



**The PFAS-Impacted
Pease International Tradeport Water System
12 Year Retrospective
(The Water System's Story)**

City of Portsmouth
March 2026 Safe Water Advisory Group

2014

A Little Background:

- PFAS Regulatory Timeline
- Other Contaminated Sites

■ January 2009

- EPA Preliminary Health Advisories:
 - PFOA: 400 ppt
 - PFOS: 200 ppt

Known Sites with Contamination:

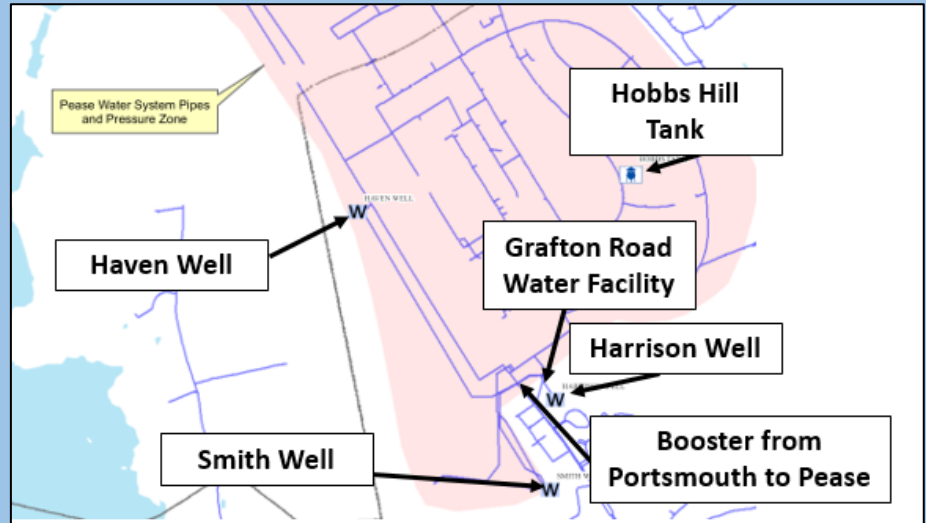
Washington County/Oakdale, MN - 2004
Decatur, Alabama - 2005
Ohio, West Virginia (C8 sites) – 2007



■ May 2012

- EPA issues UCMR 3 requiring sampling of 6 PFAS Compounds. This monitoring provides a basis for future regulatory actions to protect public health. Water Systems to Sample a 12-month period between 2013 - 2015

Pease Tradeport Water System in 2014...



Haven Well

Installed in 1875 at Haven Springs

Served Pease Air Base: 1956 to 1992

PDA/Portsmouth: 1992 to 2014

500 GPM Pump



Pease Air Base Closure - Superfund

- Eleven Record of Decisions (ROD) representing all the major Superfund cleanup decisions were completed between 1993 and 1997.
- All remedial design and construction activities for the Base have also been completed.
- Haven Well had an extensive monthly monitoring program to track any potential contaminants nearing the well.

2014

2015

2016

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2022

2023

Haven Well Water Quality August 2013



NH DPHS PHL WATER ANALYSIS LAB

29 HAZEN DR
CONCORD NH 03302
Phone: (603) 271-2994
Fax: (603) 271-2997

ANALYTICAL RESULTS

Batch ID/Form: A305509 - CHEMICAL MONITORING

Submitting Lab ID: 3000

PWS ID/Name: 1951020 - PEASE TRADE PORT - PORTSMOUTH

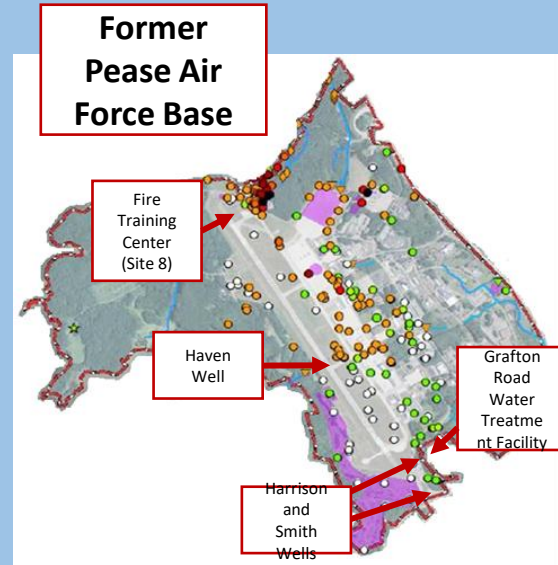
Report Date: 08/08/2013

Water Quality
Met all Drinking
Water Standards
All Non Detects
"ND"

Analytical Method: 584.1	1,3,5-TRICHLOROBENZENE	ND	CHLOROFORM	ND	T-BUTANOL (TBA)	ND	4,4'-ODD	ND	DIETHYL PHTHALATE	ND	Analytical Method: 525.2		
1,2-DIBROMO-3-CHLOROPROPANE	ND	1,3,5-TRIMETHYLBENZENE	ND	CHLOROMETHANE	ND	T-BUTYL BENZENE	ND	4,4'-ODE	ND	DIMETHYL PHTHALATE	ND	TRANS-NONACHLOR	ND
1,2-DIBROMOETHANE(EDB)	ND	1,3-DICHLOROBENZENE	ND	CIS-1,2-DICHLOROETHENE	ND	TETRACHLOROETHENE	ND	4,4'-ODT	ND	ENDRN	ND	TRIFLURALIN (TRIFLAN)	ND
Analytical Method: 585		1,3-DICHLOROPROPANE	ND	CIS-1,3-DICHLOROPROPENE	ND	TETRAHYDROFURAN(THF)	ND	ACENAPHTHENE	ND	ENDRN ALDEHYDE	ND	Analytical Method: 531.2	
CHLORDANE	ND	1,4-DICHLOROBENZENE	ND	DIBROMOCHLOROMETHANE	ND	TOLUENE	ND	ACENAPHTHYLENE	ND	FLUORANTHENE	ND	3-HYDROXY-CARBOFURAN	ND
TOXAPHENE	ND	2,2-DICHLOROPROPANE	ND	DIBROMOMETHANE	ND	TOTAL XYLENES	ND	ALACHLOR	ND	FLUORENE	ND	ALDICARB	ND
Analytical Method: 524.2		2-BUTANONE(MEK)	ND	DICHLORODIFLUOROMETHAN E	ND	TRANS-1,2-DICHLOROETHENE	ND	ALDRIN	ND	GAMMA-CHLORDANE	ND	ALDICARB SULFONE	ND
1,1,1,2-TETRACHLOROETHANE	ND	2-HEXANONE	ND	DIETHYL ETHER	ND	TRANS-1,3-DICHLOROPROPENE	ND	ALPHA-CHLORDANE	ND	HEPTACHLOR	ND	HEPTACHLOR SULFOXIDE	ND
1,1,1-TRICHLOROETHANE	ND	2-METHOXY-2-METHYLBUTANOL(TAME)	ND	DIISOPROPYL ETHER (DIPE)	ND	TRICHLOROETHENE	ND	ANTHRACENE	ND	HEPTACHLOR EPOXIDE	ND	CARBARYL	ND
1,1,2,2-TETRACHLOROETHANE	ND	4-CHLOROTOLUENE	ND	ETHYL-T-BUTYL ETHER (ETBE)	ND	TRICHLORODIFLUOROMETHAN E	ND	ATRAZINE	ND	HEXACHLOROCYCLOPENTADIENE	ND	CARBOFURAN	ND
1,1,2-TRICHLOROETHANE	ND	4-METHYL-2-PENTANONE (MIBK)	ND	HEXACHLOROBUTADIENE	ND	VINYL CHLORIDE	ND	BENZOV(ANTHRACENE)	ND	METHOMYL	ND	METHOMYL	ND
1,1-DICHLOROETHANE	ND	ACETONE	ND	ISOPROPYLBENZENE	ND	Analytical Method: 525.2		BENZO(A)PYRENE	ND	INDENO(1,2,3-CD)PYRENE	ND	OXAMYL	ND
1,1-DICHLOROETHENE	ND	BENZENE	ND	MP-XYLENE	ND	2,2,3,4,5-PENTACHLOROBIPHENYL	ND	BENZO(B)FLUORANTHENE	ND	ISOPHORONE	ND	Analytical Method: 547	
1,1-DICHLOROPROPENE	ND	BROMOBENZENE	ND	METHYL-T-BUTYL ETHER (MTBE)	ND	2,2,3,4,5,6-HEPTACHLOROBIPHENYL	ND	BENZO(G,H)PERYLENE	ND	LINDANE	ND	GLYPHOSATE	ND
1,2,3-TRICHLOROBENZENE	ND	BROMOCHLOROMETHANE	ND	METHYLENE CHLORIDE	ND	2,2,3,4,5,6-HEPTACHLOROBIPHENYL	ND	BENZO(K)FLUORANTHENE	ND	METHOXYCHLOR	ND	Analytical Method: 555	
1,2,3-TRICHLOROPROPANE	ND	BROMODICHLOROMETHANE	ND	N-BUTYLBENZENE	ND	2,2,3,4,5,6-HEPTACHLOROBIPHENYL	ND	BENZYL BUTYL PHTHALATE	ND	METOLACHLOR	ND	2,4-D	ND
1,2,4-TRICHLOROBENZENE	ND	BROMOFORM	ND	N-PROPYLBENZENE	ND	2,2,4,4-TETRACHLOROBIPHENYL	ND	(S)-2-ETHYLHEXYL PHTHALATE	ND	METIBUZZIN	ND	ACFLUFORFEN	ND
1,2,4-TRIMETHYLBENZENE	ND	BROMOMETHANE	ND	NAPHTHALENE	ND	2,2,4,4,5-HEXACHLOROBIPHENYL	ND	BUTACHLOR	ND	METIBUZZIN	ND	DICAMBA	ND
1,2-DIBROMO-3-CHLOROPROPANE	ND	CARBON DISULFIDE	ND	O-XYLENE	ND	2,3-DICHLOROBIPHENYL	ND	CHRYSENE	ND	PHENANTHRENE	ND	DINOSEB	ND
1,2-DIBROMOETHANE(EDB)	ND	CARBON TETRACHLORIDE	ND	P-ISOPROPYLTOLUENE	ND	2,4-DICHLOROBIPHENYL	ND	DI(2-ETHYLHEXYL)ADIPATE	ND	PROPACHLOR	ND	PICLORAM	ND
1,2-DICHLOROBENZENE	ND	CHLOROBENZENE	ND	SEC-BUTYLBENZENE	ND	2-CHLOROBIPHENYL	ND	DI-N-BUTYL PHTHALATE	ND	PYRENE	ND	SILVEX	ND
1,2-DICHLOROETHANE	ND	CHLOROETHANE	ND	STYRENE	ND	2-METHYLNAPHTHALENE	ND	DIELDRN	ND	SIMAZINE	ND	Analytical Method: LADHAT 16-109-12-3-A	
1,2-DICHLOROPROPANE	ND											FLUORIDE	ND

Pease Tradeport Water System PFC Contamination

- **April 2014** – NHDES contacts City of Portsmouth to sample the three Pease Tradeport water system wells for PFAS due to detections at former Fire Training Center and past use of AFFF
- **May 12, 2014** – City staff are notified that PFAS levels in Haven Well exceeded the EPA's Health Advisory Standard for PFOS of 200 Parts-Per-Trillion (ppt)
 - Haven PFOS level = 2,500 ppt
- **May 12, 2014**
 - Haven Well is shut down
 - Smith and Harrison wells remain in service with lower detectable levels of PFAS
 - All other Portsmouth Sources are sampled and test "Non Detect"



May 22, 2014....

NH Department of Health and Human Services
129 Pleasant Street – Hugh Gallen State Office Park
Concord, NH 03301



NH Department of Environmental Services
29 Hazen Drive
Concord, NH 03301

PRESS RELEASE
FOR IMMEDIATE RELEASE
May 22, 2014

Facebook: [NHDepartmentOfHealthAndHumanServices](#)

CONTACT
DHHS Public Information Office
603-271-9388
Twitter: [NHDIHSPPIO](#)
DES Public Information Office
603-271-3710

Unregulated Contaminant Found in Pease Tradeport Water System

Concord, NH – The New Hampshire Department of Health and Human Services (DHHS), Division of Public Health Services, and the New Hampshire Department of Environmental Services (DES) are today announcing a positive test result for perfluorooctane sulfonic acid (PFOS) from a well that serves the Pease Tradeport and the New Hampshire Air National Guard base at Pease. PFOS is one of a class of chemicals known as PFCs or perfluorochemicals. Because the level of PFOS exceeds the “provisional health advisory” set by the U.S. Environmental Protection Agency (EPA), the well was immediately shut down by the City of Portsmouth.



PUBLIC WORKS DEPARTMENT

CITY OF PORTSMOUTH
680 Beverly Hill Road
Portsmouth N.H. 03801
(603) 427-1530 FAX (603) 427-1539

May 22, 2014

The Pease International Tradeport Water System and Wells

On Monday May 12, 2014, City of Portsmouth staff were notified by the New Hampshire Department of Environmental Services (NHDES) that water sampling results for the Haven Well showed that perfluorooctanesulfonic acid, an unregulated contaminant, exceeded the provisional health advisory levels recommended by the Environmental Protection Agency. The Smith and Harrison wells also had levels of this unregulated contaminant in their water but they were well below the advisory levels. As a precautionary measure, the City took the Haven Well immediately off line as recommended by NHDES Drinking Water and Groundwater Bureau.



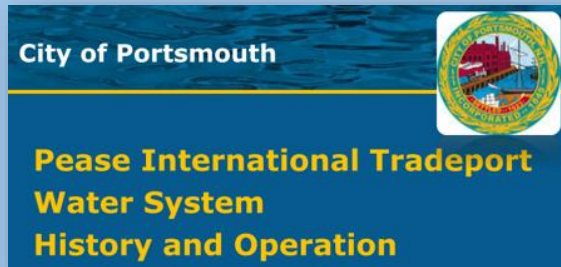
What Caused the Contamination? Aqueous Film-Forming Foam (AFFF)



May 2014 - What Did We Know?

- Referred to as “PFCs” – not yet “PFAS”
- Health concerns at Parts per Trillion
- It bio-accumulates
- Not just one compound... Many variants

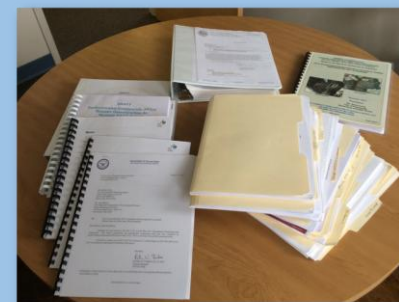
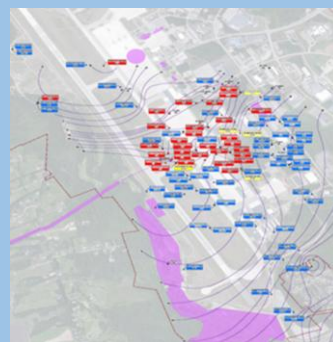
May 28, 2014: State, Health and Water System Officials Hold First Public Meeting



Pease Tradeport PFAS Investigation Begins

- Technical Team

- Air Force Civil Engineering
- Air Force Engineering Consultants
- EPA Region 1
- NHDES Waste Division
- NHDES Drinking Water and Groundwater Program
- Pease Development Authority
- City of Portsmouth Staff and Consultants



Co-operative Partnerships with Air Force

- ENVIRONMENTAL SERVICES COOPERATIVE AGREEMENTS (ESCA)
 - Well Replacement Study
 - Treatment Feasibility Study
 - Treatment Pilot Studies
 - Treatment Design
 - Treatment Construction
 - Additional Operations Expense



Meeting with U.S. Air Force to discuss Pease



August 26, 2015 - CAB meeting with U.S. Air Force to discuss Pease PFC contamination

EPA Order to Treat Haven Well Water July 2015

42

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION I

In the Matter of:

United States Air Force,

Respondent.

Former Pease Air Force Base,

The "Facility?"

Docket No.: SDWA-01-2015-0061

Proceeding Under Section 1431(a) of the
Safe Drinking Water Act,
42 U.S.C. § 300i(a)



By Jennifer
Crumpton
BIO »

EPA orders Air Force to clean up contaminated Pease well

High levels of contaminant found last year

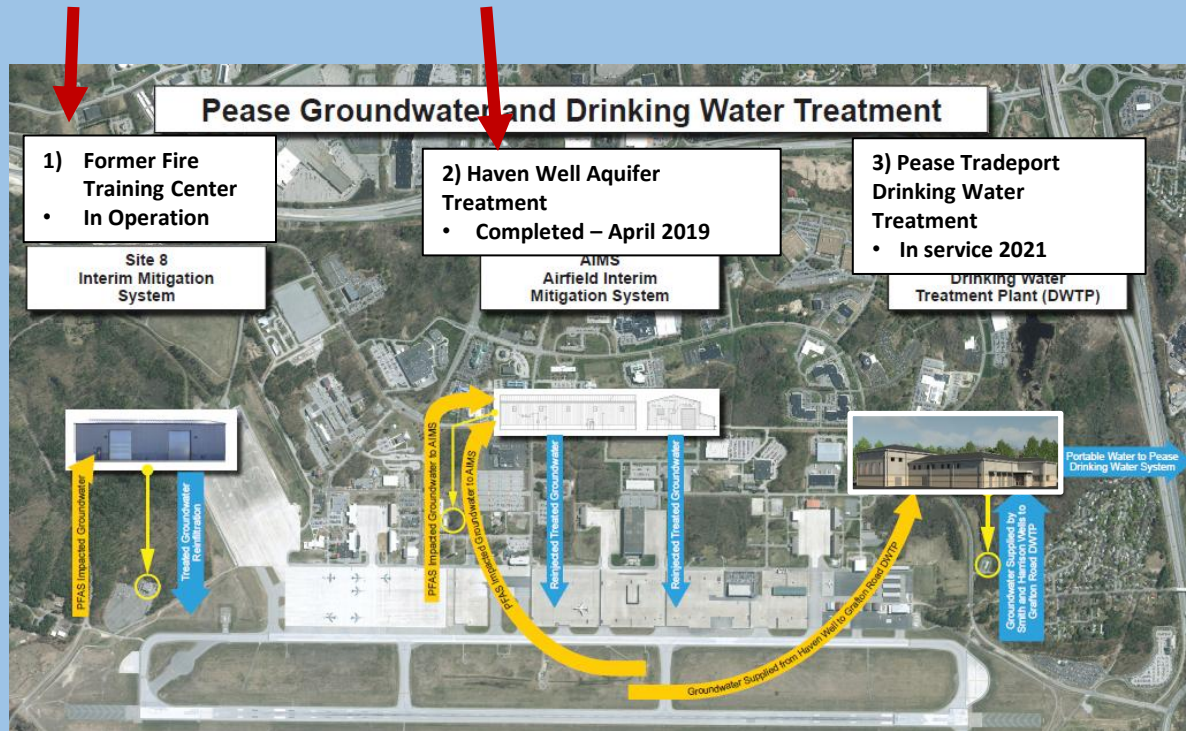
Published 6:10 PM EDT Jul 10, 2015

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- Required Treatment System for Haven Well
- City and Air Force Subsequently met with Senator Shaheen and City proposed treatment for all three Pease Wells
 - Air Force agreed to system that would also treat Harrison and Smith Wells
- City signed agreement with Air Force to design and construct the system

EPA Order Included Two Other Treatment Systems:



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Pease Restoration Advisory Board (RAB) Reinstated

AIR FORCE CIVIL ENGINEER CENTER

NEWS | FACT SHEETS | DOING BUSINESS WITH AFCEC | CONTACT

PEASE RAB DOCUMENTS

RAB Documents

RAB Operating Procedures | RAB Membership Application
RAB Contact List | RAB Factsheet

RAB Meeting Date	Notices	Agenda	Presentation	Minutes	Other
Apr. 9, 2014	Meeting Flyer	Agenda	Presentation	Minutes	USOC Presentation ANCO Presentation Recorded Session Pre-Recorded Session Meeting Summary
Nov. 1, 2013	Meeting Flyer	Agenda	Presentation	Minutes	Pre-Recorded Session Pre-Recorded Slides RAB Community Slides Water Update Slides

AFCEC hosts former Pease AFB RAB tour

Innovation, partnership bring Pease water treatment plant online

EPA recognizes AFCEC-led cleanup success

Air Force expands treatment capabilities to address PFOS/PFOA

Air Force continues attack on PFOS/PFOA issues at Pease

Tuesday, April 12, 2016 | Portsmouth Herald | Page A4
www.seacoastonline.com

Attend the former Pease Air Force Base Restoration Advisory Board Meeting

The Pease Restoration Advisory Board (RAB) meeting will provide attendees an update on the environmental restoration progress at the former Pease AFB. The RAB gives members of the community a chance to learn about the ongoing restoration at the former base, and to provide input to the Air Force and regulatory agencies.

RAB Meeting: Tuesday, April 19, 2016

Time: 6:30 pm

Location: NH Department of Environmental Services Offices (NHDES) 222 International Drive, Suite 175
Portsmouth, New Hampshire 03801

Contact: AFCEC Public Affairs at 210-925-0956

Former Pease Air Force Base



RAB Members – March 2016

GAC Piloting Begins on Harrison and Smith Wells: April 2016

Purpose – monitor GAC effects on pH

- Potential issues with orthophosphate effectiveness



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Updated Lifetime Health Advisories

- January 2009

- EPA Preliminary Health Advisories:

- PFOA: 400 ppt
- PFOS: 200 ppt

- May 2016

- EPA Lifetime Health Advisories:

- PFOA: 70 ppt
- PFOS: 70 ppt

2009

2010

2011

2012

2013

2014

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2018

- May 2012

- EPA issues UCMR 3 requiring sampling of 6 PFAS Compounds. This monitoring provides a basis for future regulatory actions to protect public health. Water Systems to Sample a 12-month period between 2013 - 2015



EPA
United States
Environmental Protection
Agency

FACT SHEET
PFOA & PFOS Drinking Water
Health Advisories

Overview

EPA has established health advisories for PFOA and PFOS based on the agency's assessment of the latest peer-reviewed science to provide drinking water system operators, and state, tribal and local officials who have the primary responsibility for overseeing these systems, with information on the health risks of these chemicals, so they can take the appropriate actions to protect their residents. EPA is committed to supporting states and public water systems as they determine the appropriate steps to reduce exposure to PFOA and PFOS in drinking water. As science on health effects of these chemicals evolves, EPA will continue to evaluate new evidence.

Background on PFOA and PFOS

PFOA and PFOS are fluorinated organic chemicals that are part of a larger group of chemicals referred to as perfluoroalkyl substances (PFASs). PFOA and PFOS have been the most extensively produced and studied of these chemicals. They have been used to make carpets, clothing, fabrics for furniture, paper packaging for food and other materials (e.g., cookware) that are resistant to water, grease or stains. They are also used for firefighting at airfields and in a number of industrial processes.

Because these chemicals have been used in an array of consumer products, most people have been exposed to them. Between 2000 and 2002, PFOS was voluntarily phased out of production in the U.S. by its primary manufacturer. In 2006, eight major companies voluntarily agreed to phase out their global production of PFOA and PFOA-related chemicals, although there are a limited number of ongoing uses. Scientists have found PFOA and PFOS in the blood of nearly all the people they tested, but these studies show that the levels of PFOA and PFOS in blood have been decreasing. While consumer products and food are a large source of exposure to these chemicals for most people, drinking water can be an additional source in the small percentage of communities where these chemicals have contaminated water supplies. Such contamination is typically localized and associated with a specific facility, for example, an industrial facility where these chemicals were produced or used to manufacture other products or an airfield at which they were used for firefighting.

EPA's 2016 Lifetime Health Advisories

EPA develops health advisories to provide information on contaminants that can cause human health effects and are known or anticipated to occur in drinking water. EPA's health advisories are non-enforceable and non-regulatory and provide technical information to states agencies and other public health officials on health effects, analytical methodologies, and treatment technologies associated with drinking water contamination. In 2009, EPA published provisional health advisories for PFOA and PFOS based on the evidence available at that time. The science has evolved since then and EPA is now replacing the 2009 provisional advisories with new, lifetime health advisories.

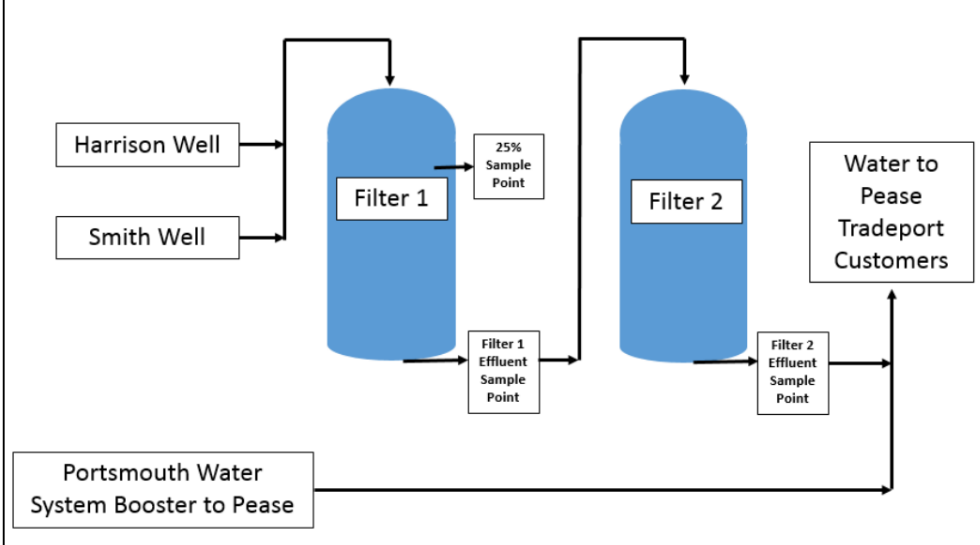
Demonstration Filters

- Fall 2016 – Installed full size temporary GAC filtration
- Flow rate - 400 GPM
- Test GAC effectiveness on Pease (Harrison and Smith) water



Demonstration Filter Schematic

Harrison and Smith Well
Activated Carbon Treatment Demonstration Schematic



Treatment Design Options

- Activated Carbon Filtration is most widely accepted for drinking water applications
- Membrane Filtration
- Anion Exchange
- Advanced Oxidation



Oakdale, Minnesota
Activated Carbon



Newcastle, Delaware
Activated Carbon

Haven Well Pilot Test – Resin Filters

(November 2017 – December 2018)

- Approached by ECT2 about potential to utilize resin treatment
- Begin piloting to compare the ability of media to remove PFAS from the Haven Well
 1. IX Resin = ECT2's SORBIX LC1
 2. GAC = Calgon's F400



September 2018 Resin Piloting Results

- Resin significantly outperforms GAC when raw water PFAS concentrations are high
- As regulations move PFAS limits lower, the advantages of resin over GAC goes up
- Recommend treatment system with resin followed by GAC filters



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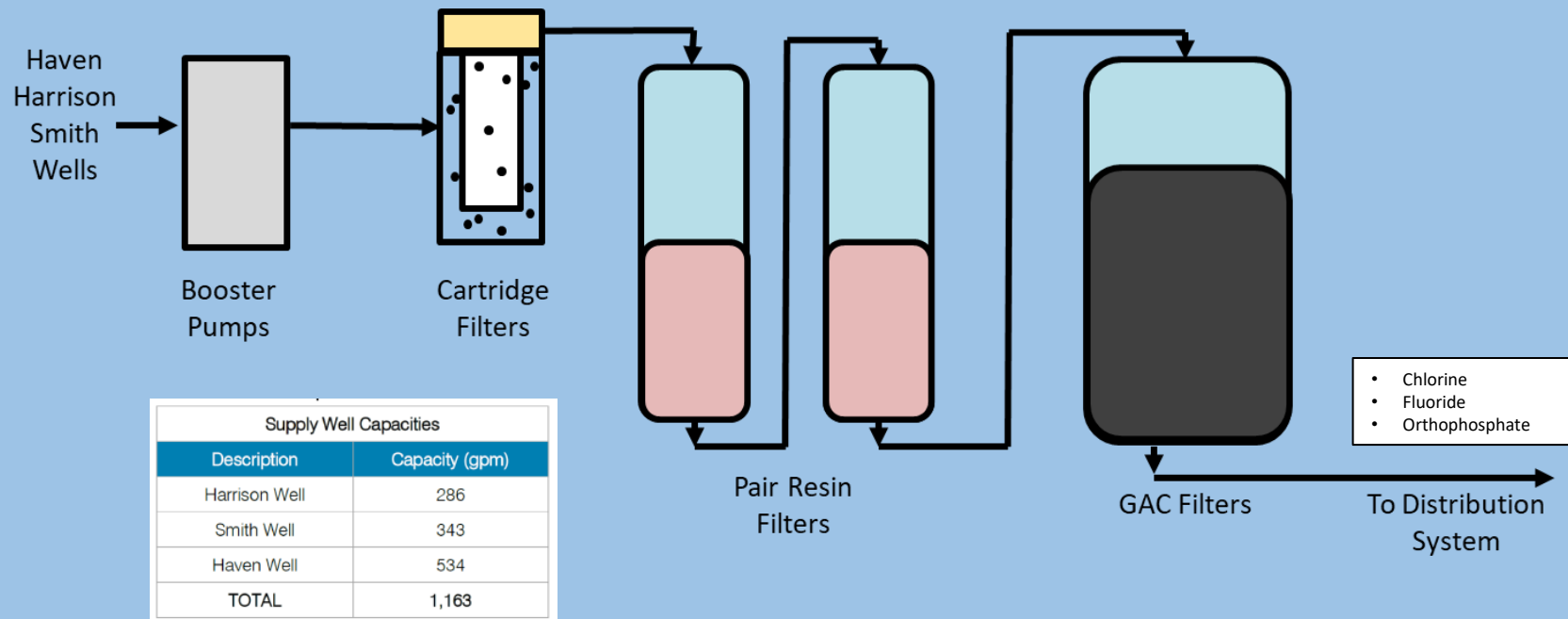
Final Treatment Facility Design



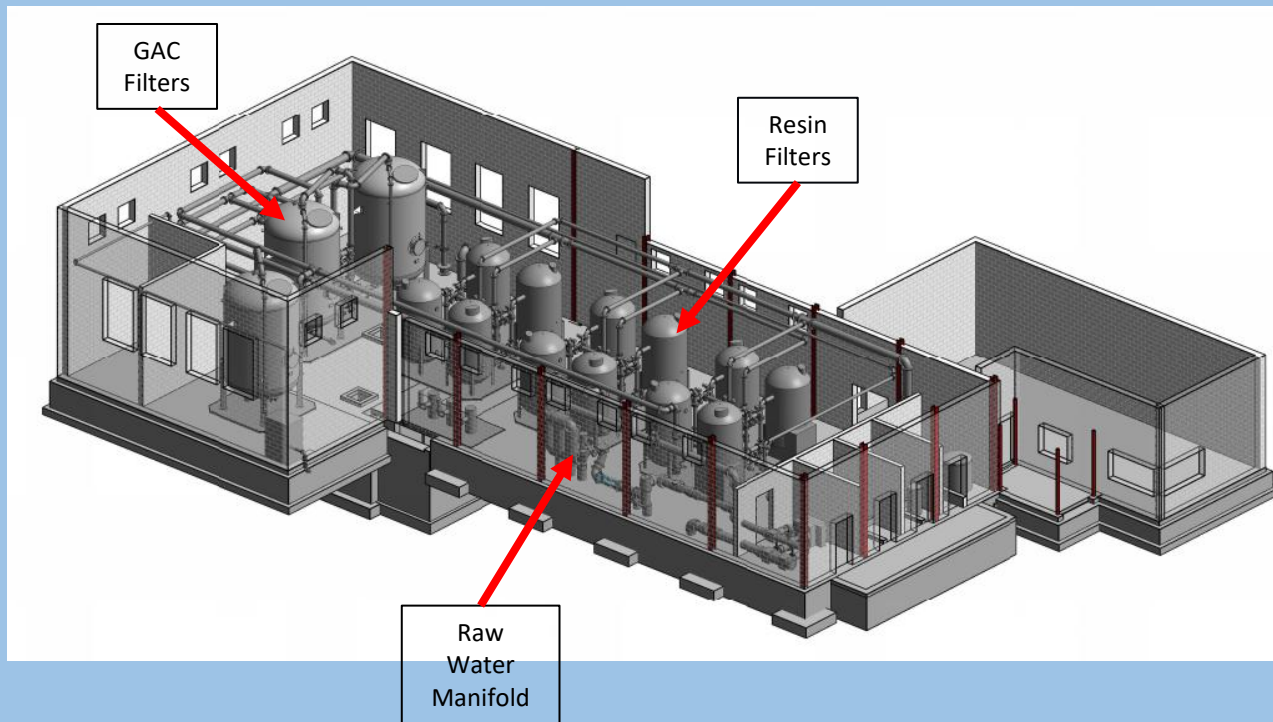
- City Water Staff
- Weston & Sampson

Pease WTF Process Schematic

New Treatment System



Final Proposed Treatment Layout



January 2019 Invitation to Bid



INVITATION TO BID
GRAFTON ROAD
DRINKING WATER TREATMENT PLANT UPGRADE
CITY OF PORTSMOUTH NEW HAMPSHIRE

OWNER: The City of Portsmouth, New Hampshire seeks sealed Bids for the construction of upgrades at the Grafton Road Drinking Water Treatment Plant. The work will consist of the renovations and additions of new treatment process to treat drinking water supplied to the Pease International Tradeport for Perfluorooctanoic acid (PFOA) and Perfluorooctanesulfonic acid (PFOS). The scope of work includes partial demolition of the existing +/- 4,000 square foot building to increase the overall size and height of the facility, including the additions of approximately 3,900 square feet of building area.

BID OPENING: Sealed Bids will be received until 2:00 P.M. Local Time on January 8, 2019 in the office of the Finance/Purchasing Department, City Hall, 1 Junkins Avenue, Portsmouth, NH 03801. After the official Bid closing time, the Bids will be publicly opened and read aloud.

BIDDING DOCUMENTS: Contract Documents may be viewed and downloaded as a Portable Document Format (PDF) file free of charge at www.accentblueprints.com. Copies may be obtained by completing an order online or by calling 978-362-8038 with payment of printing fee for each set. Copies may be shipped for an additional charge. All payments for printing and shipping are nonrefundable. Completed orders may be picked up at the offices of Accent Printing located at 99 Chelmsford Road, North Billerica, MA 01862 (978-362-8038), from 9 a.m. to 4 p.m. Copies may also be shipped to prospective bidders for an additional charge to cover handling and mailing fees. Any questions regarding bidding should be directed to the Purchasing Department at 603-610-7227. Any technical questions should be directed to Weston & Sampson's Project Manager, Margaret A. McCarthy, PE, in writing at mccarthym@wsinc.com.

PRE-BID CONFERENCE: A mandatory pre-bid conference will be held on December 5, 2018 at 1:00 P.M. at the Portsmouth Department of Public Works, First Floor, 680 Peverly Hill Road, Portsmouth, NH 03801, to familiarize Bidders with the Project. A site tour of the existing WTP will follow the conference.

BID SECURITY: Bid Security, certified treasurer's or cashier's check or bid bond, in the amount of 5 percent of the Bid shall accompany each Bid in accordance with the Instructions to Bidders.

CONTRACT SECURITY: The Bidder to whom a Contract is awarded shall furnish a Performance Bond and a Payment Bond each in amount equal to the Contract Price.

RESERVATION OF RIGHTS: OWNER reserves the right to reject any and all Bids, waive informalities in bidding or to accept the Bid or Bids, should the OWNER deem it in the Public interest to do so.

BID WITHDRAWAL: No Bid shall be withdrawn for a period of 90 days after the opening of Bids without consent of OWNER.

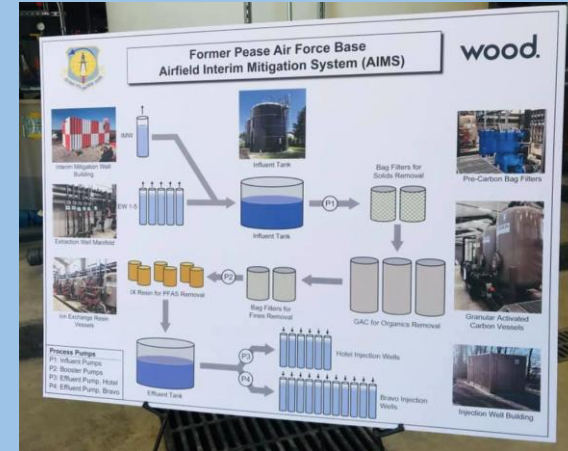
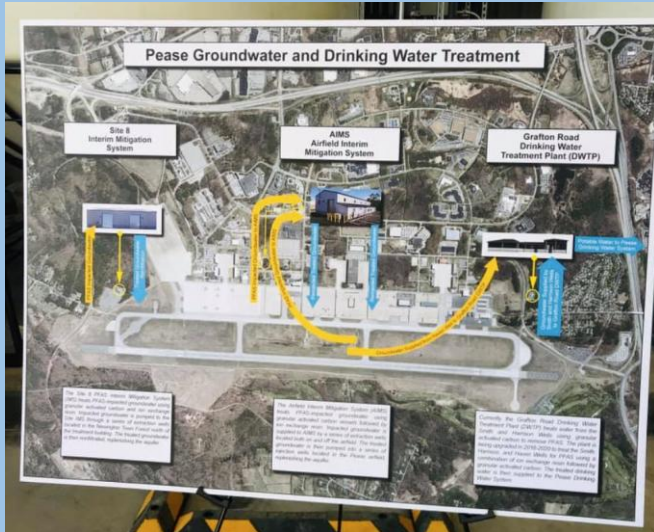
TIME FOR COMPLETION: The Work shall be completed within 670 calendar days from the date when the Contract Times commence to run. There are several Interim Milestones in addition to the time for Final Completion.

END OF SECTION

April 2019 - Start of Construction Kinsmen Corporation



Airfield Interim Mitigation System (AIMS) Treatment Completed



October 2019 – New GAC Filter Installation



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March 2020
GAC Building:



June 2020 - Demolition of Existing Building



July 2020 – NH Governor Signs PFAS MCLs into Law

Seacoastonline

Sports Entertainment Lifestyle Opinion USA TODAY Obituaries eNewspaper Legals

NH House passes tough drinking water standards

Michael Casey Associated Press
Published 6:01 p.m. ET June 30, 2020

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A carbon filtration system was installed in Portsmouth in 2016 to treat Pease well water for PFAS contamination. Rich Beauchesne/Seacoastonline, File

In July 2020, New Hampshire House Bill 1264 was signed into law establishing the following MCLs:

Per- and polyfluoroalkyl substances (PFAS)	Maximum Contaminant Level nanograms/liter (parts per trillion or ppt)
Perfluorooctanoic acid (PFOA)	12
Perfluorooctane sulfonic acid (PFOS)	15
Perfluorohexane sulfonic acid (PFHxS)	18
Perfluorononanoic acid (PFNA)	11

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October 2020 – Safe Water Advisory Group Forms Meets Quarterly

Safe Water Advisory Group (SWAG)



Water Forum

5.3.2022

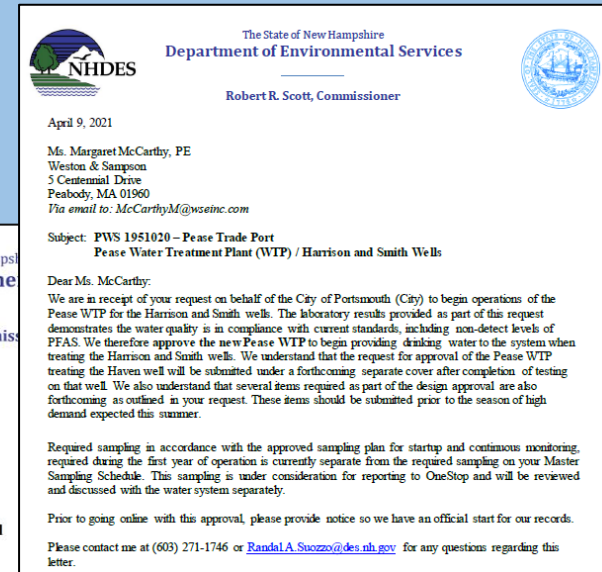
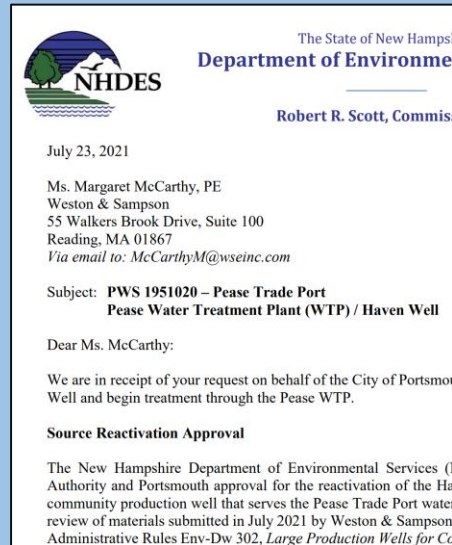
The Safe Water Advisory Group was created with the approval of City Council on October 5, 2020. Its mission is to review and communicate the latest science on the health and environmental effects of drinking water contaminants (with a heavy focus on PFAS), to monitor federal and state level legislative changes, and to anticipate policy changes that could impact the city of Portsmouth. T

Filter Room – Resin and GAC Filters – March 2021



Approval of New Treatment System

- Resin filters tested with Harrison and Smith water
- Data analysis submitted to NHDES for approval of system operation
- April 9 & July 23, 2021 – Approvals to operate and reactivate the Haven Well



Two Years of Construction

April 2019

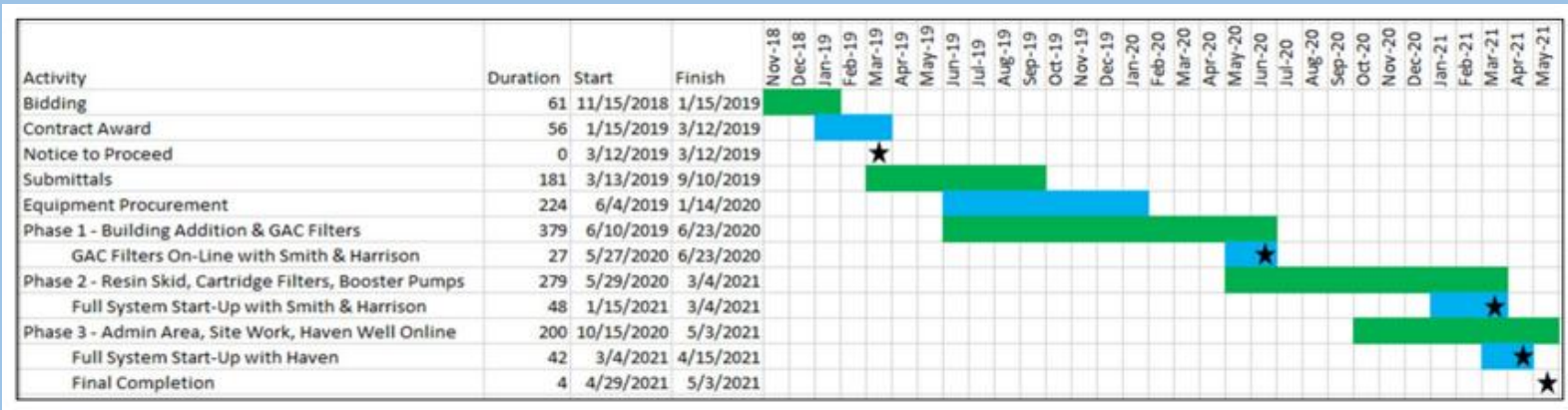


April 2021



On Time... and... On Budget

- \$10.8 Million Construction – Kinsmen Corp
- \$2 Million Engineering, Studies, Design, Piloting, Construction Admin
- Reimbursed by Air Force through various ENVIRONMENTAL SERVICES COOPERATIVE AGREEMENTS



May 4, 2021 Dedication



**City Officials, Congressional Delegation
and Air Force Representatives**



City Staff



Weston & Sampson Engineers

2014

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2019

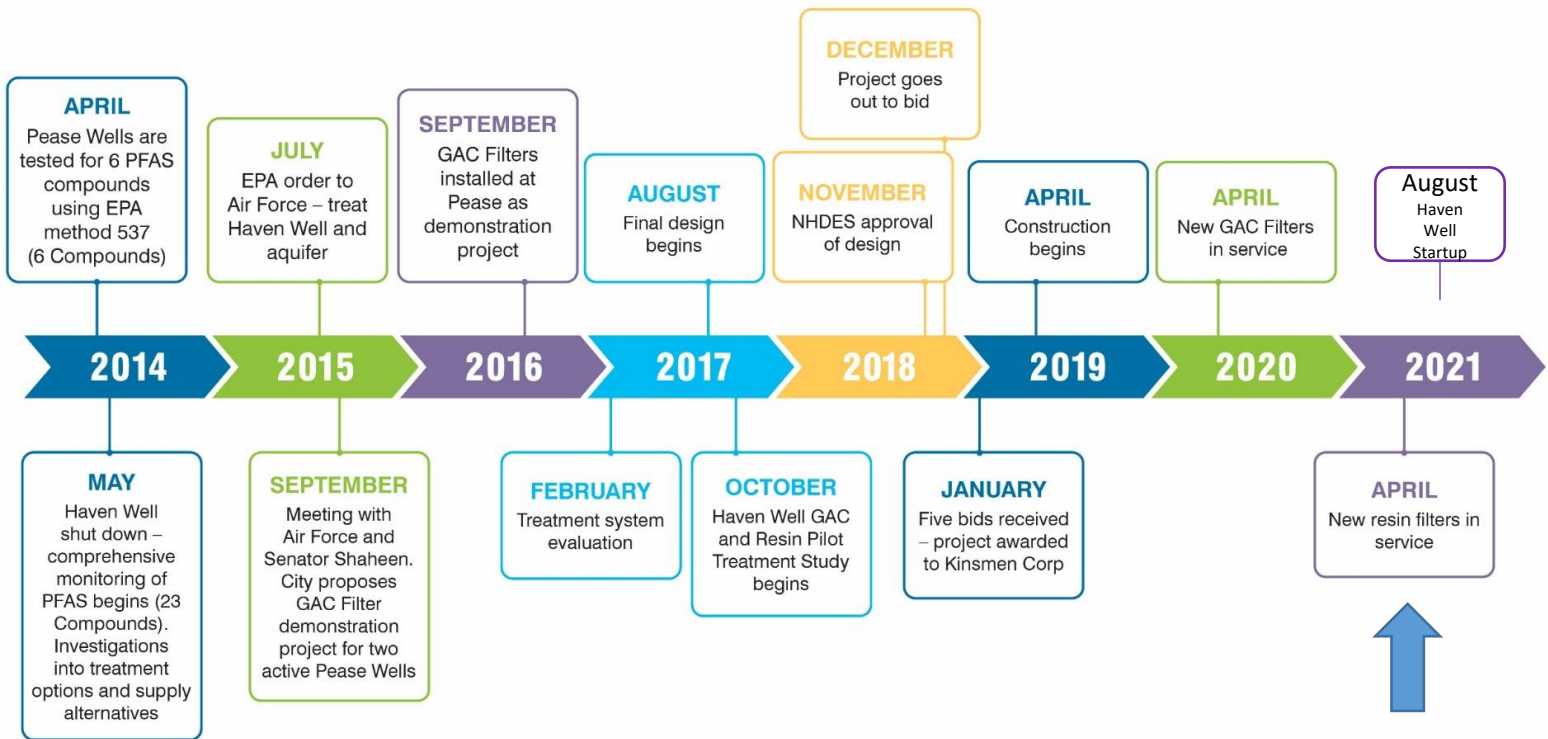
2020

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2023

PEASE TRADEPORT PFAS TIMELINE:



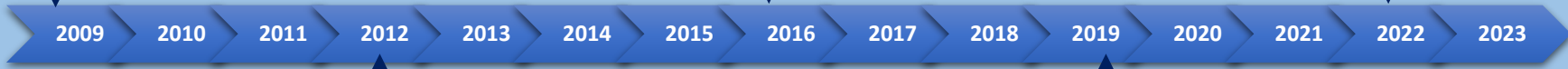


Updated Health Advisories

- January 2009
 - EPA Preliminary Health Advisories:
 - PFOA: 400 ppt
 - PFOS: 200 ppt

- May 2016
 - EPA Lifetime Health Advisories:
 - PFOA: 70 ppt
 - PFOS: 70 ppt

- June 2022
 - EPA issues Interim Updated PFOA and PFOS Health Advisories
 - PFOA = 0.004 parts per trillion (ppt)
 - PFOS = 0.02 ppt
 - GenX chemicals = 10 ppt (Final Advisory)
 - PFBS = 2,000 ppt (Final Advisory)



- May 2012
 - EPA issues UCMR 3 requiring sampling of 6 PFAS Compounds. This monitoring provides a basis for future regulatory actions to protect public health. Water Systems to Sample a 12-month period between 2013 - 2015

- July 2019
 - New Hampshire Sets Maximum Contaminant Levels in Drinking Water and Groundwater:
 - PFOA: 12 ppt
 - PFOS: 15 ppt
 - PFNA: 11 ppt
 - PFHxS: 18 ppt

2014

2015

2016

2017

2018

2019

2020

2021

2022

2023

2024

2025

Regulations Continue...

■ January 2009

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2009

2010

2011

2012

2013

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■ 2024

- EPA established MCLs for PFAS Compounds

Regulations Continue...

▪ **April 10, 2024** (EPA established MCLs for PFAS Compounds)

- PFOS: 4 ppt
- PFOA: 4 ppt
- PFNA: 10 ppt
- PFHxS: 10 ppt
- HFPO-DA (GenX): 10 ppt
- Hazard Index (PFNA, PFHxS, HFPO-DA & PFBS): 1

Compliance Deadline: 2029

▪ **May 14, 2025 EPA News Release**

(EPA rescinds MCLs for some PFAS Compounds)

- PFOS: 4 ppt
- PFOA: 4 ppt

Compliance Deadline: 2031

Pease PFAS Contamination - 10 year recap - Community Perspective

Pease Well Is Shut Down After Unregulated Contaminant Discovered

New Hampshire Public Radio | By Sam Evans-Brown
Published May 22, 2014 at 5:30 PM EDT



▶ LISTEN • 0:53



State officials have shut-down one of three drinking water wells that serve the Pease Tradeport. The well was contaminated with an unregulated chemical found in foams used by firefighters.

<https://www.nhpr.org/environment/2014-05-22/pease-well-is-shut-down-after-unregulated-contaminant-discovered>

'They need to be held accountable'

Jeff McMenemy jmcmenemy@seacoastonline.com
Published 1:00 a.m. ET Jan. 15, 2015 | Updated 8:57 a.m. ET Jan. 15, 2015



Andrea Amico wants blood testing available for people exposed to the contaminated water at Pease. Amico is the mother of two kids who go to Great Bay Kids Company, one which drank water there when high levels of PFCA were found at Haven Well. Now eight months after news of the contamination broke, testing has yet to be set up. Photo by Ioanna Raptis/Seacoastonline Portsmouth Herald

PORTSMOUTH — Andrea Amico began contacting state officials in May to find out where she could get her children and husband tested for the presence of what the Environmental Protection Agency described “a contaminant of emerging concern” in their blood.

Amico, a Portsmouth resident, sought the blood work for her family after state and

<https://www.seacoastonline.com/story/news/local/portsmouth-herald/2015/01/15/they-need-to-be/33656743007/>



TESTING *for* PEASE



www.testingforpease.com

Pease PFAS Contamination - 10 year recap - Community Perspective

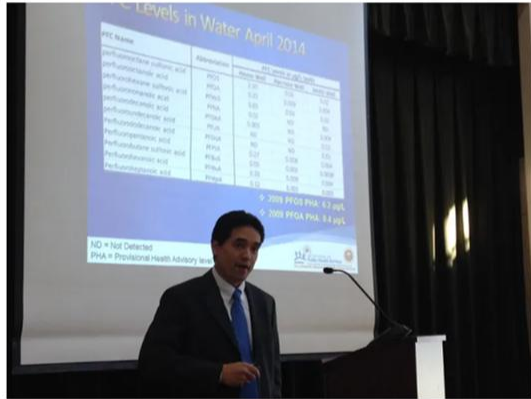
PORTSMOUTH HERALD

Report: PFCs elevated for those exposed at Pease

Meeting to discuss aggregate results sparsely attended

Karen Dandurant kdandurant@seacoastonline.com

Published 3:12 p.m. ET June 16, 2016 | Updated 9:34 a.m. ET June 17, 2016



Dr. Benjamin Chan, state epidemiologist, shares results of the Pease/PFC blood testing program, which indicate exposure levels that are higher than the national average. More than 1500 people were tested after being exposed to water from the contaminated Haven well. Photo by Howard Aitschler/Seacoastonline Portsmouth Herald

PORTSMOUTH — A meeting Thursday night at the Community Campus to discuss the results of a report on blood testing done for people exposed to contaminated water at a well on the Pease Tradeport drew only about 40 people, possibly because of a change of venue.

<https://www.seacoastonline.com/story/news/local/portsmouth-herald/2016/06/16/report-pfc-elevated-for-those/27599767007/>

PORTSMOUTH HERALD

Worried moms speak out on blood test results

Children have elevated levels after years of exposure

Jeff McMenemy jmcmenemy@seacoastonline.com

Published 5:03 p.m. ET Aug. 24, 2015 | Updated 5:36 p.m. ET Aug. 24, 2015



Jenn Horton of Nottingham, Andrea Amico of Portsmouth, and Alayna Davis of Dover, are extremely concerned for their children, who have been exposed to contaminated city water at Pease International Tradeport. Photo by Rich Beauchesne/Seacoastonline Portsmouth Herald

PORTSMOUTH — Three women whose children have been exposed to contaminated water from a city-owned well say they're worried about what damage the water may have caused.

Dover resident Alayna Davis, whose 5-year-old son has been attending Great Bay Kids Company, one of two day care facilities at the former Pease Air Force base, said her son's blood test results were "elevated and very concerning."

<https://www.seacoastonline.com/story/news/local/portsmouth-herald/2015/08/24/worried-moms-speak-out-on/33640251007/>

PFC Exposure at Pease Could Soon Be Part of National Health Study

New Hampshire Public Radio | By Jason Moon
Published December 12, 2017 at 5:11 PM EST



File Photo

People exposed to the chemicals known as PFCs at the former Pease Air Force base could soon be taking part in a new national health study.

A defense spending bill signed into law by President Trump on Tuesday included an amendment on PFCs backed by New Hampshire's congressional delegation.

<https://www.nhpr.org/environment/2017-12-12/pfc-exposure-at-pease-could-soon-be-part-of-national-health-study>

Pease PFAS Contamination - 10 year recap - Community Perspective

PORTSMOUTH HERALD

Shaheen calls for national PFC health study

Senator places amendment in defense bill to fund effort

Jeff McMenemy jmcmemey@seacoastonline.com

Published 8:12 p.m. ET June 28, 2017 | Updated 8:39 p.m. ET June 28, 2017



PORTSMOUTH – U.S. Sen. Jeanne Shaheen, D-N.H. has included an amendment in the Defense Authorization Act which creates the first-ever national study on the health effects of people exposed to PFCs in their drinking water.

The Shaheen amendment directs the Department of Defense to pay for a nationwide study, which would be conducted by the Agency for Toxic Substances and Disease Registry (ATSDR).

The study will have a huge impact on the children and adults who were exposed to drinking water contaminated by PFCs at the former Pease Air Force Base.

The study will not be a Pease-only study, but will be a nationwide assessment of the effects PFCs are having on citizens near military bases.



Sen. Jeanne Shaheen Portsmouth Herald



NEWS ABOUT CONTACT

JEANNE SHAHEEN
U.S. SENATOR - NEW HAMPSHIRE

NEWSLETTER

Press Releases

03.21.2018

Shaheen Secures Funding for First-Ever Nationwide PFC Water Contamination Study in Omnibus Government Spending Bill

***Shaheen spearheaded efforts in Congress to establish the study in the FY 2018 National Defense Authorization Act, which was signed into law by the President last year. ***

(Washington, DC) – U.S. Senator Jeanne Shaheen (D-NH), a senior member of the Senate Appropriations and Armed Services Committees, procured \$7 million to fund the first-ever nationwide health study on the impact of perfluorinated chemicals (PFCs) in drinking water. The funding is included in the bipartisan legislation unveiled today to fund the federal government for fiscal year 2018, which also directs the Defense Department to report on the extent of the PFC contamination in drinking water, plans for community notification and procedures for timely remediation.

<https://www.shaheen.senate.gov/news/press/shaheen-secures-funding-for-first-ever-nationwide-pfc-water-contamination-study-in-omnibus-government-spending-bill>

Pease study report: PFAS levels elevated but decreasing for people exposed

Jeff McMenemy Portsmouth Herald

Published 5:00 a.m. ET Jan. 14, 2024 | Updated 5:00 a.m. ET Jan. 14, 2024



PORTSMOUTH — Adults and children who participated in the Pease Health Study had “significantly higher concentrations” of a variety of PFAS chemicals in their bodies than the general United States population.

That’s according to the first report on the study, which examined a group of adults and children who were exposed to contaminated drinking water at the former Pease Air Force Base.

But when comparing results to the earlier 2015-2017 state blood testing program results, the exposed participants “had lower concentrations of all PFAS analytes,” according to the report released Friday by the Centers for Disease Control and Prevention and Agency for Toxic Substances and Disease Registry.

The report states “a possible explanation for these lower concentrations is the expected breakdown of the chemicals in the body over time.”



<https://www.seacoastonline.com/story/news/local/portsmouth-herald/2017/06/29/shaheen-calls-for-national-pfc/20411444007/>

<https://www.seacoastonline.com/story/news/local/2024/01/14/pease-study-report-pfas-elevated-but-decreasing-for-people-exposed/72207905007/>

Pease PFAS Contamination - 10 year recap - Community



Core Values Our Science Our Impact Support Our Work

Silent Spring Institute » Our Science » How are we exposed to toxic chemicals? » Drinking water

PFAS-REACH

Through PFAS-REACH, we are advancing science on the health risks associated with exposure to PFAS in children and empowering communities to reduce their exposures and advocate for change.



In recent years, a class of toxic chemicals called PFAS have been detected in drinking water supplies across the country *servicing millions of Americans*. Epidemiological studies have reported negative effects on children's immune systems from exposure to PFAS, and suggest that current drinking water guidelines may not be adequately protective. To address concerns about health effects from PFAS in drinking water and to develop tools and materials to support impacted communities, we launched PFAS-

Our researchers



Laurel Schaider, PhD
Senior Scientist, Environmental Chemistry and Engineering



Abigail Bline, PhD
Postdoctoral Research Fellow



Health

More families invited to participate in study on PFAS at Pease International Tradeport

New Hampshire Public Radio | By Mara Hoplamagian
Published February 20, 2024 at 10:35 AM EST



A water tower at the Pease International Tradeport.

The PFAS-REACH study is looking to test whether exposure to PFAS — a group of man-made chemicals that have been linked to harmful health effects — changes how children's immune systems respond to vaccines.

<https://www.nhpr.org/health/2024-02-20/more-families-invited-to-participate-in-study-on-pfas-at-pease-international-tradeport>

Did you or your child drink the water at Pease before 2014?

Sign up today for the PFAS-REACH Children's Health Study!

NOW ENROLLING AGES 4-8 AND 11-15

Help researchers study the harmful effects of PFAS in children!

High levels of PFAS chemicals were present in the drinking water at Pease prior to 2014. These chemicals can be passed from mother to child during pregnancy and breastfeeding. Learning about your child's exposure will empower you to better protect their health.



What's the goal?

To test whether exposure to PFAS in drinking water affect healthy immune response to vaccinations in children

Who's eligible?

Children (ages 4-8 and 11-15) who attended daycare at Pease or whose mothers worked at Pease before 2014

What's involved?

A questionnaire, blood draw, urine sample, and text message surveys

What will I receive?

A customized report with your child's results and \$125 in gift cards.

Contact us to sign up!

pfas-reach@silentspring.org
617-221-6428 (text or call)
bit.ly/pfas-reach

IRB# 19-05-03 - MCO 19
Approved: 11/06/2023

Funded by: NIEHS



PFAS-REACH
PFAS Research, Education,
and Action for Community Health

Pease PFAS Contamination - 10 year recap - Community Perspective



N.H. Approves Unprecedented Limits For PFAS Chemicals In Drinking Water

New Hampshire Public Radio | By Annie Ropeik
Published July 18, 2019 at 10:18 PM EDT



EPA sets strict new PFAS limits; Portsmouth confirms it must lower levels in water

Jeff McMenemy Portsmouth Herald
Published 12:15 p.m. ET April 10, 2024 | Updated 3:23 p.m. ET April 10, 2024



PORTSMOUTH — The U.S. Environmental Protection Agency on Wednesday announced federally enforceable drinking water standards for dangerous per-and polyfluoroalkyl substances (PFAS), which are also known as forever chemicals.

EPA has finalized the legally enforceable levels, called Maximum Contaminant Levels (MCLs), for five individual PFAS, including the most frequently found PFOA and PFOS, the agency said.



Portsmouth activist Andrea Amico said she is "relieved" by the EPA's decision to set strict federally enforceable drinking water standards for PFAS. File Photo

Because PFAS can often be found together in mixtures, EPA is also setting a limit for any combination of four PFAS.

<https://www.seacoastonline.com/story/news/local/2024/04/10/epa-new-pfas-limits-water-portsmouth-must-lower-levels/73265516007/>

The Washington Post
Democracy Dies in Darkness

ENVIRONMENT Climate Weather Climate Solutions Animals Climate Lab Green Living

For the first time, U.S. may force polluters to clean up these 'forever chemicals'

The EPA is classifying two of the most prevalent PFAS 'forever chemicals' as hazardous substances under the federal Superfund law

By Maxine Joselow and Brady Dennis
April 19, 2024 at 9:00 a.m. EDT



<https://www.washingtonpost.com/climate-environment/2024/04/19/epa-rule-pfas-hazardous-water-contamination/>

<https://www.nhpr.org/environment/2019-07-18/n-h-approves-unprecedented-limits-for-pfas-chemicals-in-drinking-water>

Pease PFAS Contamination - 10 year recap - Community Perspective

