SWAG Meeting

March 11, 2026 | 6:30-8:30pm

Hybrid Meeting: Portsmouth City Hall Conference Rm A and Zoom

Agenda

1. Welcome, Introduction & New Members – Andrea Amico, SWAG co-chair
2. Mission Update – Al Pratt, Water Resource Manger, SWAG co-chair
3. Quarterly Water Supply Update – Al Pratt
4. Lead Update - Mason Caceres, Assistant Water Resource Manager
5. PFAS Timeline – Al Pratt
6. Disinfection Byproducts Overview – Mason Caceres
7. Community Resources - Andrea Amico
8. Public Comment

SWAG Mission Update

To review and communicate the latest science on the health and environmental effects of PFAS, to monitor federal and state level legislative changes, and to anticipate policy changes that could impact the City of Portsmouth.

To discuss topics relevant to the City's drinking water quantity, water quality, preservation and conservation efforts, and water infrastructure projects.

To discuss public health aspects of water quality, support and provide public education about drinking water topics, and take proactive stances to protect and conserve water quality and quantity.

SWAG Topics

Per- and Polyfluoroalkyl Substances (PFAS)

- Pease PFAS History
- Drinking Water Regulations
- EPA Health Advisories
- Health Studies
- PFPrA & PFBA
- Testing Opportunities

Water System Site Tours

- Madbury Water Treatment Facility & Bellamy Reservoir
- Pease Tradeport PFAS Treatment Facility

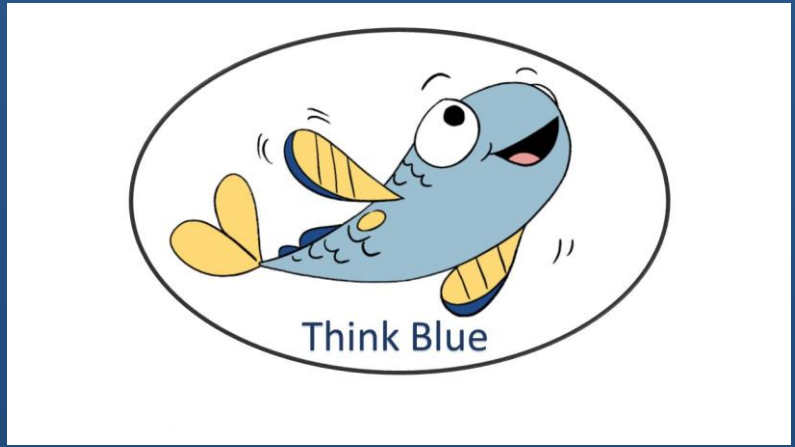
Routine Updates

- Water Supply Updates
- Water Supply Master Plan – Projects Review
- State Legislative Updates
- Lead Service Line Inventory
- Water Quality Monitoring Programs
  - Lead & Copper
  - Cyanobacteria

Special Topics

- Portsmouth Schools Lead Updates
- Former Dover Landfill Update
- Water Supply System Overview
- Climate Change & Emergency Planning
- Fluoridation
- Seacoast Drinking Water Initiatives
- Water Main Flushing Program

Portsmouth and Pease Water Supply Update



Safe Water Advisory Group
March 11, 2026

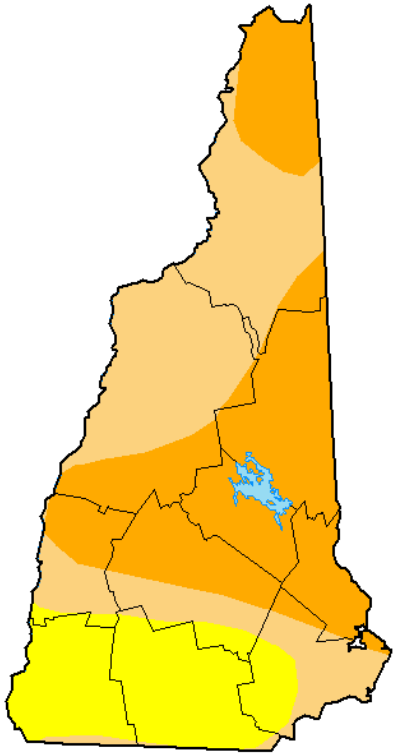
U.S. Drought Monitor

New Hampshire

March 3, 2026

(Released Thursday, Mar. 5, 2026)

Valid 7 a.m. EST



Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

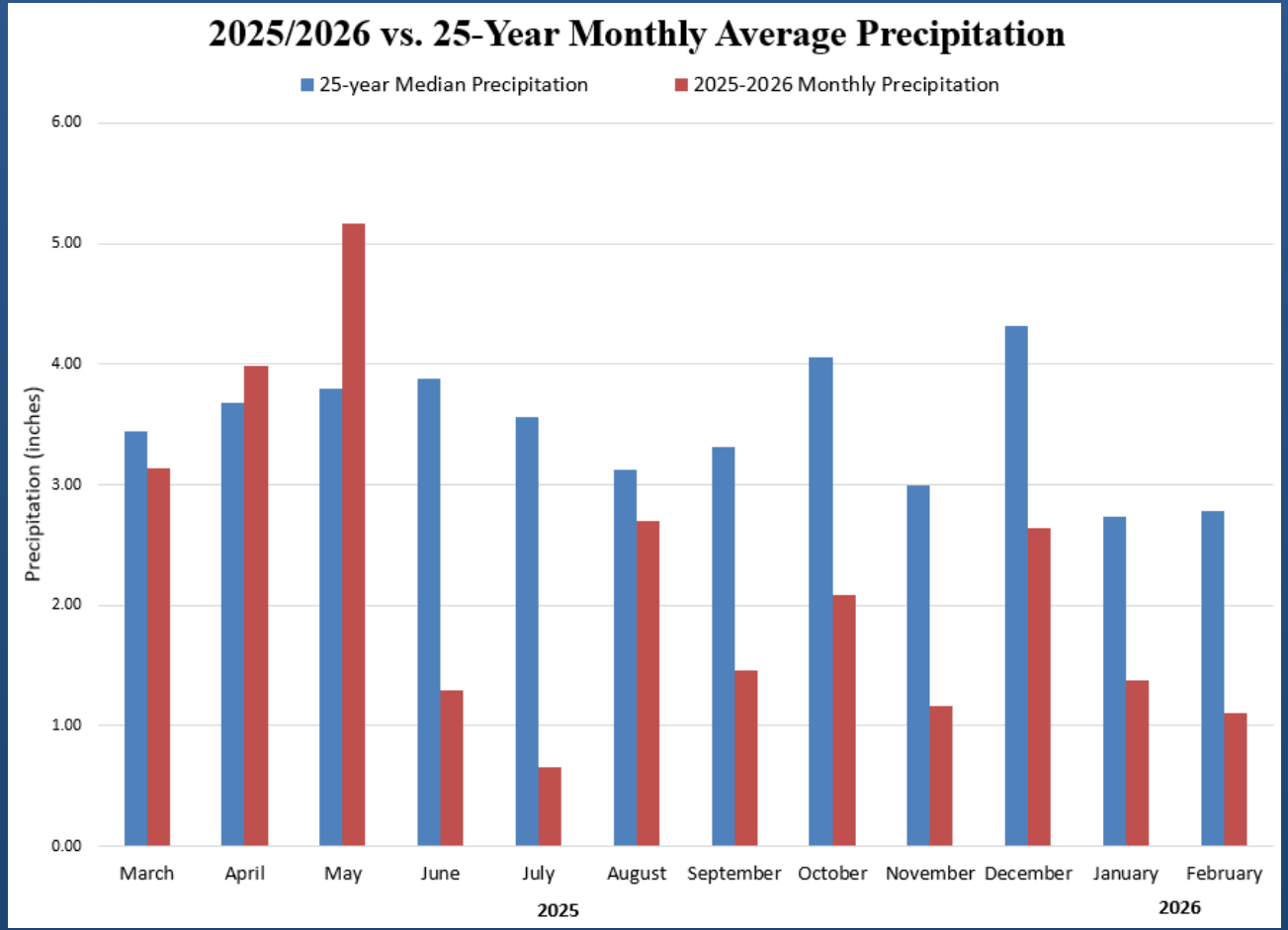
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to https://droughtmonitor.unl.edu/About.aspx

Author:

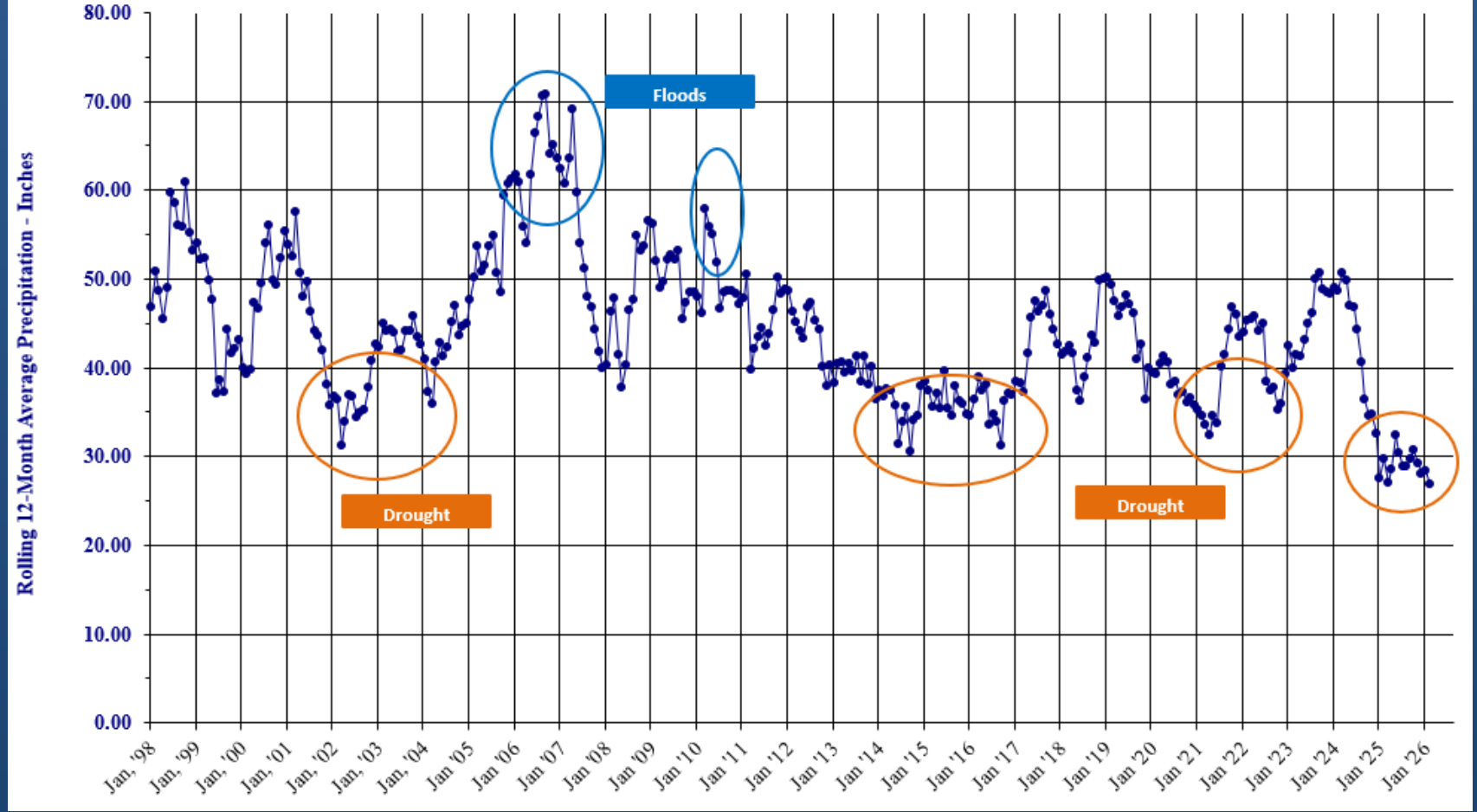
Brad Pugh
CPC/NOAA

droughtmonitor.unl.edu

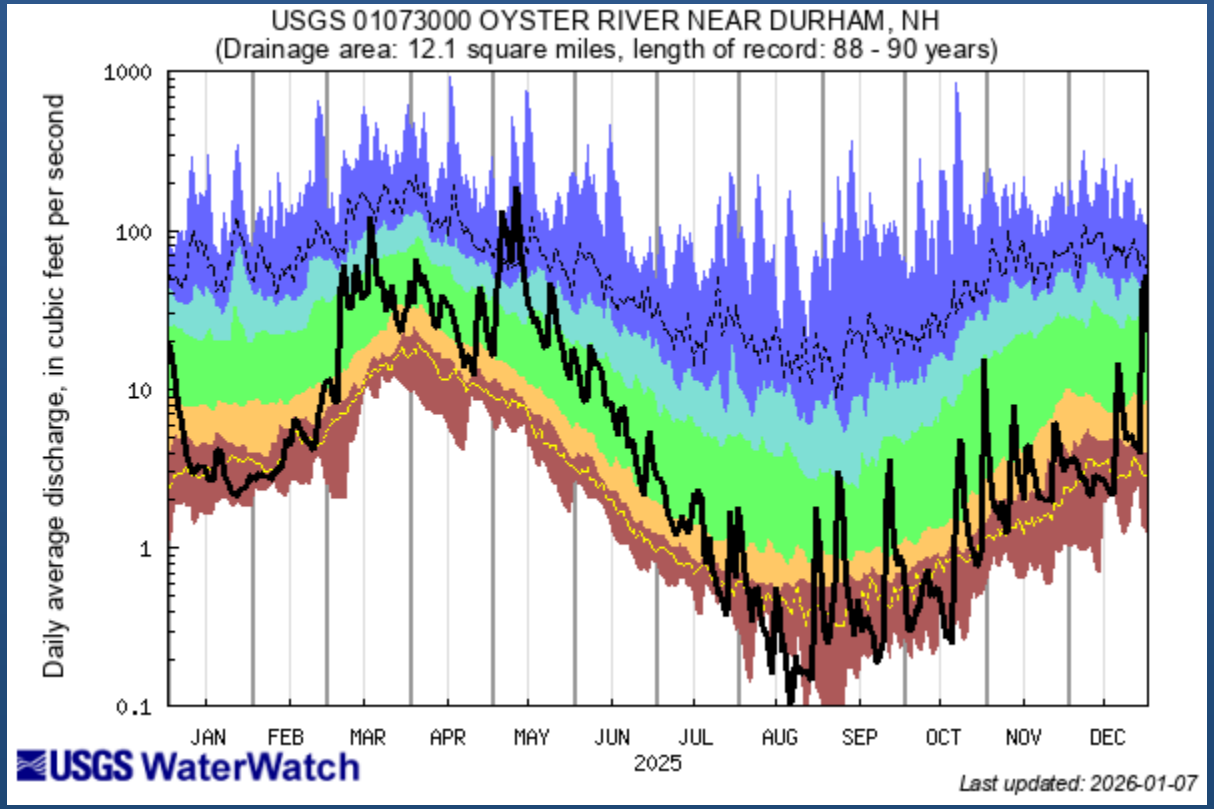
Precipitation – 36% Below Normal Annual Average

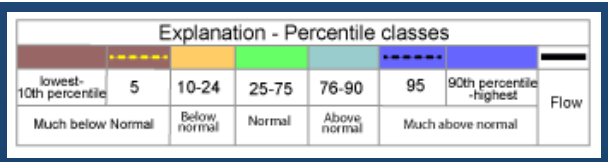


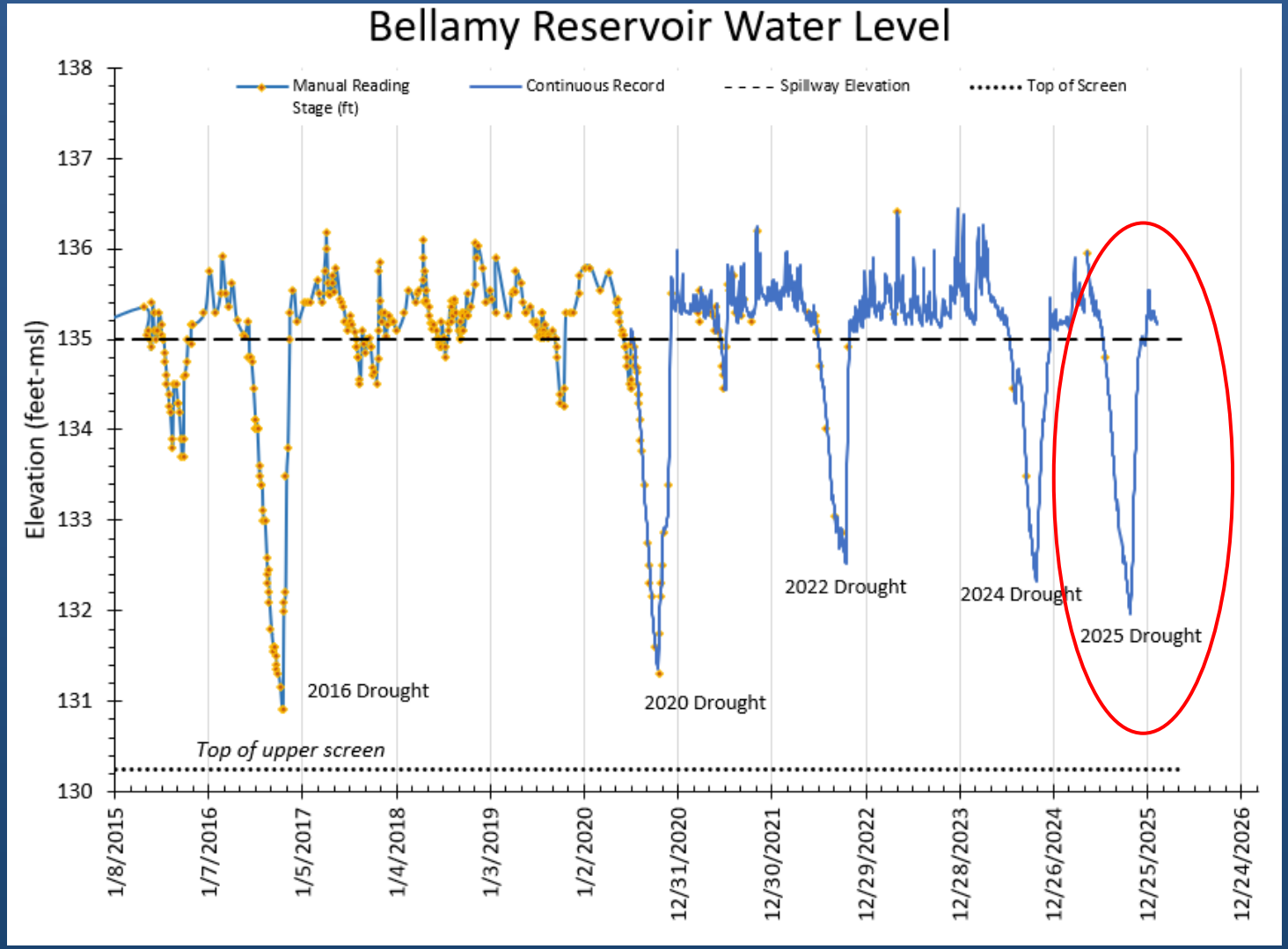
Precipitation - Portsmouth, NH - 1998 to 2026

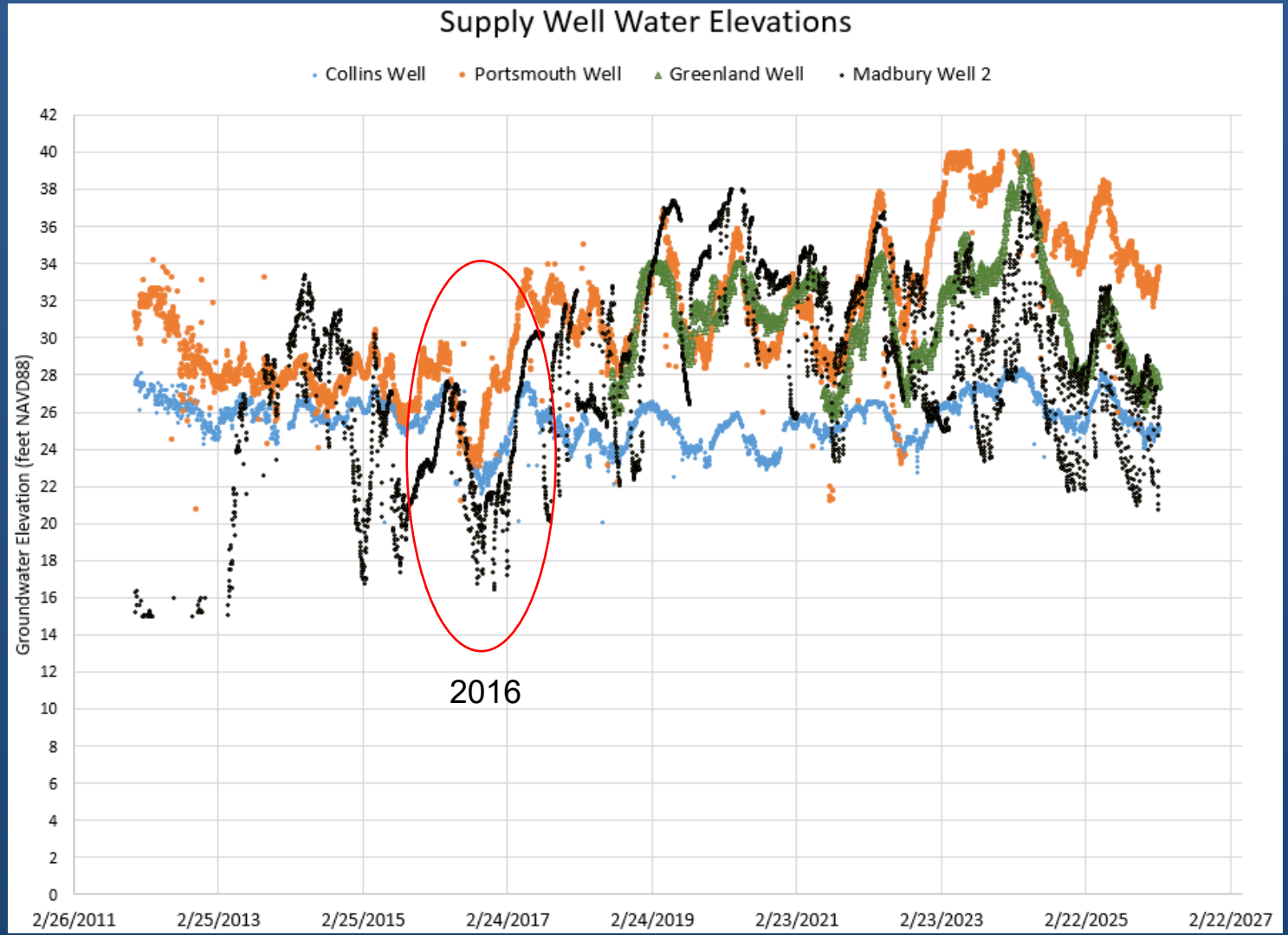


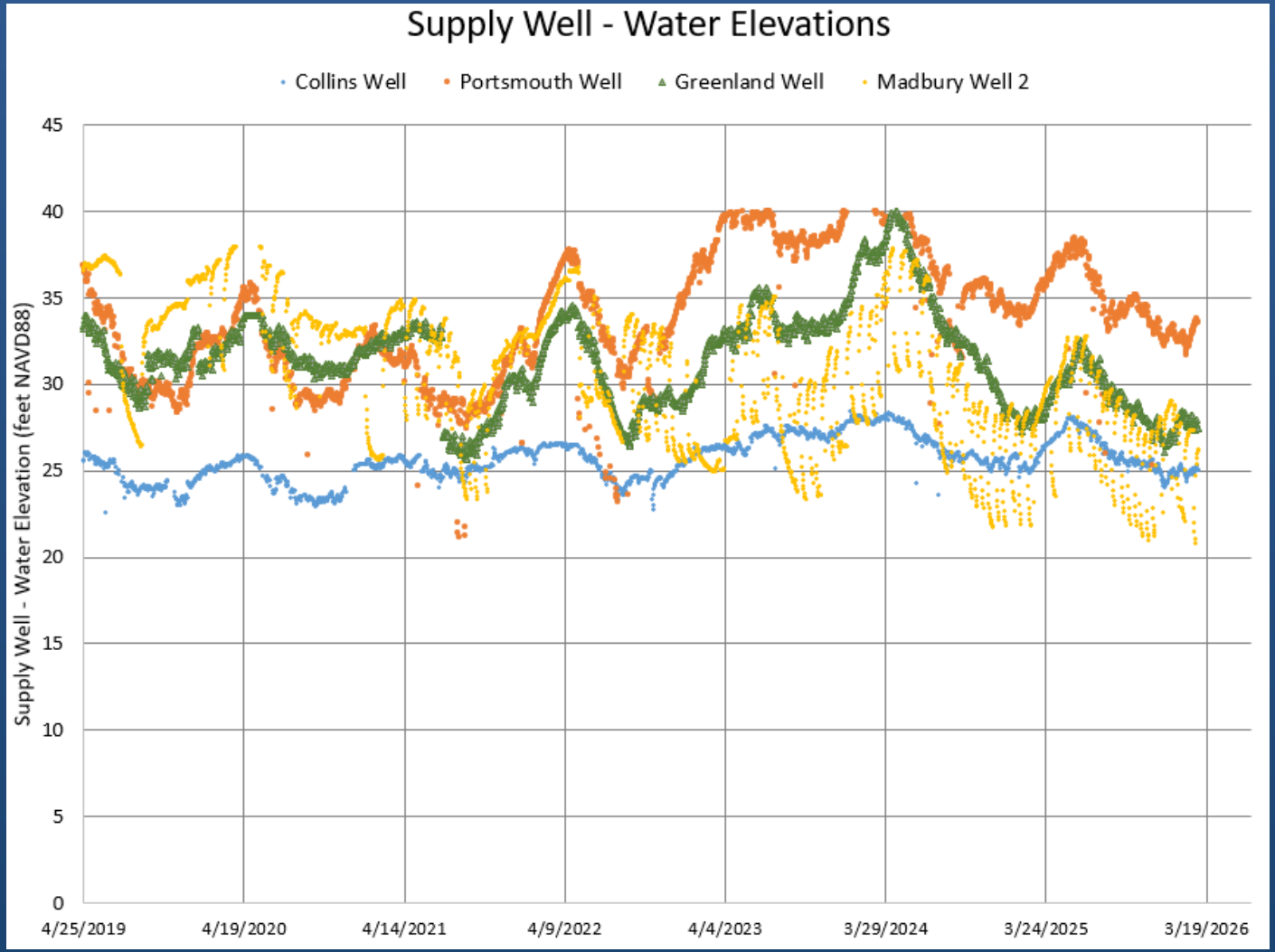
Stream Flow

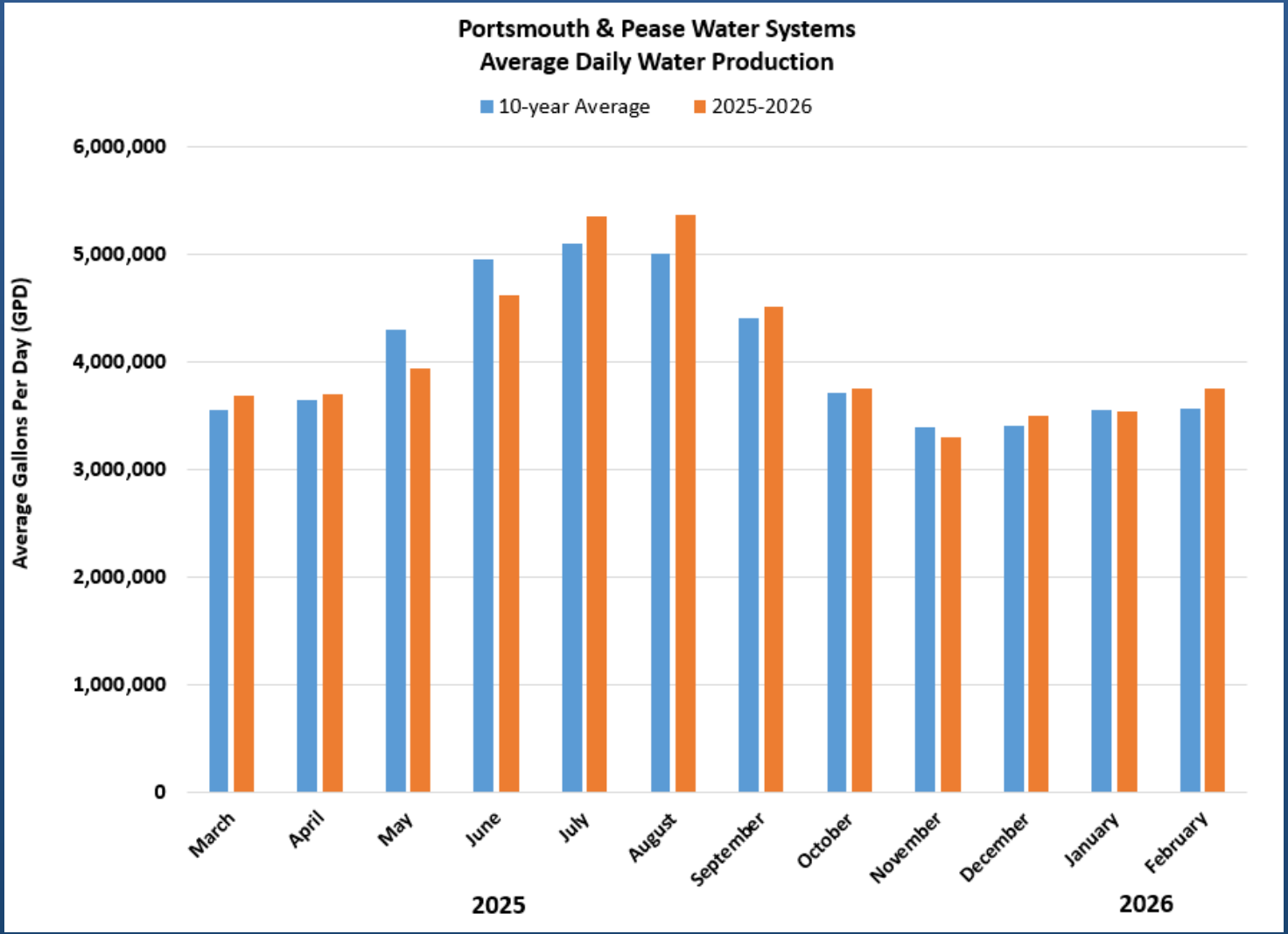

USGS 01073000 OYSTER RIVER NEAR DURHAM, NH
(Drainage area: 12.1 square miles, length of record: 88 - 90 years)
Daily average discharge, in cubic feet per second
1000
100
10
1
0.1
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
2025
USGS WaterWatch
Last updated: 2026-01-07

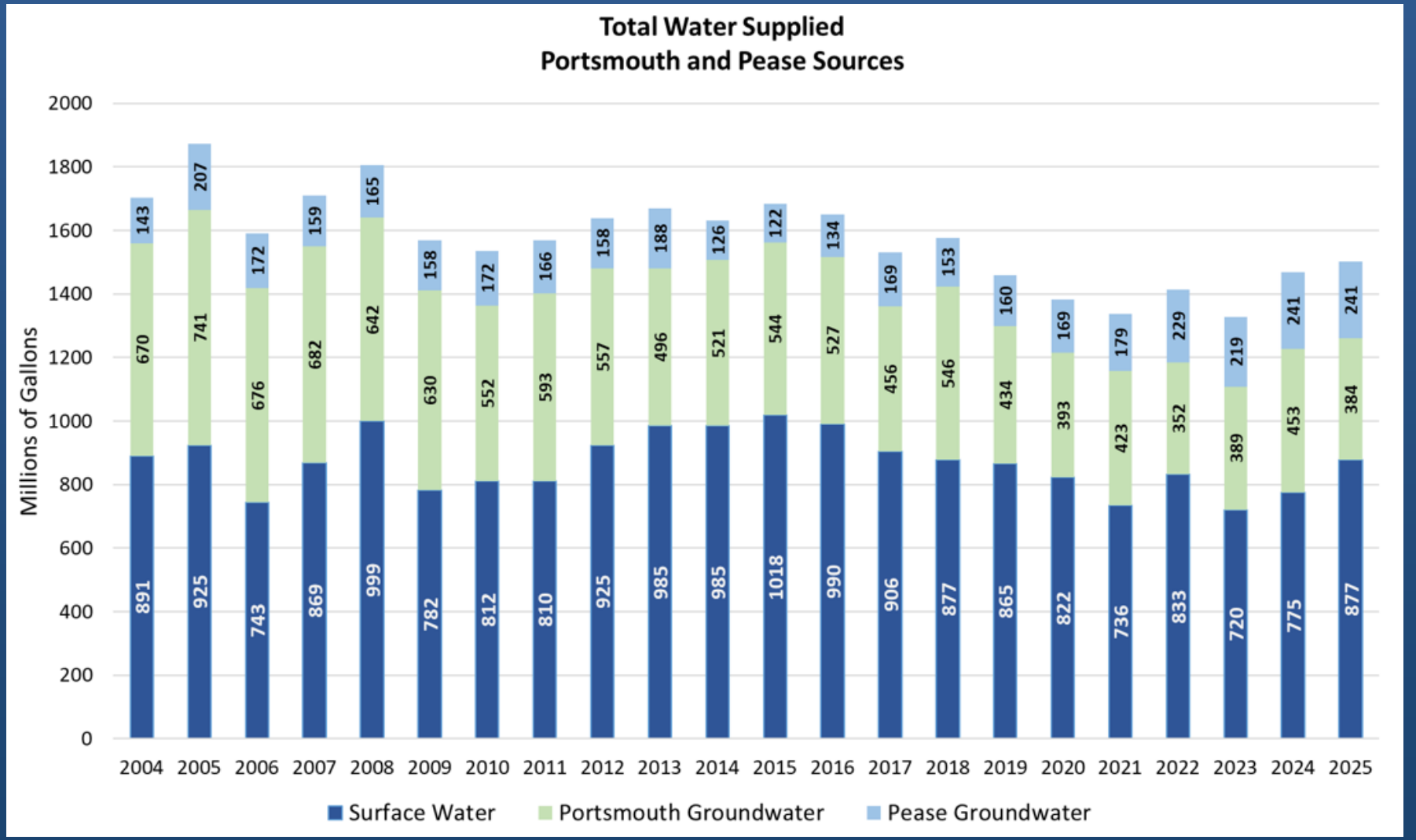

Explanation - Percentile classes
lowest-10th percentile
5
10-24
25-75
76-90
95
90th percentile -highest
Flow
Much below Normal
Below normal
Normal
Above normal
Much above normal


Bellamy Reservoir Water Level
Manual Reading Stage (ft)
Continuous Record
Spillway Elevation
Top of Screen
Elevation (feet-msl)
138
137
136
135
134
133
132
131
130
1/8/2015
1/7/2016
1/5/2017
1/4/2018
1/3/2019
1/2/2020
12/31/2020
12/30/2021
12/29/2022
12/28/2023
12/26/2024
12/25/2025
12/24/2026
2016 Drought
2020 Drought
2022 Drought
2024 Drought
2025 Drought
Top of upper screen

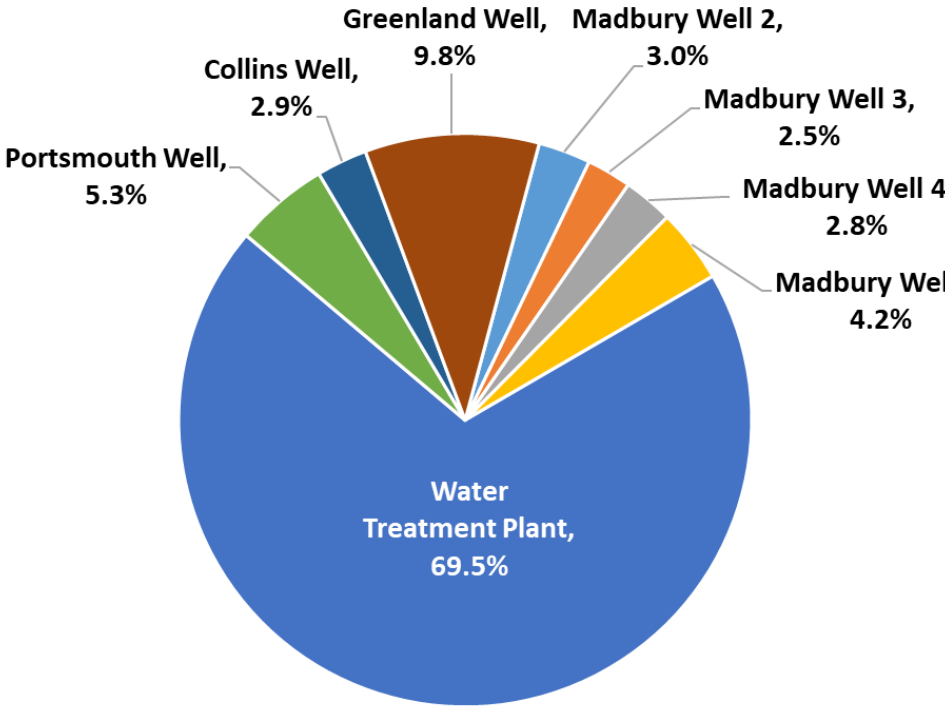

Supply Well Water Elevations
Collins Well
Portsmouth Well
Greenland Well
Madbury Well 2
Groundwater Elevation (feet NAVD88)
42
40
38
36
34
32
30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0
2016
2/26/2011
2/25/2013
2/25/2015
2/24/2017
2/24/2019
2/23/2021
2/23/2023
2/22/2025
2/22/2027


Supply Well - Water Elevations
Collins Well
Portsmouth Well
Greenland Well
Madbury Well 2
Supply Well - Water Elevation (feet NAVD88)
45
40
35
30
25
20
15
10
5
0
4/25/2019
4/19/2020
4/14/2021
4/9/2022
4/4/2023
3/29/2024
3/24/2025
3/19/2026

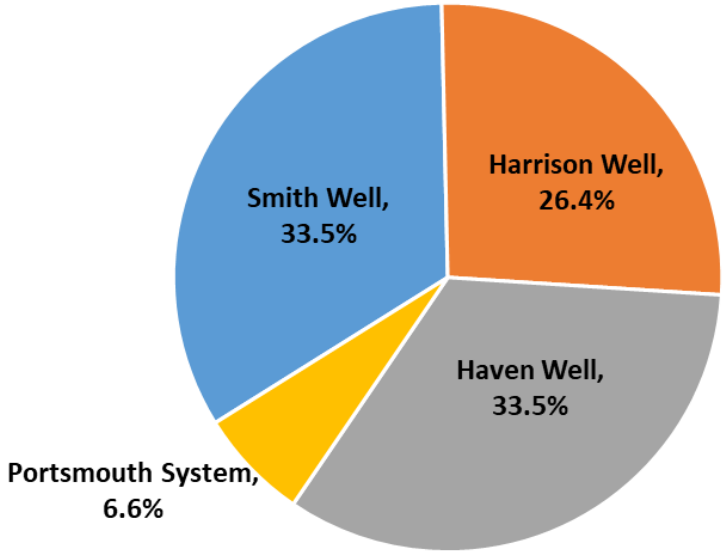

Portsmouth & Pease Water Systems
Average Daily Water Production
10-year Average
2025-2026
Average Gallons Per Day (GPD)
6,000,000
5,000,000
4,000,000
3,000,000
2,000,000
1,000,000
0
March
April
May
June
July
August
September
October
November
December
January
February
2025
2026


Total Water Supplied
Portsmouth and Pease Sources
Millions of Gallons
2000
1800
1600
1400
1200
1000
800
600
400
200
0
2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025
891 925 743 869 999 782 812 810 925 985 985 1018 990 906 877 865 822 736 833 720 775 877
670 741 676 682 642 630 552 593 557 496 521 544 527 456 546 434 393 423 352 389 453 384
143 207 172 159 165 158 172 166 158 188 126 122 134 169 153 160 169 179 229 219 241 241
Surface Water
Portsmouth Groundwater
Pease Groundwater

Portsmouth Water Sources
Source Percentages in 2025



Pease Supply Sources
Source Percentages in 2025



12-Month Rolling Average
April 2026 – March 2026

12-MONTH ROLLING AVERAGE 2026 Q1		EPA MCL (2024)	NH MCL	MADBURY WTP FINISHED	MADBURY WELL 2	MADBURY WELL 3	MADBURY WELL 4R	MADBURY WELL 5	PORTSMOUTH WELL	COLLINS WELL	GREENLAND WELL	PEASE WTP
Perfluorohexanesulfonic acid(PFHxS)	ng/L	**10**	**18**	0.0	0.4	0.4	0.4	1.1	7.7	2.2	1.9	0.0
Perfluorooctanesulfonic acid (PFOS)	ng/L	**4**	**15**	1.0	1.2	1.2	0.7	0.9	**5.6**	**4.3**	3.5	0.0
Perfluorooctanoic acid (PFOA)	ng/L	**4**	**12**	2.1	2.4	2.4	2.1	2.3	**7.1**	**4.0**	**4.2**	0.0
Perfluorononanoic acid (PFNA)	ng/L	**10**	**11**	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ng/L	**10**		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perfluorobutanesulfonic acid (PFBS)	ng/L			1.0	1.5	1.3	1.2	1.9	4.2	10.0	2.3	0.0
Hazard Index*		**1**		0.0	0.0	0.0	0.0	0.1	0.8	0.2	0.2	0.0

* Hazard Index MCL = (HFPO-DA/10)+(PFBS/2000)+(PFNA/10)+(PFHxS/10)

https://www.portsmouthnh.gov/publicworks/water/portsmouth-water-system-pfas-updates

Water Supply Project Updates

- Bellamy Dam Repair
- PFAS Treatment Design – Greenland Well
- PFAS Treatment Design – Portsmouth and Collins Wells
- Storage Tank Painting & Rehabilitation
- Little Bay Water Transmission Main Rehabilitation Project
- Service Line Inventory and Replacement Project

Bellamy Reservoir Dam Maintenance

- Minor seepage and efflorescence
- Epoxy injections
- Cement mortar patching
- 70% complete – finish in the Spring

Greenland Well – PFAS Treatment

- Final design on-going
- Construction anticipated 2026 - 2028
- Two (2) Granular Activated Carbon (GAC) vessels
- Permitting reactivation of old well for backup supply
- SRF Funds ($6.5M)

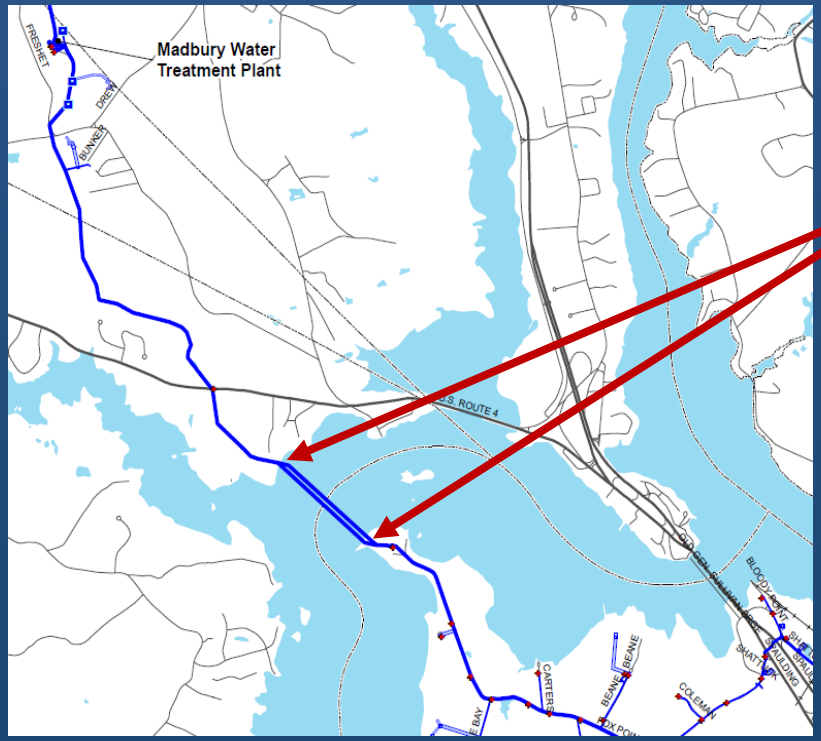
Portsmouth and Collins Wells – PFAS Treatment

- Final design in FY27
- Construction anticipated 2028 - 2029
- Two (2) Granular Activated Carbon (GAC) vessels
- Submitting second formal request to the Air Force

Water Storage Tank Painting & Rehabilitation

- Spinney Road Tank
  - Spot Rehab & Paint Exterior
  - Fall 2026
- Newington Booster Tank
  - Full Rehab
  - Paint Interior & Exterior
  - Spring 2027
- Lafayette Tank
  - Spot Rehab Interior & Exterior

Little Bay Water Transmission Main Resilience Project



- Phase 1 – Valve Project
  - Construction is Complete
  - Two new valves installed on the lines that run under Little Bay
  - Two 20” taps and valves installed in the PCCP for third main preparation
- Phase 2 – New Main
  - Permitting of Modified Design
  - Engineer’s Opinion of Cost
  - Evaluate Funding Options

Water & Sewer Rate Study - Ongoing

Study Considerations

- Rate Structure (Tiers)
- Water and Sewer Rates
- Service Fees (“Fixed Charge”)
- Wholesale Water and Sewer Rates
- Capacity Use Surcharge Fees
- Other Fees (Fire Service & Hydrants)

Portsmouth and Pease Water Systems – Service Line Inventory & Lead Testing Updates

Safe Water Advisory Group

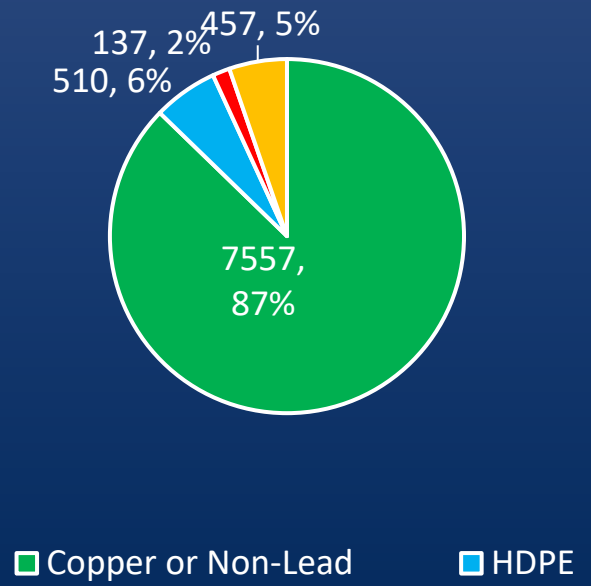
March 11, 2026

Service Line Notifications

- November 17, 2025 - Total of 2,327 service line notification letters sent to customers with an unknown portion of service or to those identified as galvanized steel.
- Total customer responses (calls & emails): 80+
  - 12 service line material inspections scheduled
  - 43 free lead testing kits requested, compiled, and delivered (THANK YOU MARIAH!)
  - 23 participants collected and submitted samples
    - **Results: no detections of lead**

Inventory Status Report

Customer-Owned Service Line Materials Across Both Systems



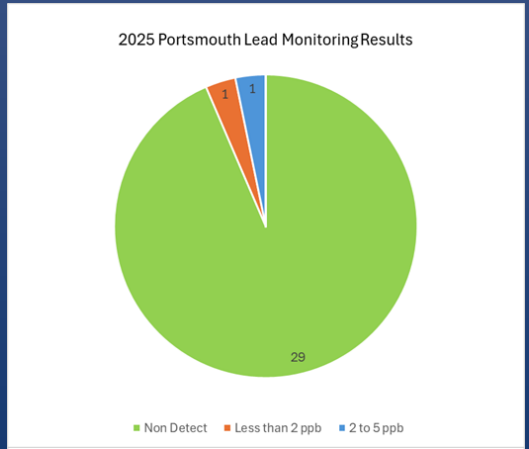
- Total service connections: 8,661
- Customer-owned portions identified: 8,204
  - 457 unknowns remaining across both systems
- City-owned portions identified: 6,612
  - 2,049 remaining unknowns – requires potholing
- 137 galvanized services present
  - Makes up 2% of identified service lines
  - Requires replacement under LCRI
  - City will financially assist customers with SRF $$ (planning in progress)

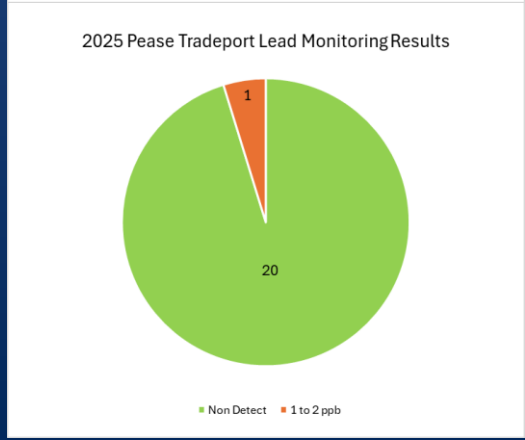
Potholing Efforts

- Targeting developments that have hotspots of unknown service line materials on city-side portion: starting with Maple Haven (132 “unknowns”)
- Required to identify 36% of development, or 48 random service lines to “rule-out” the rest.
  - 15 pothole excavations accomplished – all identified as copper
  - 33 remaining – starting next week (March 16)

2025 Lead Monitoring Data – Compliance

- Portsmouth Water System routine monitoring results (Q3, 2025):
  - 31 samples collected from homes with galvanized service lines.
  - 2 detections of lead at 1.4 ppb and 2.9 ppb
- Pease Tradeport routine monitoring results (Q4, 2025):
  - 21 samples collected from homes in Newington, and businesses throughout the Pease Tradeport.
  - Only 1 detection at 1.2 ppb or ug/L





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

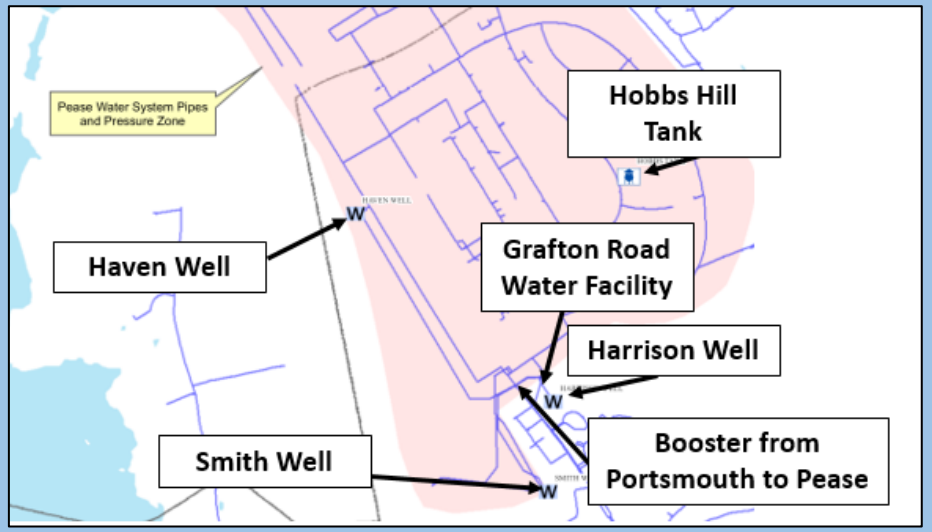
- January 2009
  - EPA Preliminary Health Advisories:
    - PFOA: 400 ppt
    - PFOS: 200 ppt

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.

Haven Well Water Quality August 2013

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

NEW HAMPSHIRE DEPARTMENT OF Environmental Services

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

Analytical Method: 504.1

1,2-DIBROMO-3-CHLOROPROPANE	ND
1,2-DIBROMOETHANE(EDB)	ND

Analytical Method: 505

CHLORDANE	ND
TOXAPHENE	ND

Analytical Method: 524.2

1,1,1,2-TETRACHLOROETHANE	ND
1,1,1-TRICHLOROETHANE	ND
1,1,2,2-TETRACHLOROETHANE	ND
1,1,2-TRICHLOROETHANE	ND
1,1-DICHLOROETHANE	ND
1,1-DICHLOROETHENE	ND
1,1-DICHLOROPROPENE	ND
1,2,3-TRICHLOROBENZENE	ND
1,2,3-TRICHLOROPROPANE	ND
1,2,4-TRICHLOROBENZENE	ND
1,2,4-TRIMETHYLBENZENE	ND
1,2-DIBROMO-3-CHLOROPROPANE	ND
1,2-DIBROMOETHANE(EDB)	ND
1,2-DICHLOROBENZENE	ND
1,2-DICHLOROETHANE	ND
1,2-DICHLOROPROPANE	ND
1,3,5-TRICHLOROBENZENE	ND
1,3,5-TRIMETHYLBENZENE	ND
1,3-DICHLOROBENZENE	ND
1,3-DICHLOROPROPANE	ND
1,4-DICHLOROBENZENE	ND
2,2-DICHLOROPROPANE	ND
2-BUTANONE(MEK)	ND
2-CHLOROTOLUENE	ND
2-HEXANONE	ND
2-METHOXY-2-METHYLBUTANE(TAME)	ND
4-CHLOROTOLUENE	ND
4-METHYL-2-PENTANONE (MIBK)	ND
ACETONE	ND
BENZENE	ND
BROMOBENZENE	ND
BROMOCHLOROMETHANE	ND
BROMODICHLOROMETHANE	ND
BROMOFORM	ND
BROMOMETHANE	ND
CARBON DISULFIDE	ND
CARBON TETRACHLORIDE	ND
CHLOROBENZENE	ND
CHLOROETHANE	ND
CHLOROFORM	ND
CHLOROMETHANE	ND
CIS-1,2-DICHLOROETHENE	ND
CIS-1,3-DICHLOROPROPENE	ND
DIBROMOCHLOROMETHANE	ND
DIBROMOMETHANE	ND
DICHLORODIFLUOROMETHANE	ND
DIETHYL ETHER	ND
DIISOPROPYL ETHER (DIPE)	ND
ETHYL-T-BUTYL ETHER (ETBE)	ND
ETHYLBENZENE	ND
HEXACHLOROBUTADIENE	ND
ISOPROPYLBENZENE	ND
M/P-XYLENE	ND
METHYL-T-BUTYLETHER (MTBE)	ND
METHYLENE CHLORIDE	ND
N-BUTYLBENZENE	ND
N-PROPYLBENZENE	ND
NAPHTHALENE	ND
O-XYLENE	ND
P-ISOPROPYLTOLUENE	ND
SEC-BUTYLBENZENE	ND
STYRENE	ND
T-BUTANOL (TBA)	ND
T-BUTYLBENZENE	ND
TETRACHLOROETHENE	ND
TETRAHYDROFURAN(THF)	ND
TOLUENE	ND
TOTAL XYLENES	ND
TRANS-1,2-DICHLOROETHENE	ND
TRANS-1,3-DICHLOROPROPENE	ND
TRICHLOROETHENE	ND
TRICHLOROFLUOROMETHANE	ND
VINYL CHLORIDE	ND

Analytical Method: 525.2

2,2',3',4,6-PENTACHLOROBIPHENYL	ND
2,2',3,3',4,4'-HEPTACHLOROBIPHEN	ND
2,2',3,3',4,5',6,6'-OCTACHLOROBIPH	ND
2,2',4,4'-TETRACHLOROBIPHENYL	ND
2,2',4,4',5,6'-HEXACHLOROBIPHENYL	ND
2,3-DICHLOROBIPHENYL	ND
2,4,5-TRICHLOROBIPHENYL	ND
2-CHLOROBIPHENYL	ND
2-METHYLNAPHTHALENE	ND
4,4'-DDD	ND
4,4'-DDE	ND
4,4'-DDT	ND
ACENAPHTHENE	ND
ACENAPHTHYLENE	ND
ALACHLOR	ND
ALDRIN	ND
ALPHA-CHLORDANE	ND
ANTHRACENE	ND
ATRAZINE	ND
BENZO(A)ANTHRACENE	ND
BENZO(A)PYRENE	ND
BENZO(B)FLUORANTHENE	ND
BENZO(G,H,I)PERYLENE	ND
BENZO(K)FLUORANTHENE	ND
BENZYL BUTYL PHTHALATE	ND
BIS(2-ETHYLHEXYL) PHTHALATE	ND
BUTACHLOR	ND
CHRYSENE	ND
DI(2-ETHYLHEXYL)ADIPATE	ND
DI-N-BUTYL PHTHALATE	ND
DIBENZ(A,H)ANTHRACENE	ND
DIELDRIN	ND
DIETHYL PHTHALATE	ND
DIMETHYL PHTHALATE	ND
ENDRIN	ND
ENDRIN ALDEHYDE	ND
FLUORANTHENE	ND
FLUORENE	ND
GAMMA-CHLORDANE	ND
HEPTACHLOR	ND
HEPTACHLOR EPOXIDE	ND
HEXACHLOROBENZENE	ND
HEXACHLOROCYCLOPENTADIENE	ND
INDENO(1,2,3-CD)PYRENE	ND
ISOPHORONE	ND
LINDANE	ND
METHOXYCHLOR	ND
METOLACHLOR	ND
METRIBUZIN	ND
NAPHTHALENE	ND
PENTACHLOROPHENOL	ND
PHENANTHRENE	ND
PROPACHLOR	ND
PYRENE	ND
SIMAZINE	ND

Analytical Method: 525.2

TRANS-NONACHLOR	ND
TRIFLURALIN (TREFLAN)	ND

Analytical Method: 531.2

3-HYDROXY-CARBOFURAN	ND
ALDICARB	ND
ALDICARB SULFONE	ND
ALDICARB SULFOXIDE	ND
CARBARYL	ND
CARBOFURAN	ND
METHOMYL	ND
OXAMYL	ND

Analytical Method: 547

GLYPHOSATE	ND

Analytical Method: 555

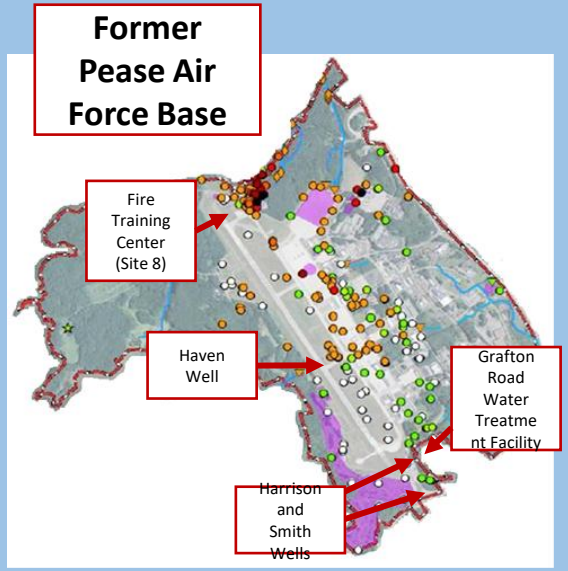
2,4-D	ND
ACIFLUORFEN	ND
DICAMBA	ND
DINOSEB	ND
PICLORAM	ND
SILVEX	ND

Analytical Method: LACHAT 10-109-12-2-A

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"



2014 2015 2016 2017 2018 2019 2020 2021 2022 2023

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

CONTACT
DHHS Public Information Office
603-271-9388
Twitter: NHDHHSPIO
Facebook: NHDepartmentOfHealthAndHumanServices

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 Peverly Hill Road
Portsmouth N.H. 03801
(603) 427-1530 FAX (603) 427-1539

May 22, 2014

The Pease International Tradeport Water System and Wells

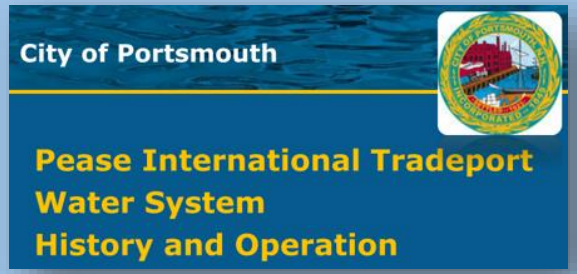
On Monday May 12, 2014, City of Portsmouth staff were notified by the New Hampshire Department of Environmental Services (NHDES) that water sampling results for the Haven Well showed that perfluorooctanesulfonic acid, an unregulated contaminant, exceeded the provisional health advisory levels recommended 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?

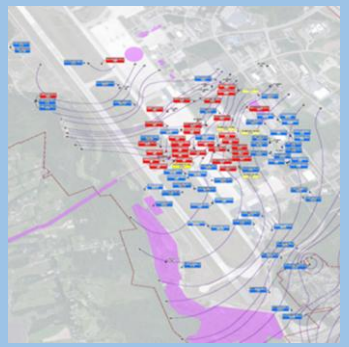
- Referred to as “PFCs” – not yet “PFAS”
- Health concerns at Parts per Trillion
- It bio-accumulates
- Not just one compound… Many variants

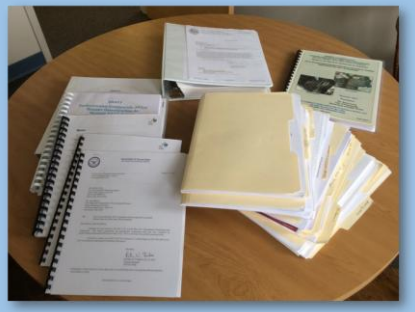
May 28, 2014: State, Health and Water System Officials Hold First Public Meeting



Pease Tradeport PFAS Investigation Begins

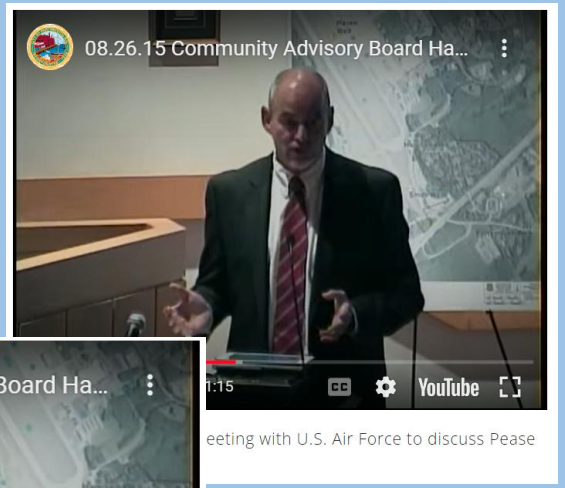
- Technical Team
  - Air Force Civil Engineering
  - Air Force Engineering Consultants
  - EPA Region 1
  - NHDES Waste Division
  - NHDES Drinking Water and Groundwater Program
  - Pease Development Authority
  - City of Portsmouth Staff and Consultants





Co-operative Partnerships with Air Force

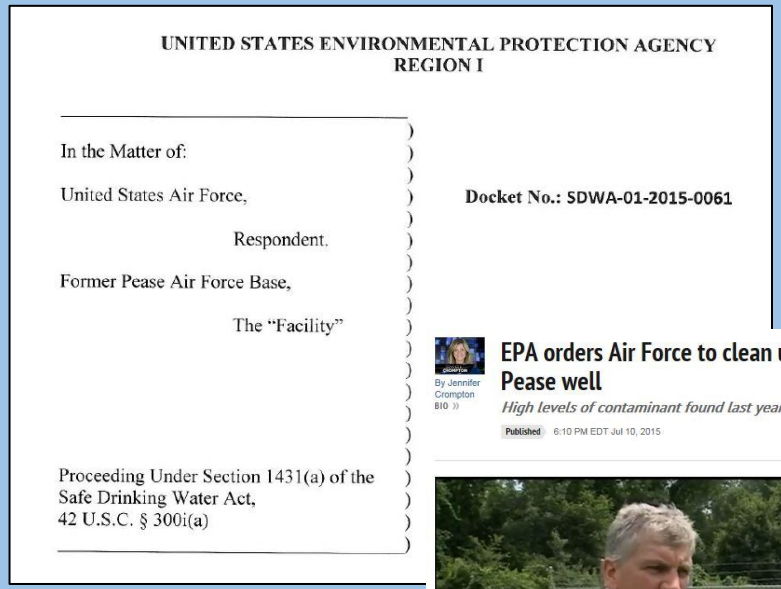
- ENVIRONMENTAL SERVICES COOPERATIVE AGREEMENTS (ESCA)
  - Well Replacement Study
  - Treatment Feasibility Study
  - Treatment Pilot Studies
  - Treatment Design
  - Treatment Construction
  - Additional Operations Expense



eeting 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



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)

EPA orders Air Force to clean up contaminated Pease well

High levels of contaminant found last year

By Jennifer Crompton

Published 6:10 PM EDT Jul 10, 2015

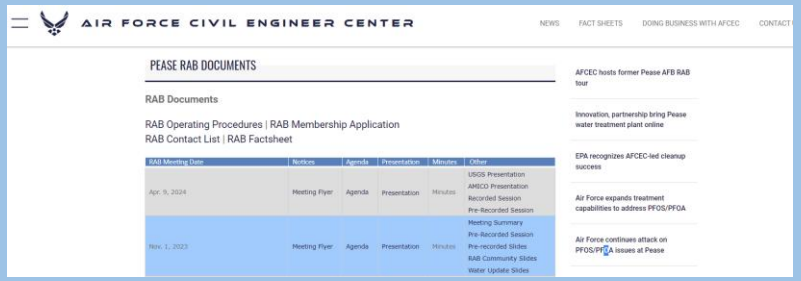
Play

WMUR9

- 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:

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, 2024	Meeting Flyer	Agenda	Presentation	Minutes	USGS Presentation AMEC Presentation Recorded Session Pre-Recorded Session
Nov. 1, 2023	Meeting Flyer	Agenda	Presentation	Minutes	Meeting Summary Pre-Recorded Session Pre-recorded Slides RAB Community Slides Water Update Slides

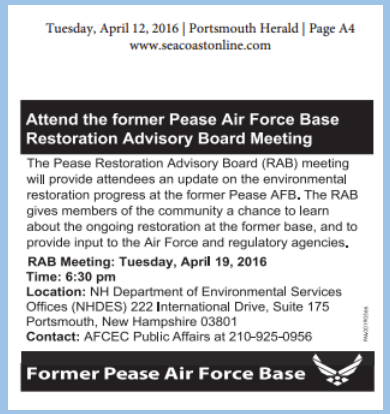
AFCEC hosts former Pease AFB RAB tour

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

2014 2015 2016 2017 2018 2019 2020 2021 2022 2023

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 2015 2016 2017 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.

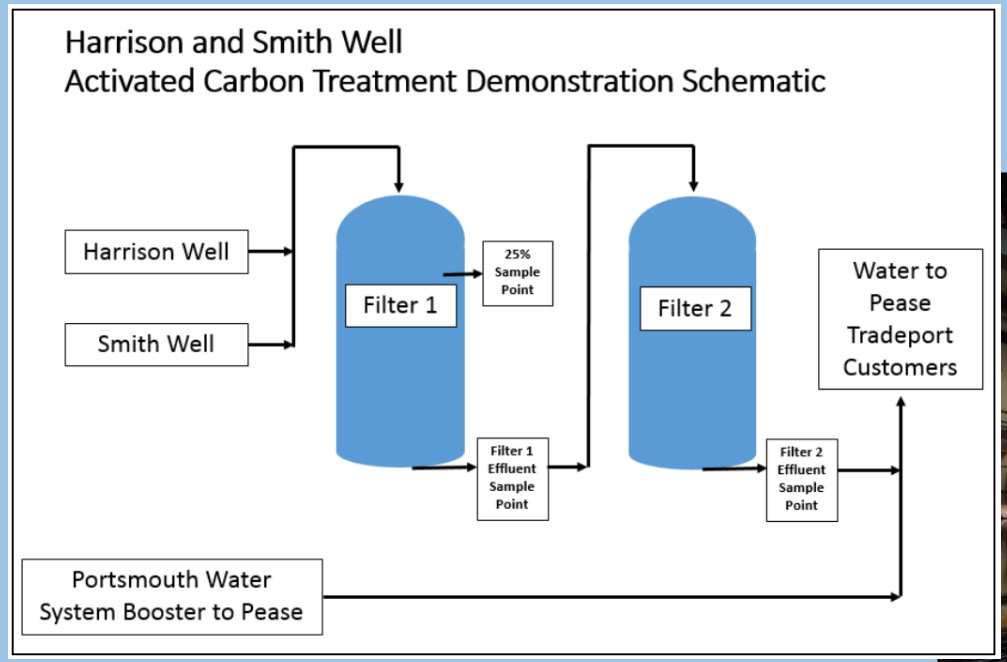
EPA's 2016 Lifetime Health Advisories

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



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

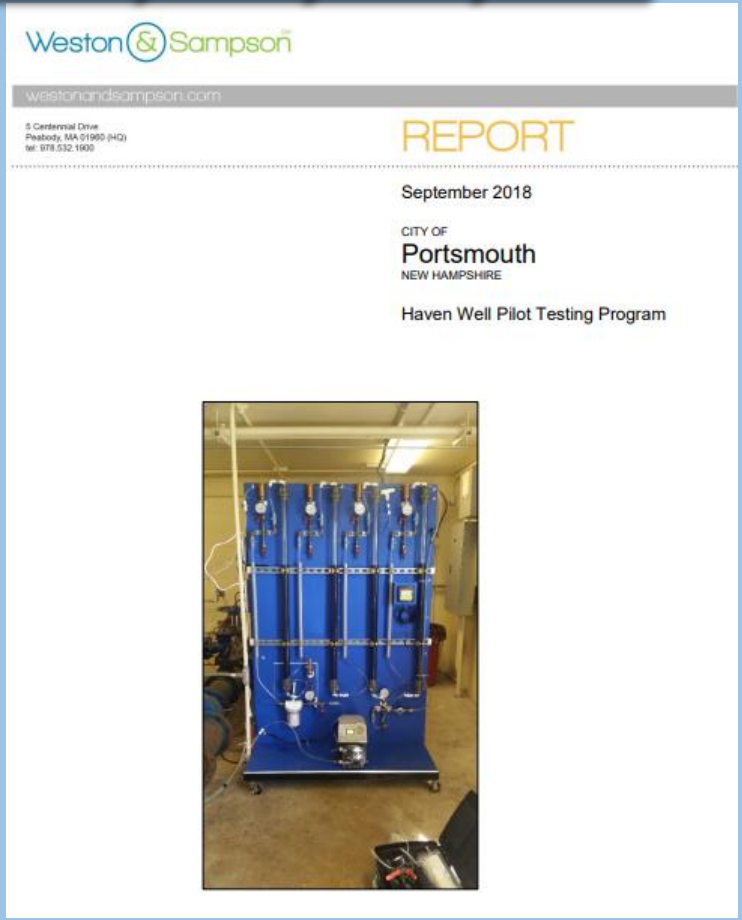
Haven Well Pilot Test – Resin Filters

(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


Weston & Sampson

westonandsampson.com

5 Centennial Drive
Peabody, MA 01960 (HQ)
tel: 978.532.1900

REPORT

September 2018

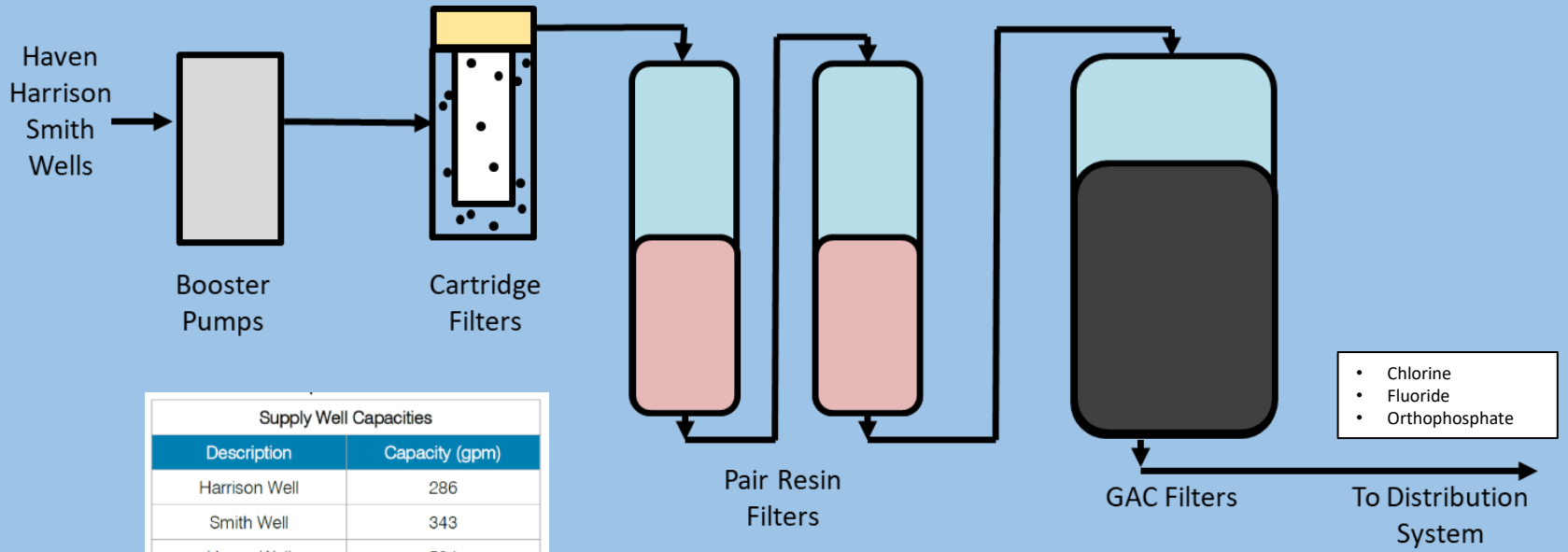
CITY OF
Portsmouth
NEW HAMPSHIRE

Haven Well Pilot Testing Program

Final Treatment Facility Design

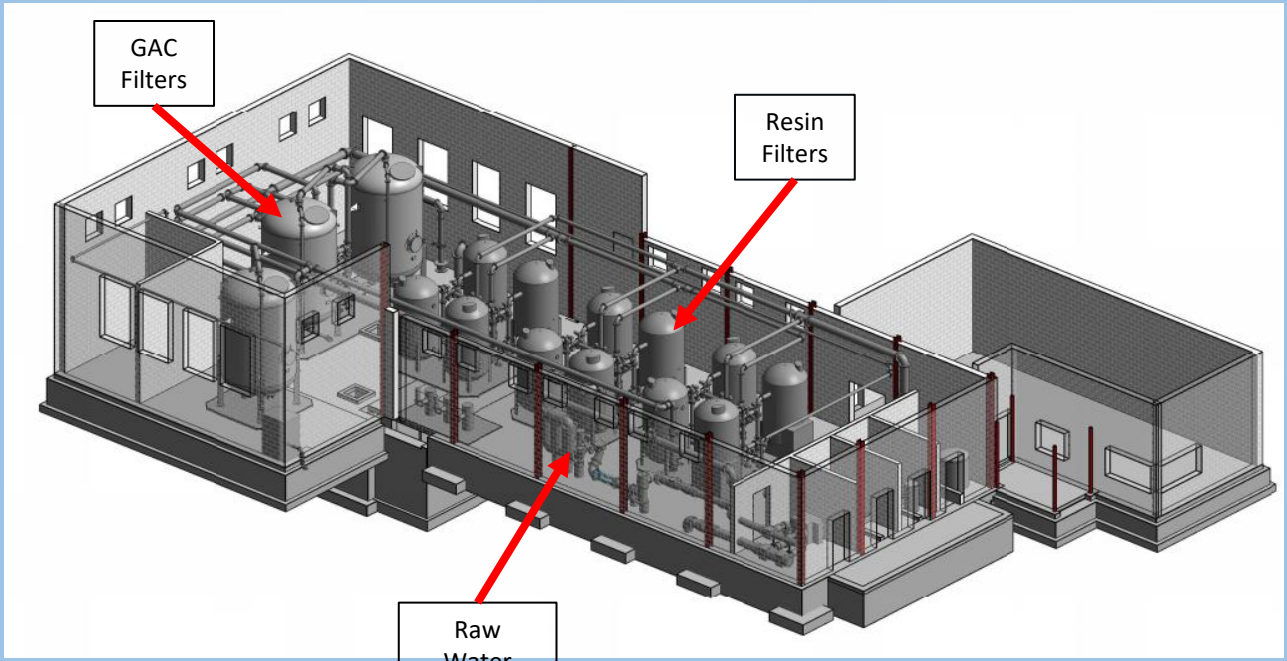
- City Water Staff
- Weston & Sampson

Pease WTF Process Schematic
New Treatment System



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

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@wseinc.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.

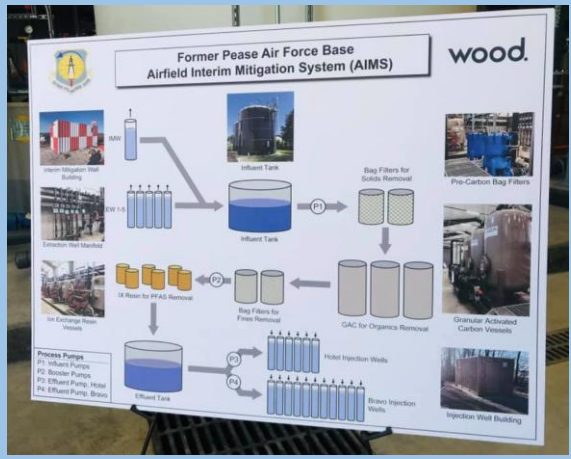
BID WITHDRAWAL: No Bid shall be withdrawn for a period of 90 days after the opening of Bids without consent of OWNER.

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

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

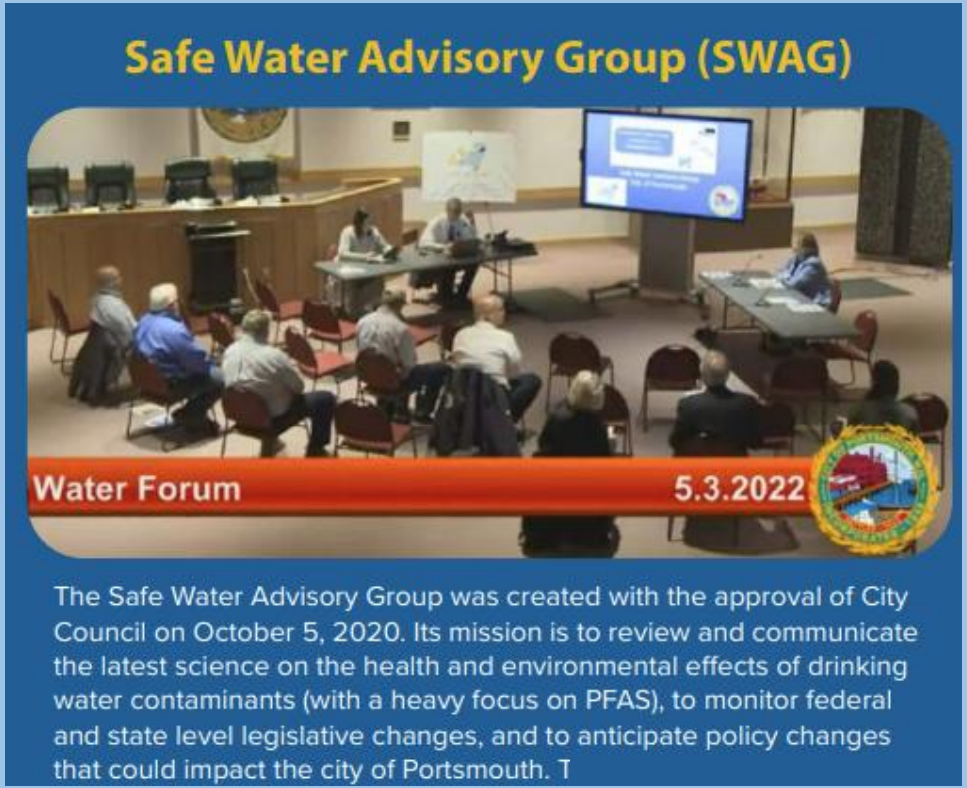
View Comments

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

October 2020 – Safe Water Advisory Group Forms Meets Quarterly

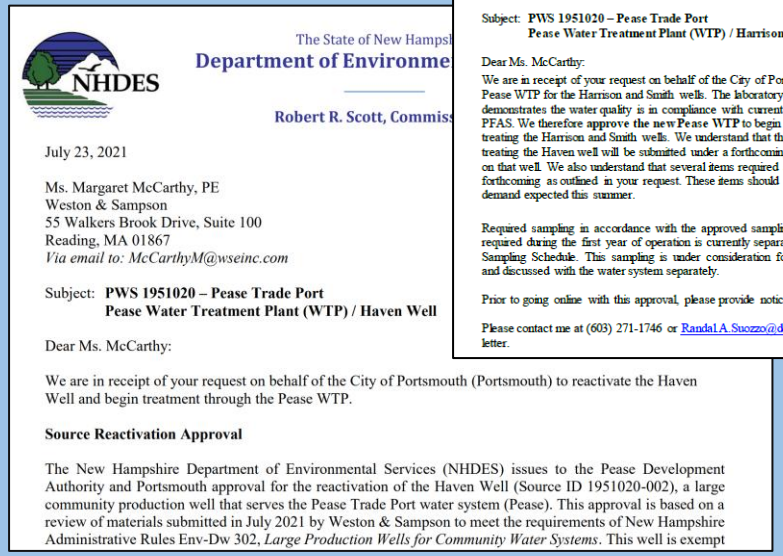


The Safe Water Advisory Group was created with the approval of City Council on October 5, 2020. Its mission is to review and communicate the latest science on the health and environmental effects of drinking water contaminants (with a heavy focus on PFAS), to monitor federal and state level legislative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



The State of New Hampsh
Department of Environme
Robert R. Scott, Commis

July 23, 2021

Ms. Margaret McCarthy, PE
Weston & Sampson
55 Walkers Brook Drive, Suite 100
Reading, MA 01867
Via email to: McCarthyM@wseinc.com

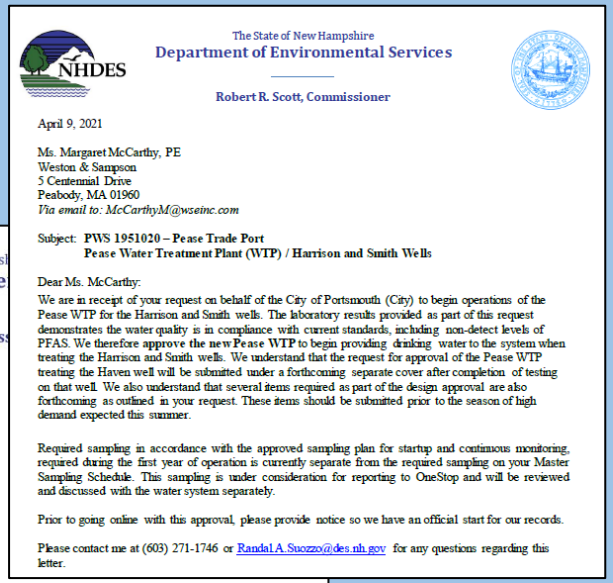
Subject: **PWS 1951020 – Pease Trade Port**
Pease Water Treatment Plant (WTP) / Haven Well

Dear Ms. McCarthy:

We are in receipt of your request on behalf of the City of Portsmouth (Portsmouth) to reactivate the Haven Well and begin treatment through the Pease WTP.

Source Reactivation Approval

The New Hampshire Department of Environmental Services (NHDES) issues to the Pease Development Authority and Portsmouth approval for the reactivation of the Haven Well (Source ID 1951020-002), a large community production well that serves the Pease Trade Port water system (Pease). This approval is based on a review of materials submitted in July 2021 by Weston & Sampson to meet the requirements of New Hampshire Administrative Rules Env-Dw 302, *Large Production Wells for Community Water Systems*. This well is exempt



The State of New Hampshire
Department of Environmental Services
Robert R. Scott, Commissioner

April 9, 2021

Ms. Margaret McCarthy, PE
Weston & Sampson
5 Centennial Drive
Peabody, MA 01960
Via email to: McCarthyM@wseinc.com

Subject: **PWS 1951020 – Pease Trade Port**
Pease Water Treatment Plant (WTP) / Harrison and Smith Wells

Dear Ms. McCarthy:

We are in receipt of your request on behalf of the City of Portsmouth (City) to begin operations of the Pease WTP for the Harrison and Smith wells. The laboratory results provided as part of this request demonstrates the water quality is in compliance with current standards, including non-detect levels of PFAS. We therefore **approve the new Pease WTP** to begin providing drinking water to the system when treating the Harrison and Smith wells. We understand that the request for approval of the Pease WTP treating the Haven well will be submitted under a forthcoming separate cover after completion of testing on that well. We also understand that several items required as part of the design approval are also forthcoming as outlined in your request. These items should be submitted prior to the season of high demand expected this summer.

Required sampling in accordance with the approved sampling plan for startup and continuous monitoring, required during the first year of operation is currently separate from the required sampling on your Master Sampling Schedule. This sampling is under consideration for reporting to OneStop and will be reviewed and discussed with the water system separately.

Prior to going online with this approval, please provide notice so we have an official start for our records.

Please contact me at (603) 271-1746 or Randal.A.Suozzo@des.nh.gov for any questions regarding this letter.

Two Years of Construction

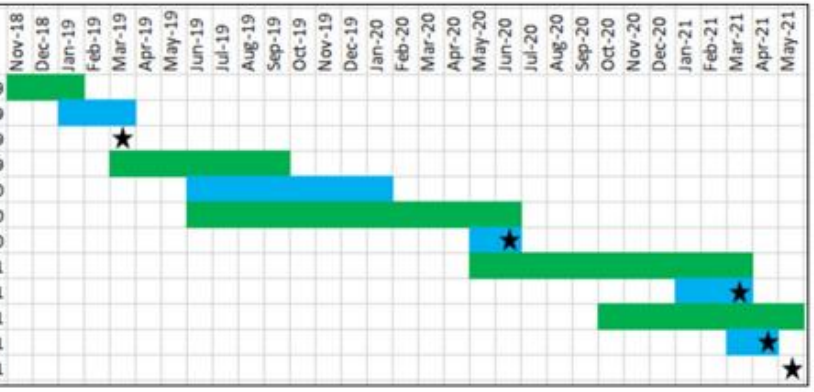
April 2019

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

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



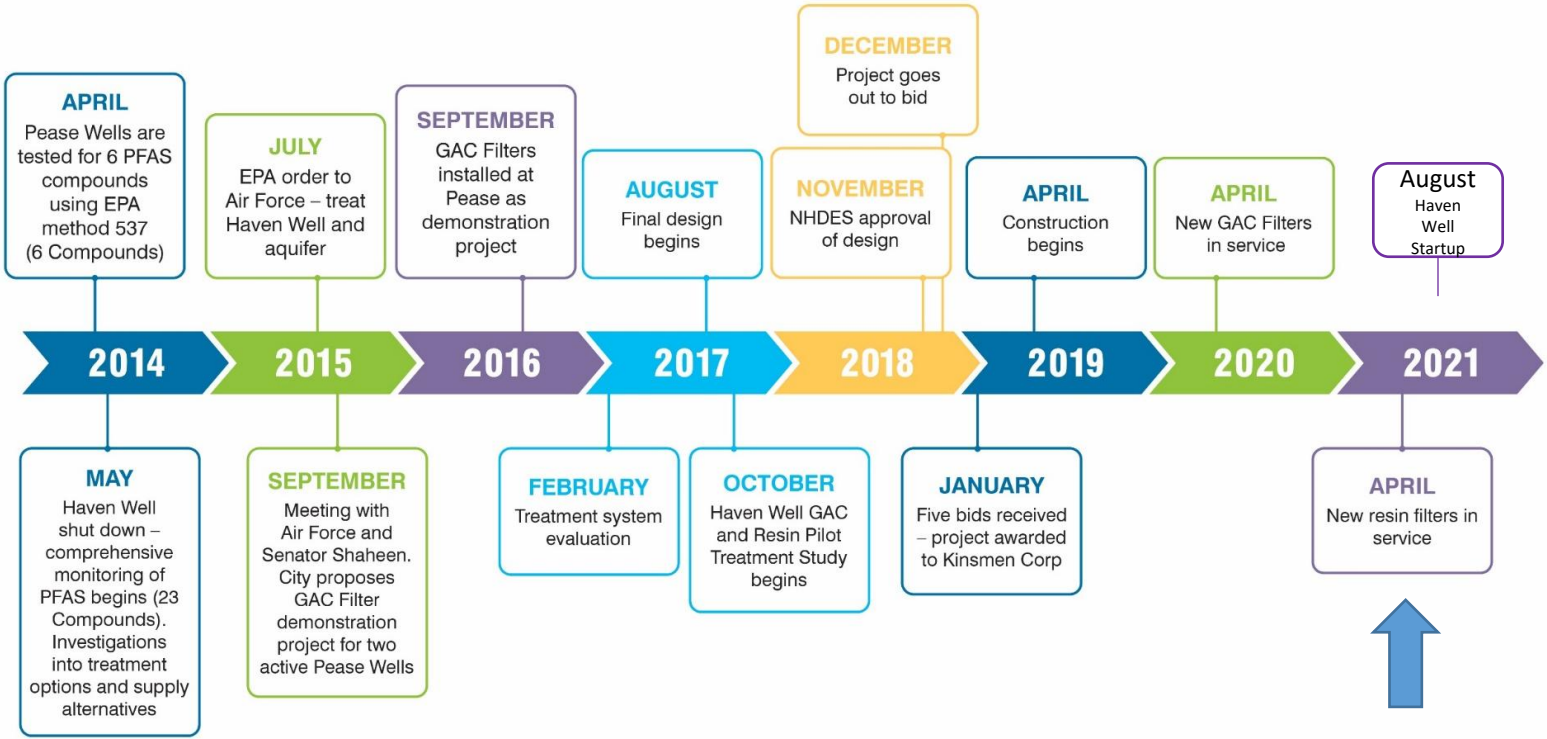
May 4, 2021 Dedication

City Officials, Congressional Delegation and Air Force Representatives

City Staff

Weston & Sampson Engineers

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

Regulations Continue…

- January 2009
  - EPA Preliminary Health Advisories:
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    - PFOS: 200 ppt
- May 2016
  - EPA Lifetime Health Advisories:
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    - PFBS = 2,000 ppt (Final Advisory)

2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025

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    - PFHxS: 18 ppt
- 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 PFCs 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 PeasePFC blood testing program, which indicate exposure levels that arehigher than the national average. More than 1500 people were testedafter being exposed to water from the contaminated Haven well. Photo by Howard Altschiller/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-pfcs-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 jmcmenemy@seacoastonline.com
Published 8:12 p.m. ET June 28, 2017 | **Updated 8:30 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.

Sen. Jeanne Shaheen *Portsmouth Herald*

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.

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

NEWS ABOUT CONTACT JEANNE SHAHEEN U.S. SENATOR for NEW HAMPSHIRE NEWSLETTER →

ess 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.

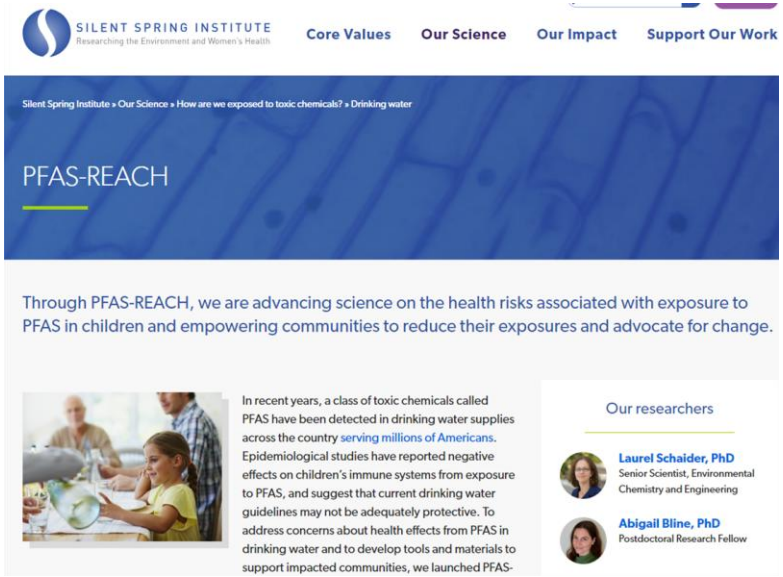
That's according to the first report on the study, which examined a group of adults and children who were exposed to contaminated drinking water at the former Pease Air Force Base.

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."

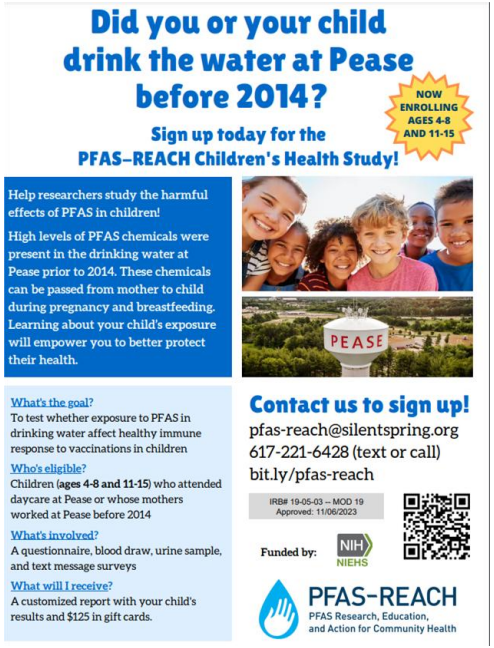
https://www.seacoastonline.com/story/news/local/2024/01/14/pease-study-report-pfas-elevated-but-decreasing-for-people-exposed/72207905007/

Pease PFAS Contamination - 10 year recap - Community



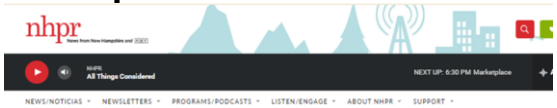
https://silentspring.org/project/pfas-reach

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



https://static1.squarespace.com/static/565b6fe8e4b0f0c1a028adc4/t/65a163a27c0503032de743b3/1705075618946/Pease+Flyer+v1+2023-11-06.pdf

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

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

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 "elated" by the EPA's decison to set strick federally enforceable drining 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/

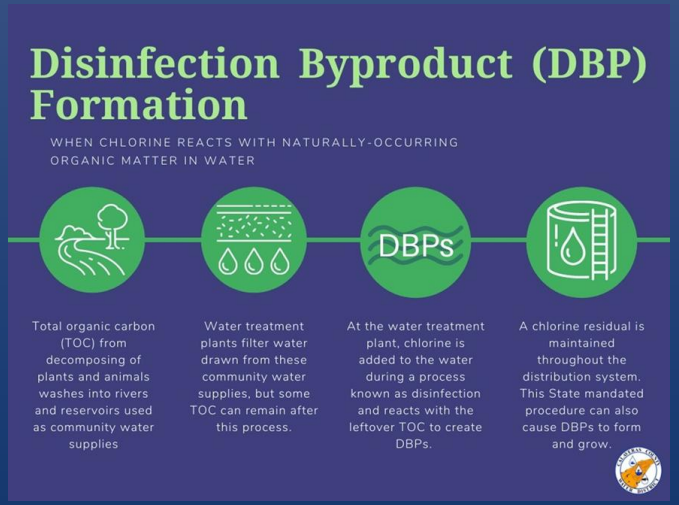
Pease PFAS Contamination - 10 year recap - Community Perspective

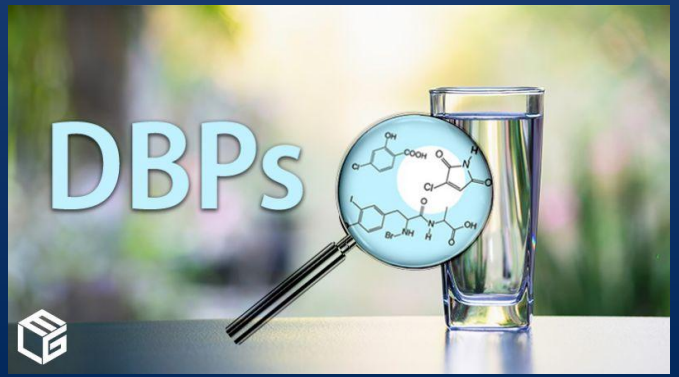
Disinfection Byproducts – Overview and Current Status

Safe Water Advisory Group

Disinfection Byproducts (DBPs) - Overview

- **<u>What are Disinfection Byproducts?</u>**
  - Chemical compounds that form when chlorine, used to disinfect drinking water, reacts with naturally occurring organic matter found in source water (specifically surface water supplies).
  - Total Trihalomethanes (TTHMs) and Haloacetic Acids (HAA5s)
- **<u>Why do public water systems monitor for DBPs?</u>**
  - Regulated contaminants – concentrations vary over time with respect to source water quality.
- **<u>How often do we collect and test for DBPs?</u>**
  - Quarterly: 4 sample locations throughout the Portsmouth Water System
  - Annually: 2 sample locations in the Pease Tradeport Water System



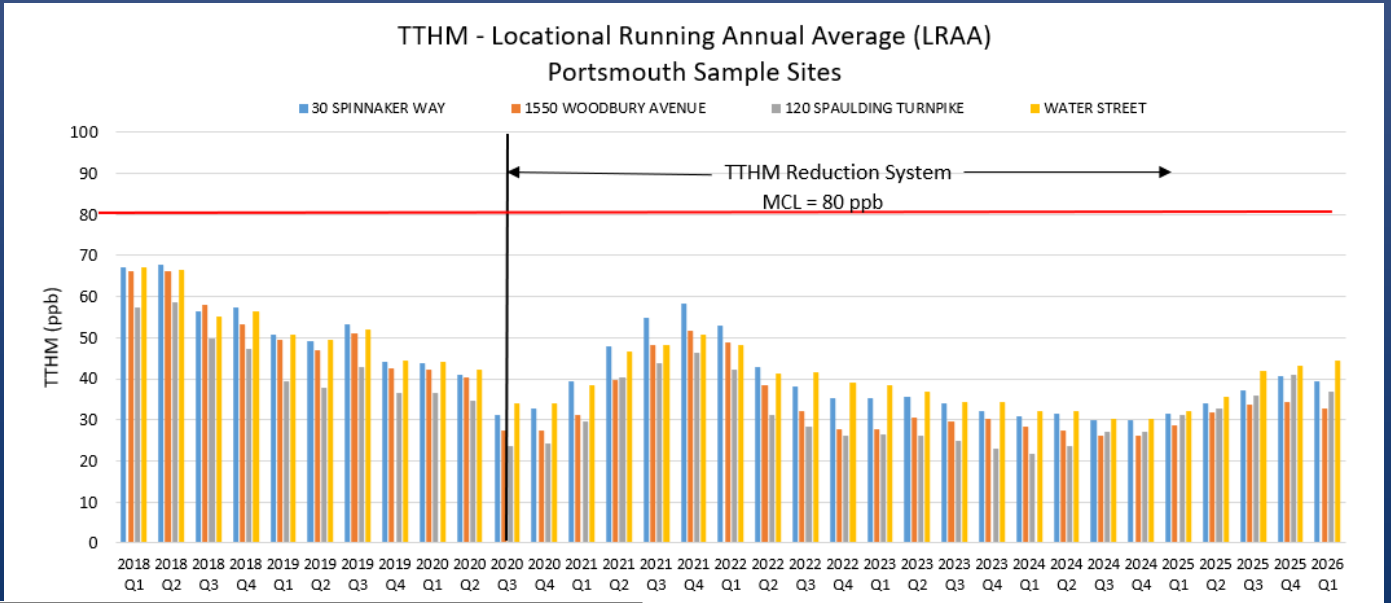


Regulatory Info. - Disinfection Byproduct Rule

- **Both HAAs & TTHMs are regulated using a Locational Running Annual Average (LRAA).**
  - LRAA definition: average of sample results taken at a particular monitoring location during the previous four calendar quarters. Averages must stay below the 60ppb and 80ppb maximum contaminant levels (MCLs) to avoid potential health effects and water system violation.
- **How can DBP formation be controlled?**
  - Source Management (minimize nutrient loading)
  - Treatment Optimization (pretreatment, pH control, chlorine control, filtration media)
  - Distribution System Management (flushing program, water age reduction)

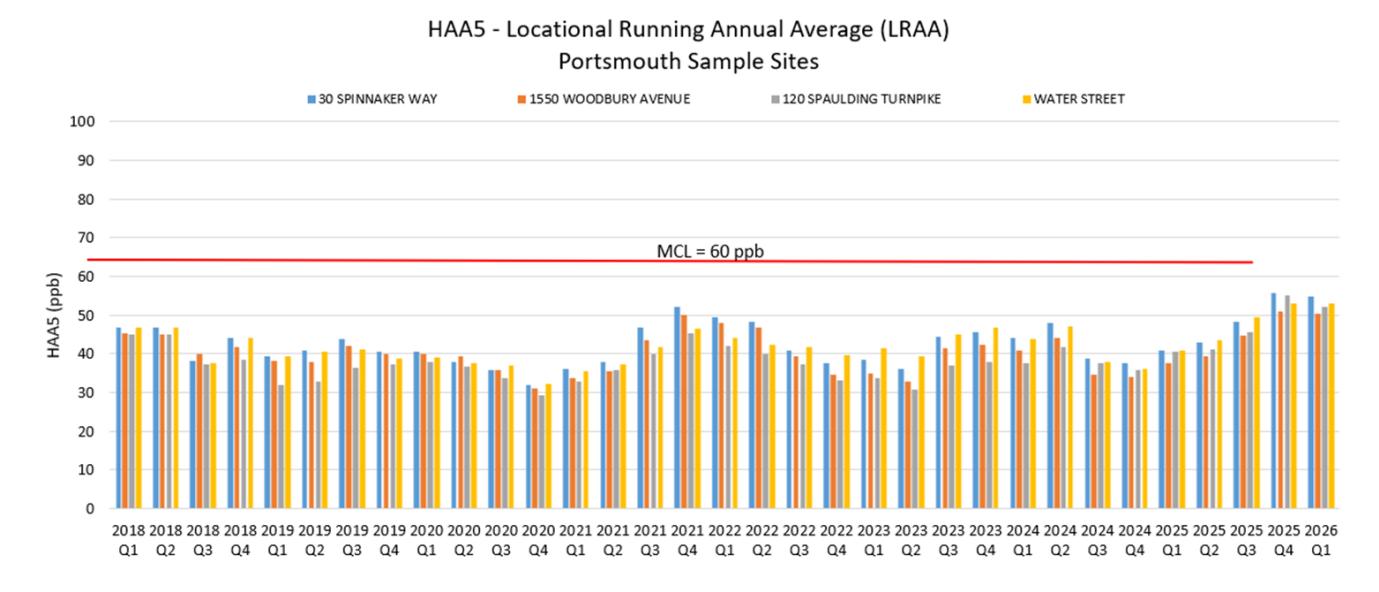
Regulated Contaminants	MCL (mg/L)
TTHM	0.080
Chloroform	
Bromodichloromethane	
Dibromochloromethane	
Bromoform	
HAA5	0.060
Monochloroacetic acid	
Dichloroacetic acid	
Trichloroacetic acid	
Bromoacetic acid	
Dibromoacetic acid	
Bromate (plants that use ozone)[1]	0.010
Chlorite (plants that use chlorine dioxide)	1.0
Regulated Disinfectants	**MRDL[3] (mg/L)**
Chlorine	4.0 as Cl_2
Chloramines	4.0 as Cl_2
Chlorine dioxide	0.8

TTHM Results – Portsmouth Water System



DATE SITE		TTHM	HAA5
Quarter I 2026	MCL's =>	80	60
ID #	Reference	ppb	ppb
Q1	**Locational Running Average**	Locational Running Average	Locational Running Average
321	30 SPINNAKER WAY	**40**	**55**
325	1550 WOODBURY PLAZA	**33**	**51**
323	120 SPAULDING TURNPIKE	**37**	**52**
324	WATER STREET	**45**	**53**

HAA5 Results – Portsmouth Water System



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Community Resources - Local Meetings

City of Portsmouth Safe Water Advisory Group (SWAG)

- Meets quarterly at City Hall
- www.portsmouthnh.gov/citycouncil/safe-water-advisory-group

US Air Force Pease Restoration Advisory Board (RAB)

- Meets 2-3 times a year at Pease or in Newington
- Focuses on environmental investigation and remediation at and around Pease
- www.afcec.af.mil/What-We-Do/BRAC/Restoration-Advisory-Boards/Pease-RAB/

Agency for Toxic Substances and Disease Registry (ATSDR) Pease Community Assistance Panel (CAP)

- Has not been meeting regularly
- Focuses on Pease PFAS health study and human health impacts at Pease
- www.atsdr.cdc.gov/pfas/health-studies/pease-community-assistance-panel.html

Community Resources - State Commissions

- Commission on the Environmental and Public Health Impacts of Perfluorinated Chemicals – House Bill 737 - 2019 (2019 – November 1, 2029)
  www.pfas.des.nh.gov/information-center/legislative-commission

- Seacoast Commission on Long-Term Goals and Requirements for Drinking Water – House Bill 495 - 2019 (2017 – November 1, 2029)
  https://gc.nh.gov/statstudcomm/details.aspx?id=1493%20&rbl=1&txtkeyword=seacoast

- Commission to Study Environmentally Triggered Chronic Illness – Senate Bill 85 – 2019 (2019 – November 1, 2029)
  https://gc.nh.gov/statstudcomm/details.aspx?id=1468%20&rbl=1&txtbillnumber=SB85

Community Resources - Private Wells

- Search “NH Be Well Informed” to learn about testing and treating water from private well for PFAS and other common contaminants
  https://www.des.nh.gov/water/drinking-water/private-wells

- PFAS Removal Rebate Program for Private Wells
  https://www.pfas.des.nh.gov/funding/pfas-removal-rebate-program-private-wells

- PFAS Sampling Dashboard - Results mapped statewide
  https://www.pfas.des.nh.gov/tabbed-content/pfas-sampling-dashboard

If you’re worried about personal exposure
- “PFAS in NH: What You Need to Know”
  https://www.pfas.des.nh.gov/sites/g/files/ehbemt586/files/inline-documents/2022-09/pfas-in-nh.pdf

Community Resources - PFAS and health

PFAS Exchange website - https://pfas-exchange.org/resources/

PFAS Exposure and Health
- How to Reduce Your Exposure to PFAS
- How Can PFAS Affect Your Health
- PFAS and the Immune System: What Do We Know?

Health Monitoring
- Medical Screening Guidance – for people in PFAS-impacted communities
- Medical Screening Guidance – for clinicians
- Vaccine Response and PFAS Exposure – for people in PFAS-impacted communities
- PFAS Blood Testing: What You Need to Know
- Information About Blood Testing Laboratories – for individuals

NH State Law requires insurance companies to pay for PFAS blood testing
https://www.insurance.nh.gov/news-and-media/blog/and-polyfluoroalkyl-substances-pfas

Community Resources - websites

- City of Portsmouth DPW - www.portsmouthnh.gov/publicworks/water/drinking-water-quality
- NH DES PFAS Response website - www.pfas.des.nh.gov/
- EPA - PFAS www.epa.gov/pfas and Lead - www.epa.gov/lead
- Department of Defense (DoD) - www.acq.osd.mil/eie/eer/ecc/pfas/
- EWG - www.ewg.org/pfas-resources

Community groups:

- Testing for Pease - www.testingforpease.com
- Great Bay Changemakers - https://greatbay.org/great-bay-changemakers/

Other:

- EPA re: PFAS home water filtration - https://www.epa.gov/system/files/documents/2024-04/water-filter-fact-sheet.pdf

- City of Portsmouth Community Drinking Water Forum May 3, 2022 provides a general overview of the City water system and relevant topics:
  https://www.youtube.com/watch?v=98ShsRM_UEo&t=5201s

Public Comment