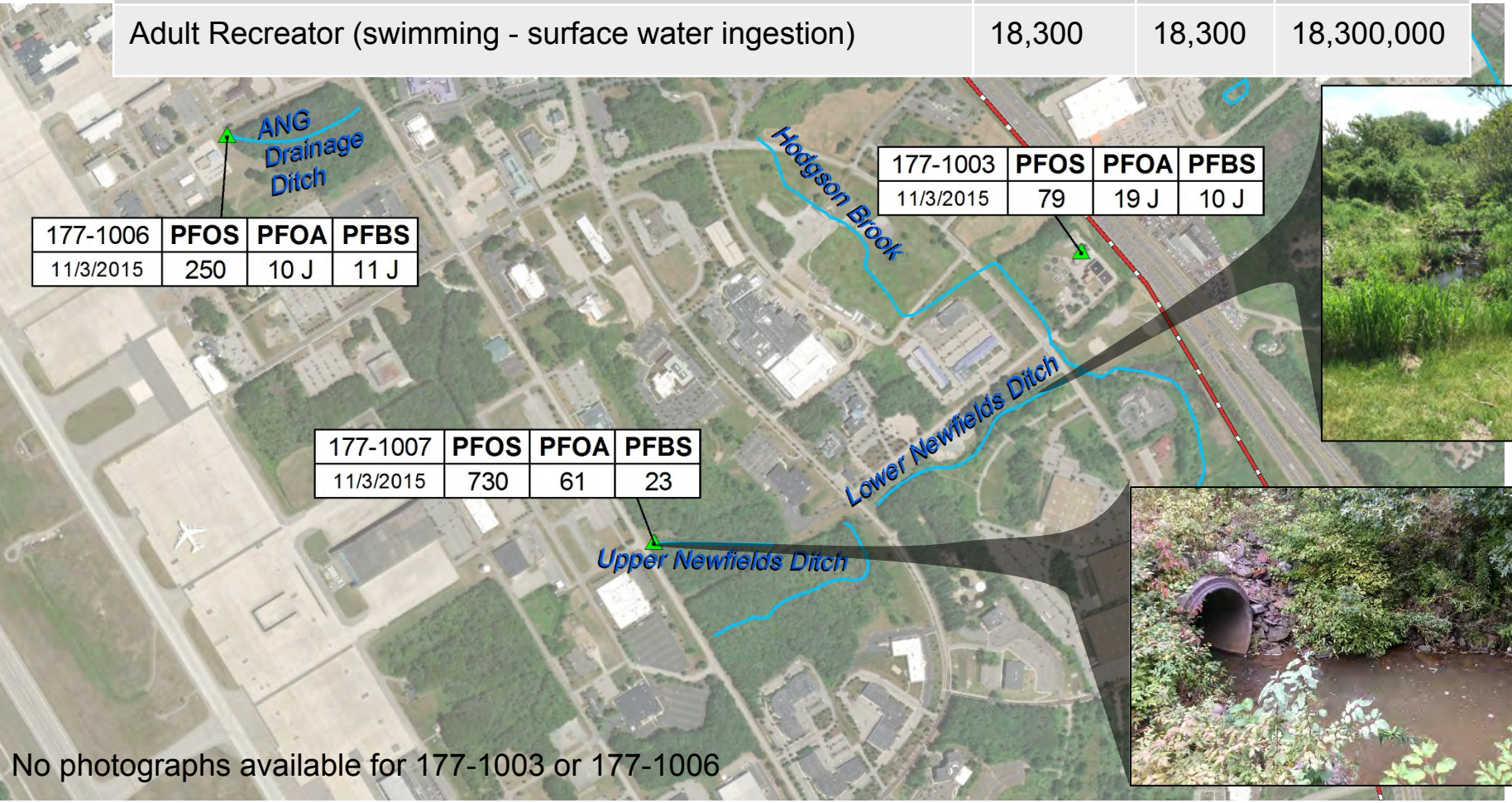
McIntyre Brook

USEPA Screening Levels - Receptor/Pathway (ppt)	PFOS	PFOA	PFBS
Child Recreator (swimming - surface water ingestion)	2,030	2,030	2,030,000
Adult Recreator (swimming - surface water ingestion)	18,300	18,300	18,300,000



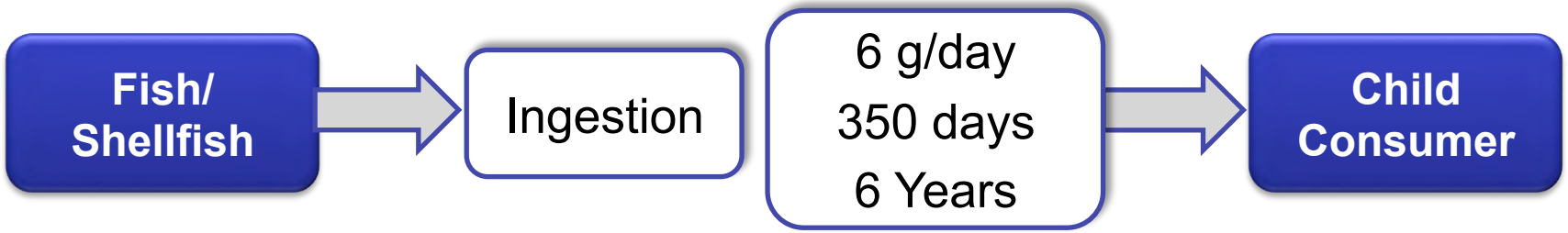
Eastern Outfalls (2015 Data)

USEPA Screening Levels - Receptor/Pathway (ppt)	PFOS	PFOA	PFBS
Child Recreator (swimming - surface water ingestion)	2,030	2,030	2,030,000
Adult Recreator (swimming - surface water ingestion)	18,300	18,300	18,300,000



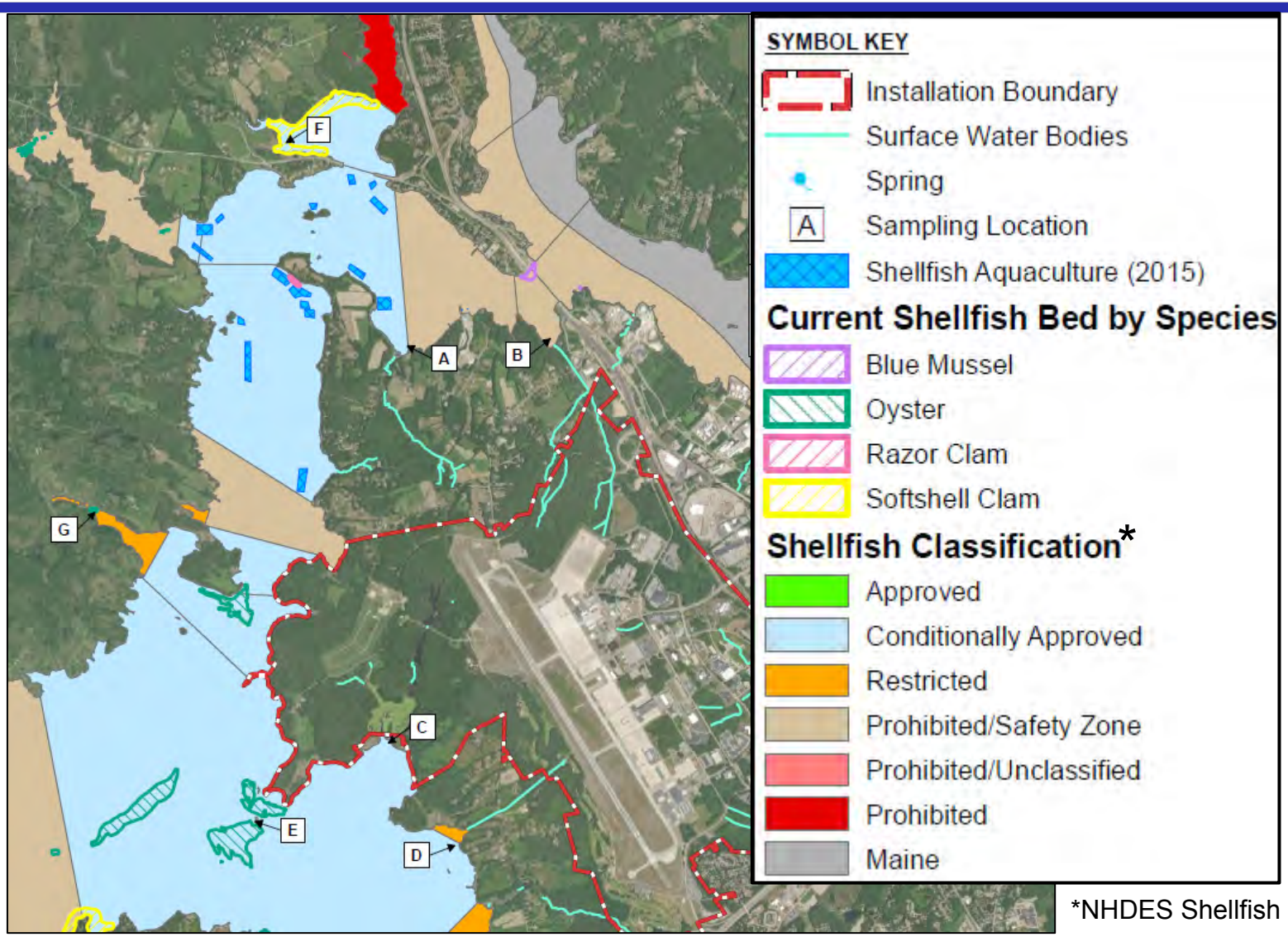
No photographs available for 177-1003 or 177-1006

Risk Screening – Adult/Child Fish/ Shellfish Consumption



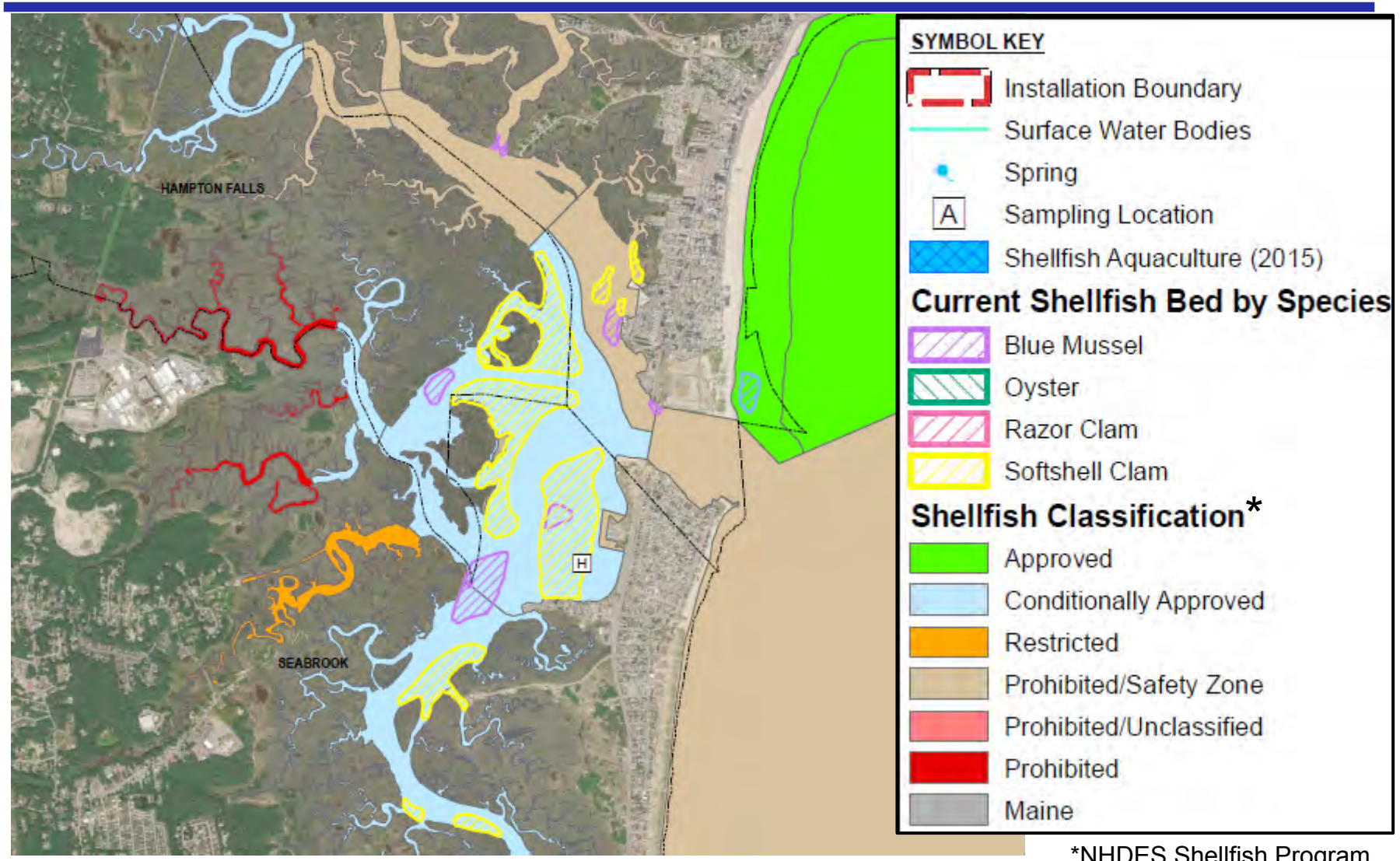
- Sampling plan drafted to collect shellfish in Little Bay and Great Bay (proposed sample locations follow)
  - No fish sampling planned at this point
- No regular fishing in freshwater drainage features
- Migratory fish (e.g. striped bass) caught in Great Bay, Little Bay & Piscataqua River.
- Commercial oyster beds in Little Bay
- Compounds known to bioaccumulate in fish/shellfish

Proposed Shellfish Tissue Sample Locations – Little Bay/Great Bay



*NHDES Shellfish Program

Proposed Shellfish Tissue Sample Location – Hampton Beach



*NHDES Shellfish Program

Proposed Shellfish Tissue Sample Location Details

Loc ID	Description	Purpose	Softshell Clams Samples [1]	Oysters Samples [1]	Surface Water Samples [2]	Sediment Samples [2]
A	Mouth of Knight's Brook in Broad Cove	Potential impact from Knight's Brook - Target Sample Location	3		1	1
B	Mouth of Pickering Brook in Tricky's Cove	Potential impact from Knight's Pickering Brook (closed to	3		1	1
C	Mouth of Peverly Brook in Herod's Cove	Potential impact from Peverly Brook - Target Sample Location	3		1	1
D	Mouth of McIntyre Brook in Great Bay	Potential impact from McIntyre Brook - Target Sample Location	3	3	1	1
E	Oyster beds Nannie Island	Potential impact groundwater discharge - Target Sample Location	3 (if available)	3	1	1
F	Mouth of Bellamy River - Northern end of Little Bay	Reference Sample Location, near a drainage feature	3	3	1	1
G	Mouth of Crommet Creek - Western side of Little Bay	Reference Sample Location, near a small drainage feature	3	3	1	1
H	Softshell clams Hampton, NH - remote reference location	Reference Sample Location	3		1	1
Notes:						
All samples submitted for analysis off the 13 PFAS compounds presented in Table 2 of the Exposure Assessment Workplan						

Possible Shellfish Consumption Outcomes Following Sampling

- Biota concentrations below USEPA risk-based screening levels at all locations
  - Safe for consumption
  - No further investigation

- Biota concentrations above USEPA risk-based screening levels at one or more locations
  - Further investigation/data evaluation

Proposed Additional Surface Water/ Sediment Freshwater Samples

- Additional freshwater drainage samples proposed
  - Primarily nature and extent - lack of data to the south
  - Will be compared to recreational screening levels

Sample Number	Description
1	Hodgson Brook
2	Lower Newfields Ditch
3	Lower Grafton Ditch
4	Unnamed brook emanating in Pease Golf Course
5	Great Bog

Exposure Assessment Conclusions

- Soil, Surface Water and Sediment are safe for current use
- Concentrations in shellfish are unknown and therefore tissue sampling is proposed
  - Shellfish samples will be collected and concentrations of PFOS/PFOA/PFBS compared to USEPA screening levels for human consumption
  - Surface water/Sediment samples will be collected at shellfish sample locations
- Additional freshwater surface water/sediment samples are proposed

Portsmouth Water Treatment

Brian Goetz

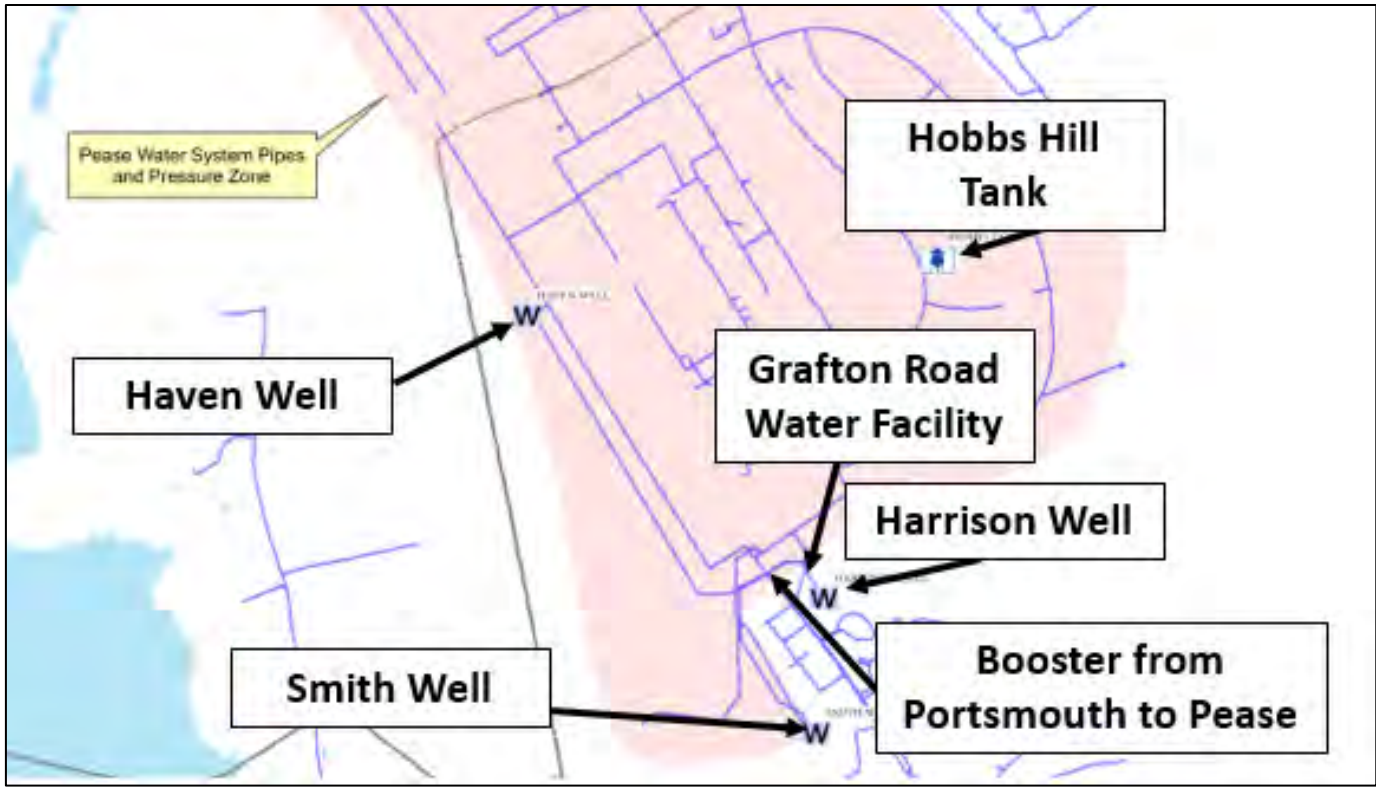
City of Portsmouth

Pease Tradeport
Water Treatment System Update

Pease Restoration Advisory Board

October 10, 2018

Current Pease Tradeport
Grafton Road Water Facility



Grafton Road Water Facility Process Schematic Prior to PFAS Contamination

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

- Chlorine
- Fluoride
- Orthophosphate

To Distribution System

Grafton Road Water Facility Process Schematic
May 2014 to September 2016

Supply Well Capacities	
Description	Capacity (gpm)
Harrison Well	286
Smith Well	343
~~Haven Well~~	~~534~~
TOTAL	~~1,163~~
	629

Portsmouth Water System Water

- Chlorine
- Fluoride
- Orthophosphate

To Distribution System

Pease Well PFOA/PFOS Response – Demonstration Filters in Service Since September 2016

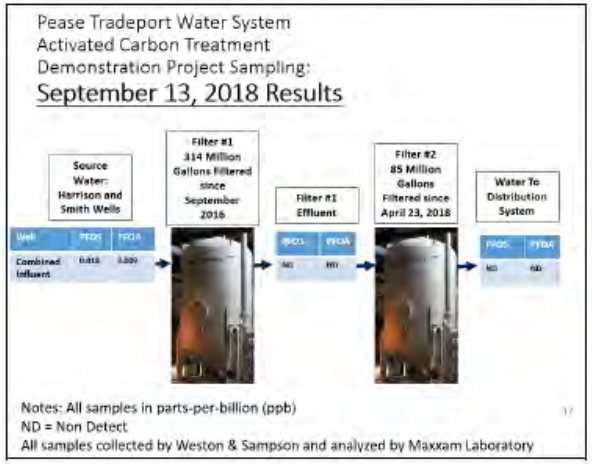
City of
Portsmouth
Department of Public Works

September 28, 2018

PEASE TRADEPORT WATER SUPPLY UPDATE

Demonstration Filter Performance

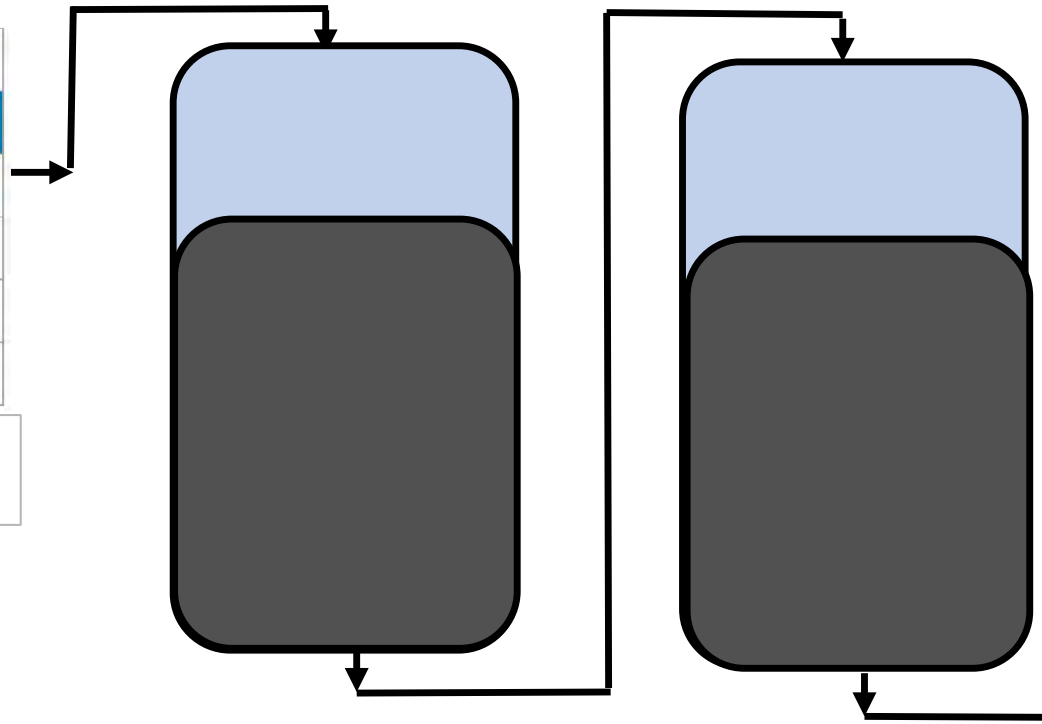
The City's engineering consultant continues to sample the performance of the activated carbon filters based on the amount of water treated. The graphic below shows the most recent source water sampling and treated filter water quality results for the PFOS and PFOA.



Grafton Road Water Facility Process Schematic
Granular Activated Carbon Demonstration Filters

Supply Well Capacities	
Description	Capacity (gpm)
Harrison Well	286
Smith Well	343
~~Haven Well~~	~~584~~
TOTAL	~~1,168~~

400
(maximum filter rate)



- Chlorine
- Fluoride
- Orthophosphate

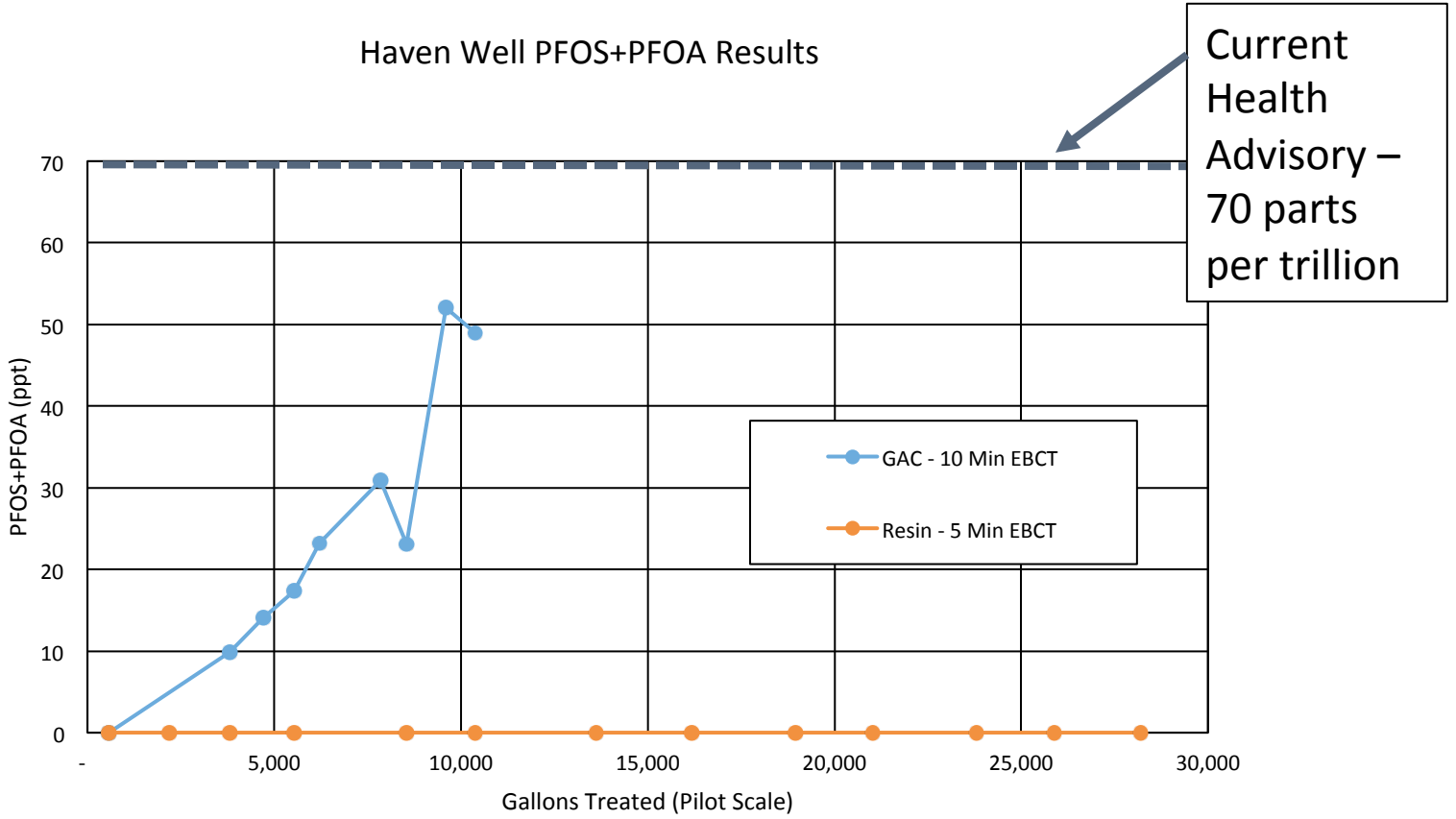
Portsmouth Water System Water

GAC Filter #1

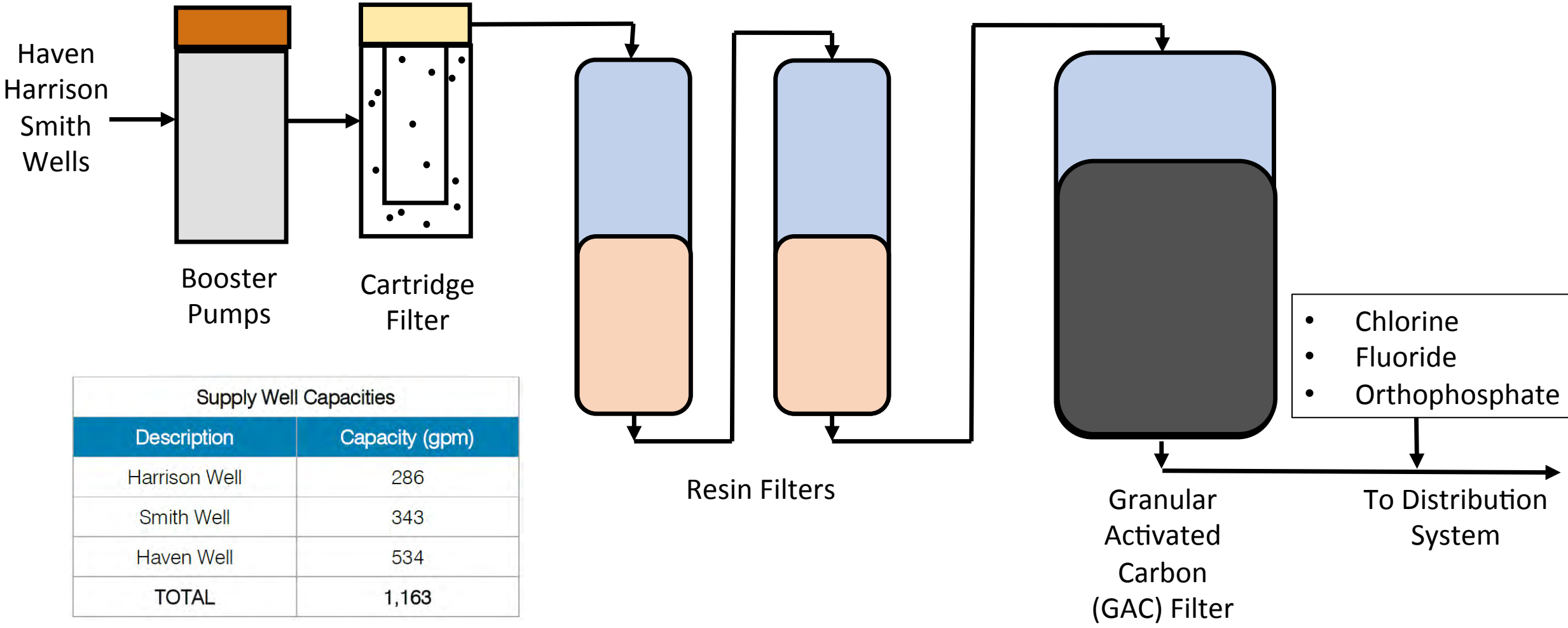
GAC Filter #2

To Distribution System

Activated Carbon and Resin Piloting – Haven Well



Grafton Road Water Facility Process Schematic
Current Treatment System Design



Supply Well Capacities	
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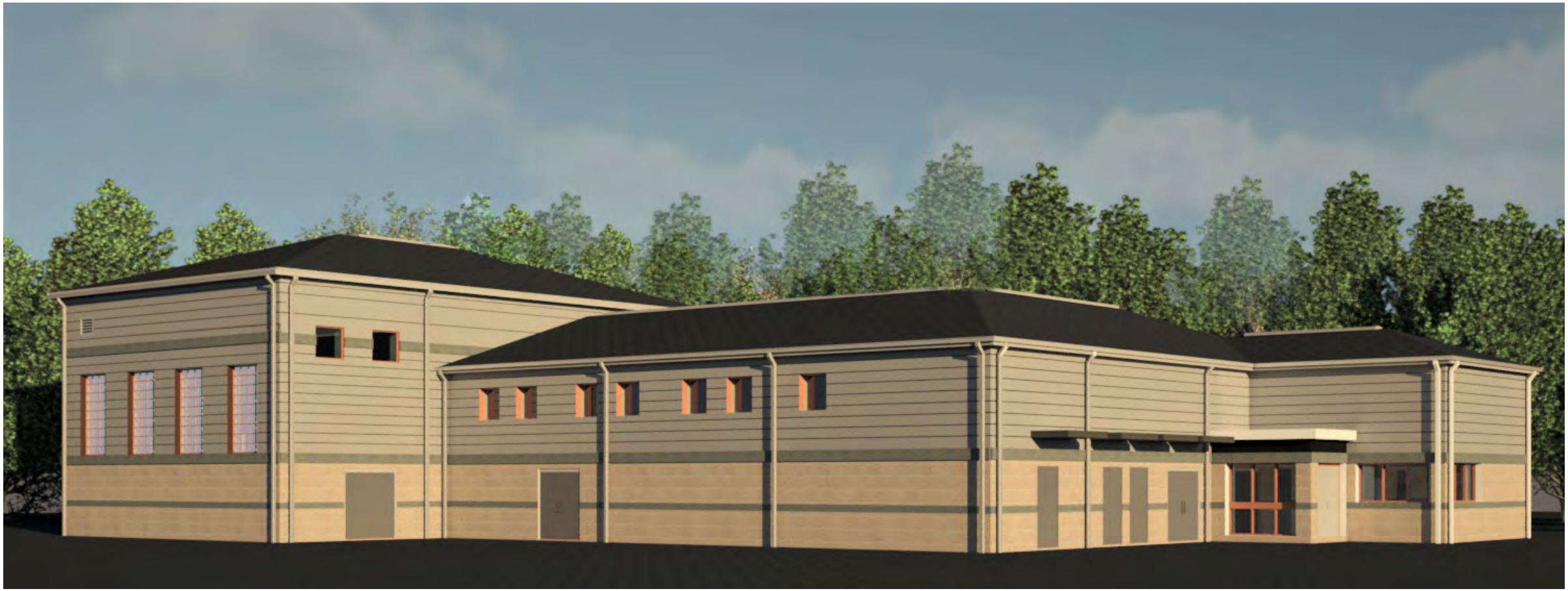
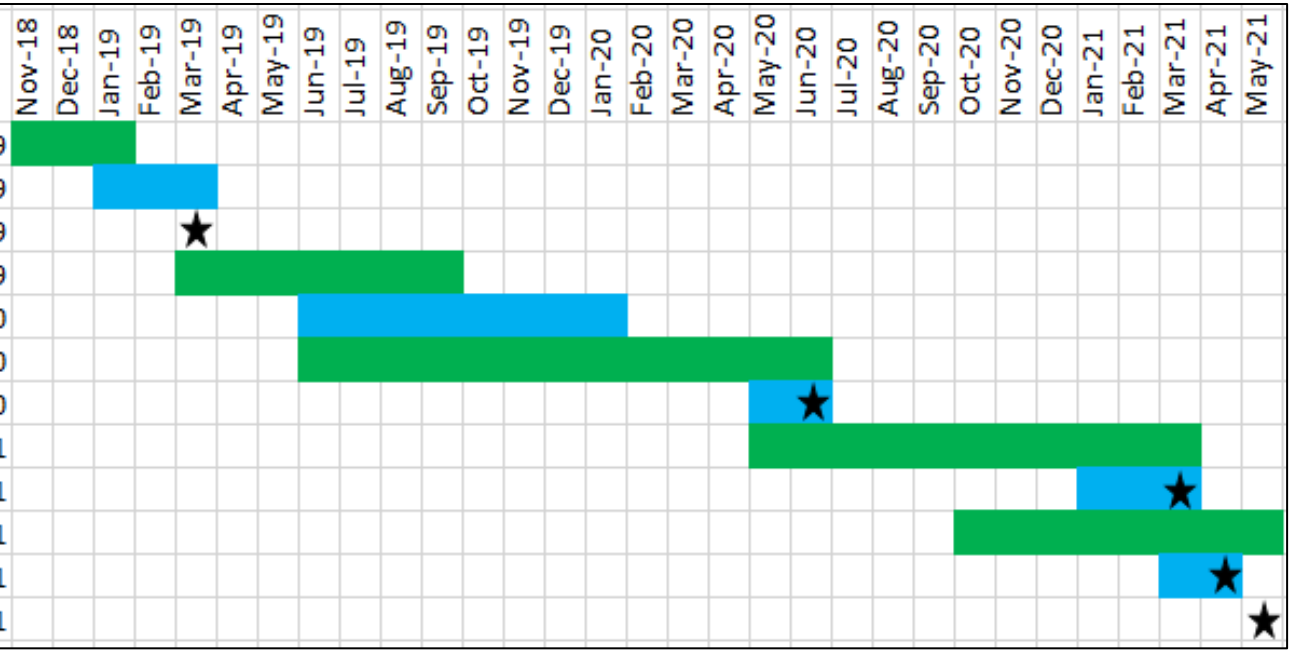
Current Rendering – Grafton Road Water Treatment Facility



Anticipated 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

Future Water Quality Monitoring of Haven Well and Pease Tradeport Aquifer

- Ongoing discussions with Air Force and regulators about developing a comprehensive water quality monitoring programs for:
  - Required Compliance Monitoring
  - Filter Performance Monitoring
  - Aquifer Monitoring

Thank You

Brian Goetz – Deputy Director of Public Works
City of Portsmouth, New Hampshire
bfgoetz@cityofportsmouth.com

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
- Next Steps
- Next meeting – TBD

Adjournment


AIR FORCE CIVIL ENGINEER CENTER

Former Pease Air Force Base (AFB)
Restoration Advisory Board (RAB)
October 10 2018 - 6:30-9:00 p.m.
Great Bay Community College
320 Corporate Drive, Portsmouth, New Hampshire

Meeting Summary

RAB members present: Susan Chamberlin (community member), Ted Connors (community member), Mike Daly (appointed member: USEPA), Brian Goetz (appointed member: City of Portsmouth), Peggy Lamson (community member), Dennis Malloy (community member), Mark Mattson (Portsmouth resident), Kim McNamara (appointed member: City of Portsmouth), Mindi Messmer (community member), Lulu Pickering (community member), Peter Sandin (appointed member, NHDES) Andrew Smith (community member), Maria Stowell (appointed member: Pease Redevelopment Authority), Roger Walton (appointed member: AFCEC, DoD Chair).

Meeting support staff present: Ona Ferguson (Consensus Building Institute, RAB Facilitator), Linda Geissinger (AFCEC, Public Affairs), Scott Johnston (AFCEC, Public Affairs), Rob Singer (Wood).

Others attending: James Bolenger (Newington resident), Libby Bowen (Wood), Doris Brock (Colebrook resident), Alayna Davis (Testing for Pease), Kelsey Dumville (USEPA Boston), Nancy Eaton (Newmarket resident), Bobby Gisham (Senator Hassan's office), Lisa Griffith (Dover resident), Karen Johnson (Greenland resident), Thomas Johnson (Pease Air National Guard public affairs), Margaret McCarthy (City of Portsmouth), Anne McCurry (Newmarket resident), Robin Mongeon (NHDES Concord), Jim Murphy (EPA public affairs), Lauren O'Neill (Senator Shaheen's office), Al Pratt (City of Portsmouth), Mike Quinlin (APTIMS), Amy Quintin (Wood), Katy Sarsfield (Wood), Dr. Steve TerMaath (AFCEC).

Next meeting: to be determined.

Action items:

- Air Force and USEPA staff to consider a request from Mark Mattson (RAB Member) to review and provide input on the draft shellfish sampling plan prior to approval by the USEPA. (*Note: Mr. Mattson participated in an on-board review of the shellfish sampling plans at NHDES on 11/26/18).*

- Roger Walton to provide Mindi Messmer with a copy of the Air Force policy that prevents release of private well data within a few days of the meeting. (*Note: Privacy Act policy information was provided to RAB membership on 10/11/18).*

- Residential Well Sampling Data without personally identifiable information (PII) was also provided to the RAB on 10/16/18.

- Roger Walton will reach out to ANG regarding interest in an appointed RAB seat.

Welcome, Introductions and RAB Administrative Items
The facilitator welcomed everyone to the Pease Restoration Advisory Board. RAB members approved the June meeting summary as revised in advance of the meeting. The group discussed RAB membership; Andrew Smith is stepping off the RAB because he will no longer be working at the Air National Guard

(ANG). ANG will consider replacing Andrew with another representative from the ANG. All RAB meeting materials are online at http://www.afcec.af.mil/Home/BRAC/Pease

Air Force Review of Response to PFOS/PFOA
See presentation slides, available at http://www.afcec.af.mil/Home/BRAC/Pease-Archives/

Roger Walton (Air Force Civil Engineer Center, RAB co-chair) gave a presentation reviewing the general process for cleanup at active and former Air Force bases. General steps are *Identify* (Former Fire Training Area, City of Portsmouth municipal wells and sampling of private wells), *Respond* (shut down Haven Well, provide bottled water and treatment, work with city to install treatment of municipal wells and install interim remedial systems at Site 8 and AIMS), and *Prevent* (this is not a focus area for BRAC cleanup locations as it focuses on operational uses of replacement fire-fighting foams). The Air Force is currently in the Site Inspection (SI) and Interim Remedial Action (IRA) stage at Pease. Roger described the activities at Pease since 2013 that fit into these categories. The Supplemental Site Investigation is ongoing. Data collected to date will be used to determine what additional sampling should be conducted in response to the screening values provided in November 2017 by USEPA.

RAB members asked the status of access agreements for locations where point of entry treatment (POET) systems were installed, and Roger said the Air Force is aware that the agreements expire soon. They also asked if the Air Force collected blood samples from homeowners where POET systems were installed. Roger said the Air Force did not perform blood testing.

Supplemental Site Inspection Activities Conducted to Date
See attached presentation slides, available at http://www.afcec.af.mil/Home/BRAC/Pease-Archives/
Amy Quintin (Wood, Air Force contractor) summarized recent execution of the Exposure Assessment and Human Health Risk Screening. This investigation is a step in the process to prevent human exposure. The first step was to protect drinking water. The current investigation is designed to identify potential risks based on other types of human exposure.

In the discussion about this presentation, RAB members raised significant concerns that little is known about deer exposure through drinking contaminated surface water and that there are no plans to investigate this. USEPA will review the reports provided by RAB member Lulu Pickering and work with the Air Force to determine the appropriate path forward to address these concerns. People asked why the Air Force is using assumptions of 45-day annual exposure for children rather than the more conservative 120-day exposure assumption for children. Mike Daly (USEPA) said USEPA provided the Air Force with the screening values that are being used.

People expressed concerns about PFOS and PFOA concentration levels in surface water in some places and asked how concentrations in surface water are linked to health advisories. Wood staff clarified that drinking water health advisory numbers are not applicable to surface water samples. Participants asked to see all the data on the 13 PFAS compounds that were analyzed. They were told that all that data would indeed be included in the report. RAB members asked that all data be provided, regardless of whether USEPA has established screening values, so the public can make decisions about what water bodies they want to come in contact with. A RAB member asked if there were plans to install signs at locations where PFAS were detected at concentrations above screening values. Roger noted that there are not currently plans to post signs.

RAB member Mark Mattson (PhD in aquatic toxicology) asked that if he could review the draft shellfish sampling plan prior to it being approved by USEPA. Air Force and USEPA staff said they would consider the request and provide a response.

Portsmouth Water Treatment
Brian Goetz provided an update on work at the City of Portsmouth Grafton Road treatment plant. See attached presentation slides, also available at http://www.afcec.af.mil/Home/BRAC/Pease-Archives/

Public Comments
Members of the public had the opportunity to share thoughts with the RAB. Three people shared comments, summarized here.

Anne McCurry (wife of deceased fire fighter):

- I am concerned that exposure to chemicals contributed to my husband's death. I have copies of historical data and a 1994 Superfund Records Search and Record of Decision indicating that Pease should not have be transferred to another owner until wells on the base were cleaned up.

Doris Brock (wife of deceased ANG member):

- I am also concerned about exposure to PFAS through ingestion of deer and am interested in participating in the RAB and CAP as well as making sure that ANG and Air Force workers are heard as part of this process.

Alayna Davis:

- How were Pease-specific screening values developed, and how do they compare to screening values at other sites? Are screening values considered cumulative risks from drinking water, and will screening be performed for PFHxS?
  USEPA response: There are no screening values currently available for PFHxS. However, as discussed throughout the meeting, should toxicity data become available, the screening could be updated because the data for PFHxS have been collected. USEPA developed the Pease-specific screening values from existing, standard generic scenarios because there are no national screening values (published as USEPA "Regional Screening Levels" (RSLs)) available for these compounds.
  Wood response: The screening values used in the exposure assessment do not include consideration for the fact that the population may have been exposed to PFAS-impacted drinking water. However due to the conservatism built in to the values and setting them at 10% of the safe exposure level, the screening levels are considered by USEPA to be sufficiently conservative to account for some cumulative exposure. Additionally the Baseline Risk Assessment, another phase of risk assessment, would take all cumulative exposure into account. This may be conducted as part of a Remedial Investigation (the next phase of the CERCLA process).

Open RAB Member Discussion

A few minutes were provided for RAB members to raise topics of their choosing. One RAB member suggested that RAB meetings be held more frequently. There was a request for a copy of the Air Force policy that prevents release of private well data, and Roger said the Air Force would provide that information in the next few days.