

SWAG Meeting

December 5, 2024 | 6:30-8:30pm

Hybrid Meeting: Portsmouth City Hall Conference Rm A and Zoom

Agenda

1. Welcome, Introduction & Approval of minutes –
Andrea Amico, co-chair
2. SWAG Co-chair update
3. Mission Update
4. Water Supply Update – Al Pratt, Water Resource Manager
5. City Water Projects Update
6. Service Line Inventory Update –
Mason Caceres, Assistant Water Resource Manager
7. DoD Policy Update on EPA PFAS MCLs
8. Legislative Update – Representative David Meuse
9. Public comment

SWAG Co-chair update

Thank you to Brian Goetz! He made a big impact on Portsmouth and will be missed.

Welcome to our new co-chair Al Pratt. We look forward to continuing to work with you!

Mission Discussion

Current Mission:

Established by Council action on October 5, 2020, the group's stated mission is to:

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.

In the SWAG City Council report dated 1/8/24:

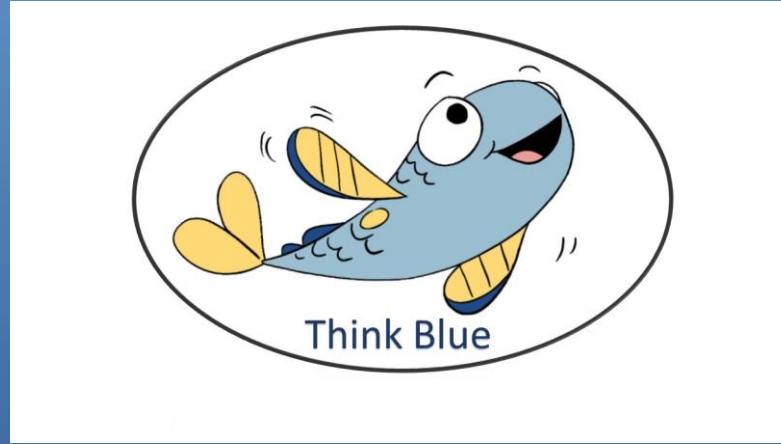
“... It is important to note that SWAG meetings have consistently covered topics on the City’s water quantity, quality, preservation and conservation efforts, and projects pertaining to the water master planning through the City’s annual Capital Improvement Plan process and other engineering studies.”

Mission Discussion

Proposed revised mission:

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 water quantity, quality, preservation and conservation efforts, and projects pertaining to the water master planning through the City's annual Capital Improvement Plan process and other engineering studies.

Portsmouth and Pease Water Supply Update



Safe Water Advisory Group
December 5, 2024

Water Supply Conditions Assessment

- Drought Conditions (US Drought Monitor)
- Precipitation
- Reservoir Conditions
- Stream Flow
- Groundwater Levels
- System Demand
- Supply Capacity

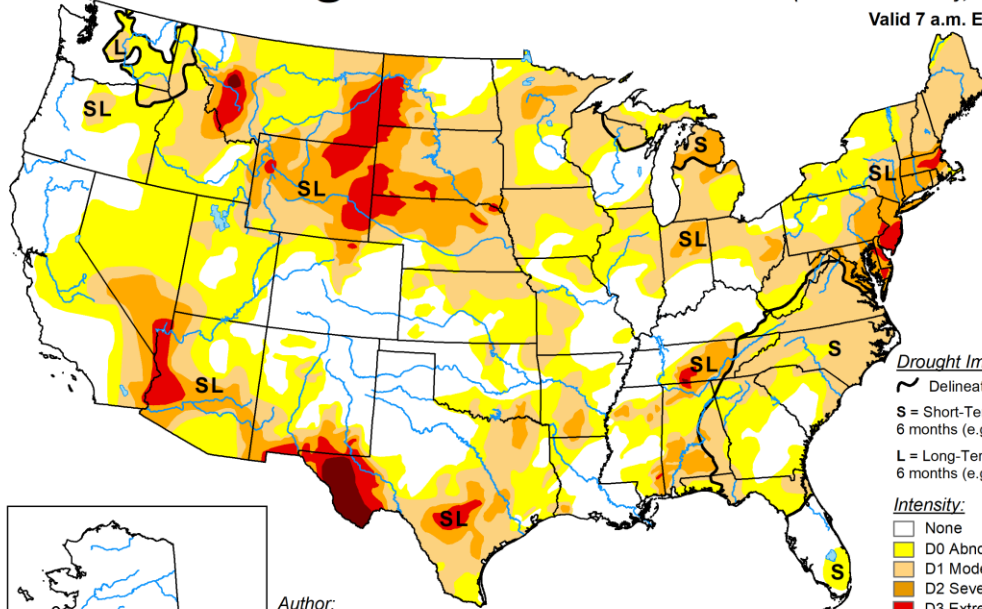
Water Supply Conditions Assessment

Precipitation	Groundwater Levels	River Flows	Reservoir Level	Water Supply Capability	Current Water Demand	Customer Water Restrictions
Above Average	Above Average	Above Average	Above Average	Above Normal	Below Normal	None
Average	Average	Average	Average	Normal	Normal	None
Below Average	Below Average	Below Average	Below Average	Below Normal	Above Normal	Voluntary Measures
Dry	Low	Low	Low	Restrictions Necessary	High	Odd/Even Watering
Very Low	Very Low	Very Low	Very Low	Additional Restrictions Necessary	Very High	Two-days/Week Watering
Drought	Historic Low	Historic Low	Historic Low	Emergency	Historic High	No Outdoor Use

Drought Monitor

U.S. Drought Monitor

December 3, 2024
(Released Thursday, Dec. 5, 2024)
Valid 7 a.m. EST



Drought Impact Types:

~ Delineates dominant impacts

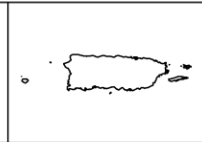
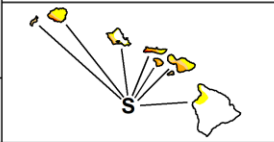
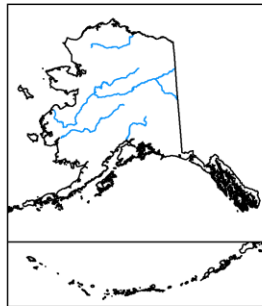
S = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)

L = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)

Intensity:

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

Author:
David Simeral
Western Regional Climate Center



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>



droughtmonitor.unl.edu

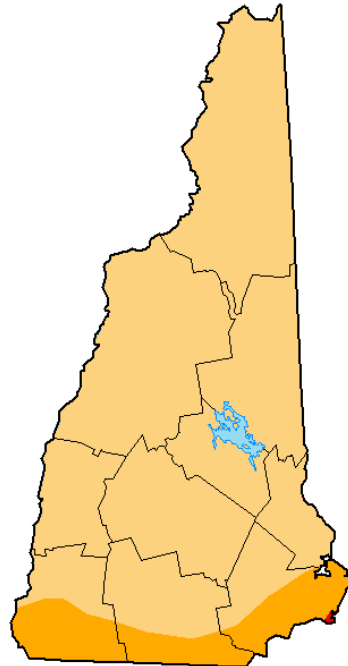
Drought Monitor

U.S. Drought Monitor New Hampshire

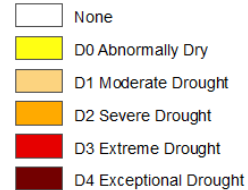
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Intensity:



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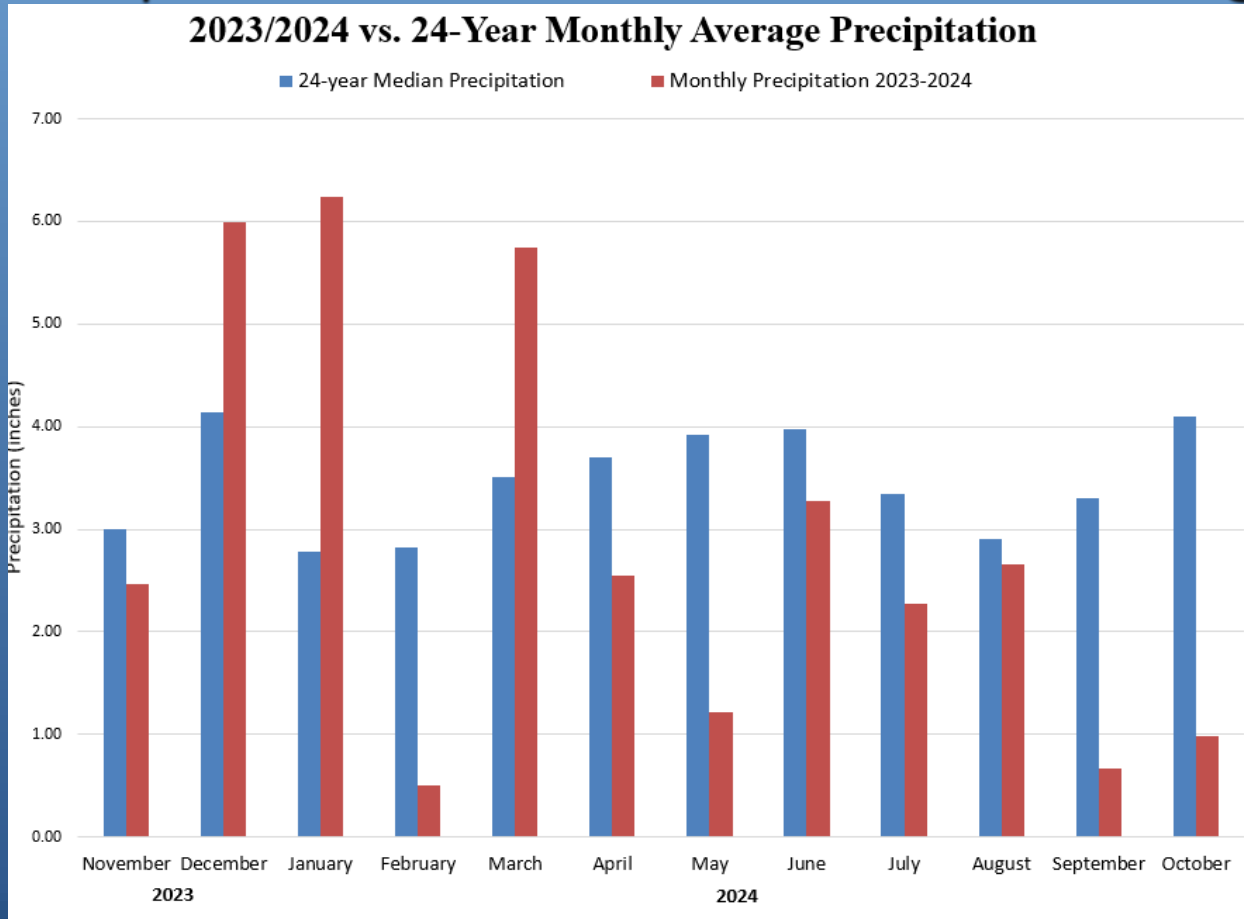
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Western Regional Climate Center

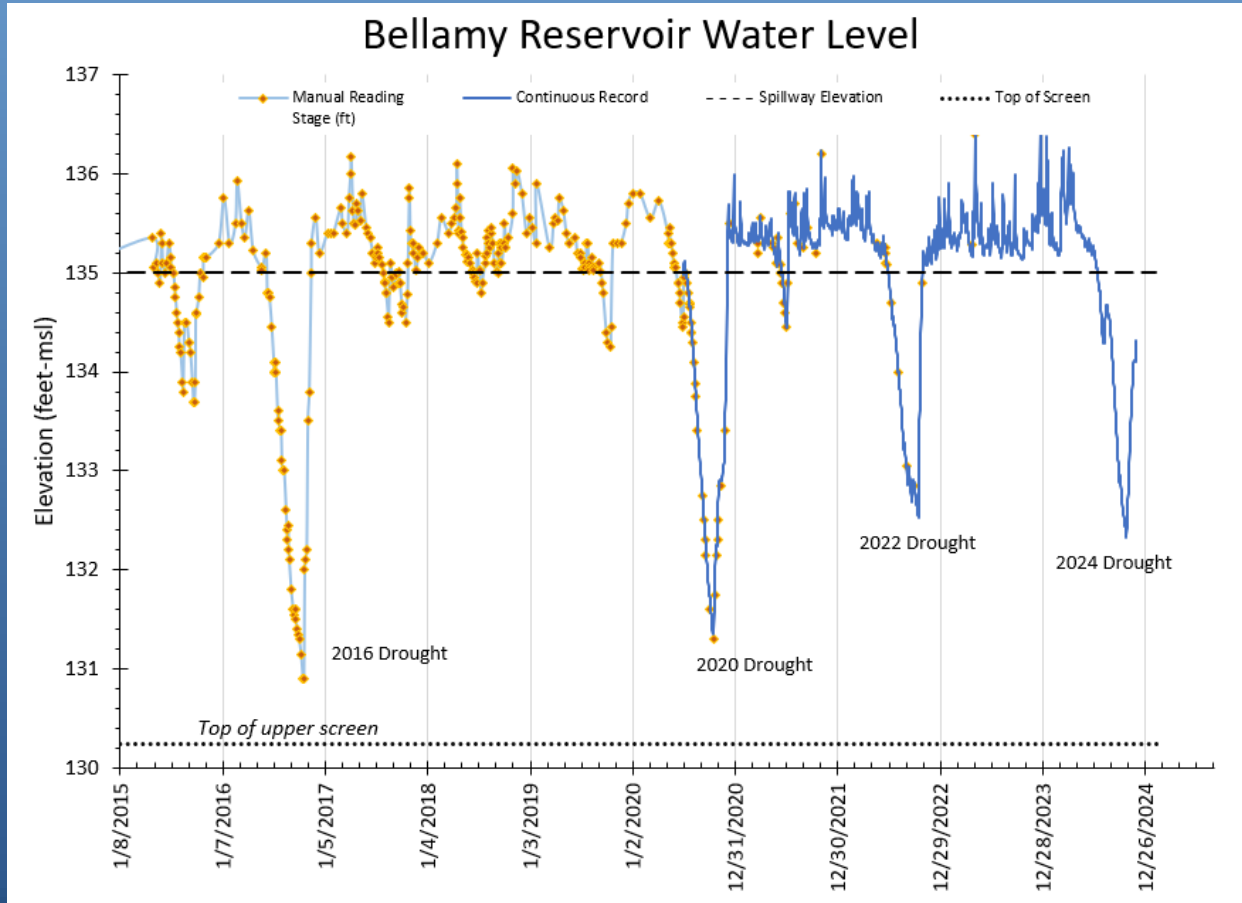


droughtmonitor.unl.edu

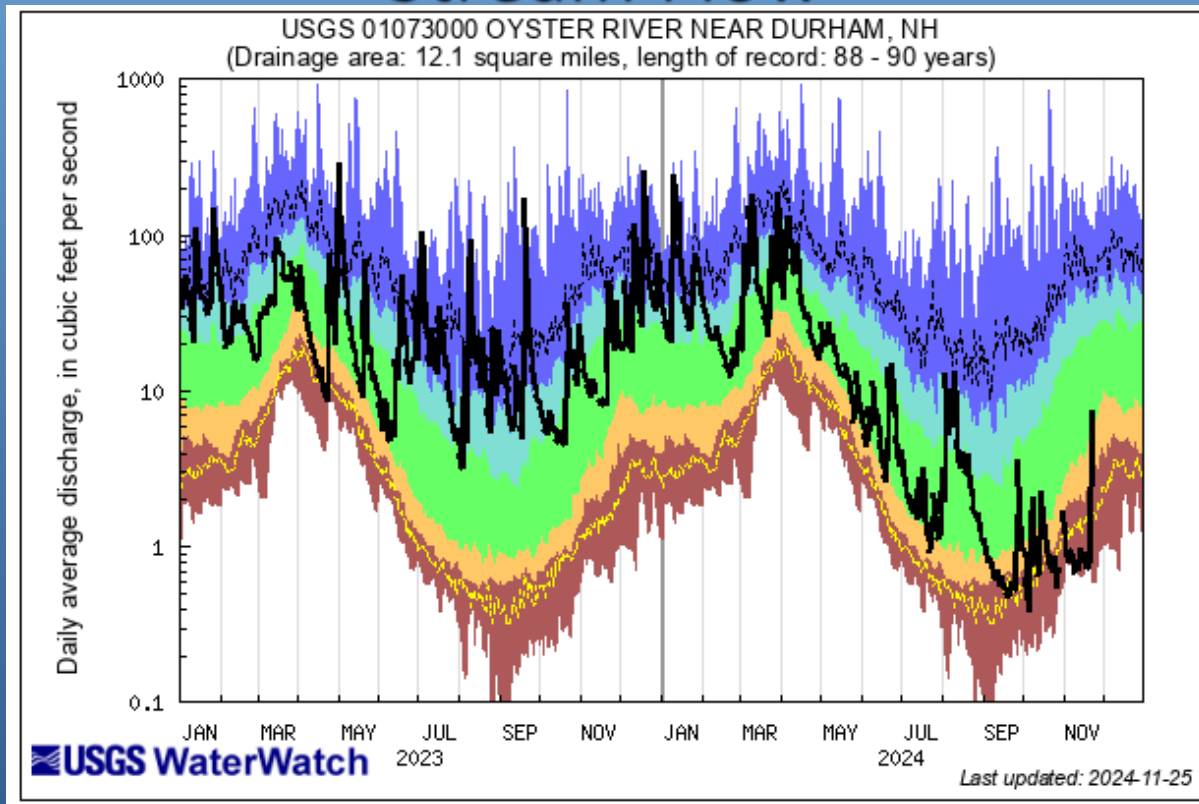
Precipitation – 83% of Annual Average



Surface Water Conditions



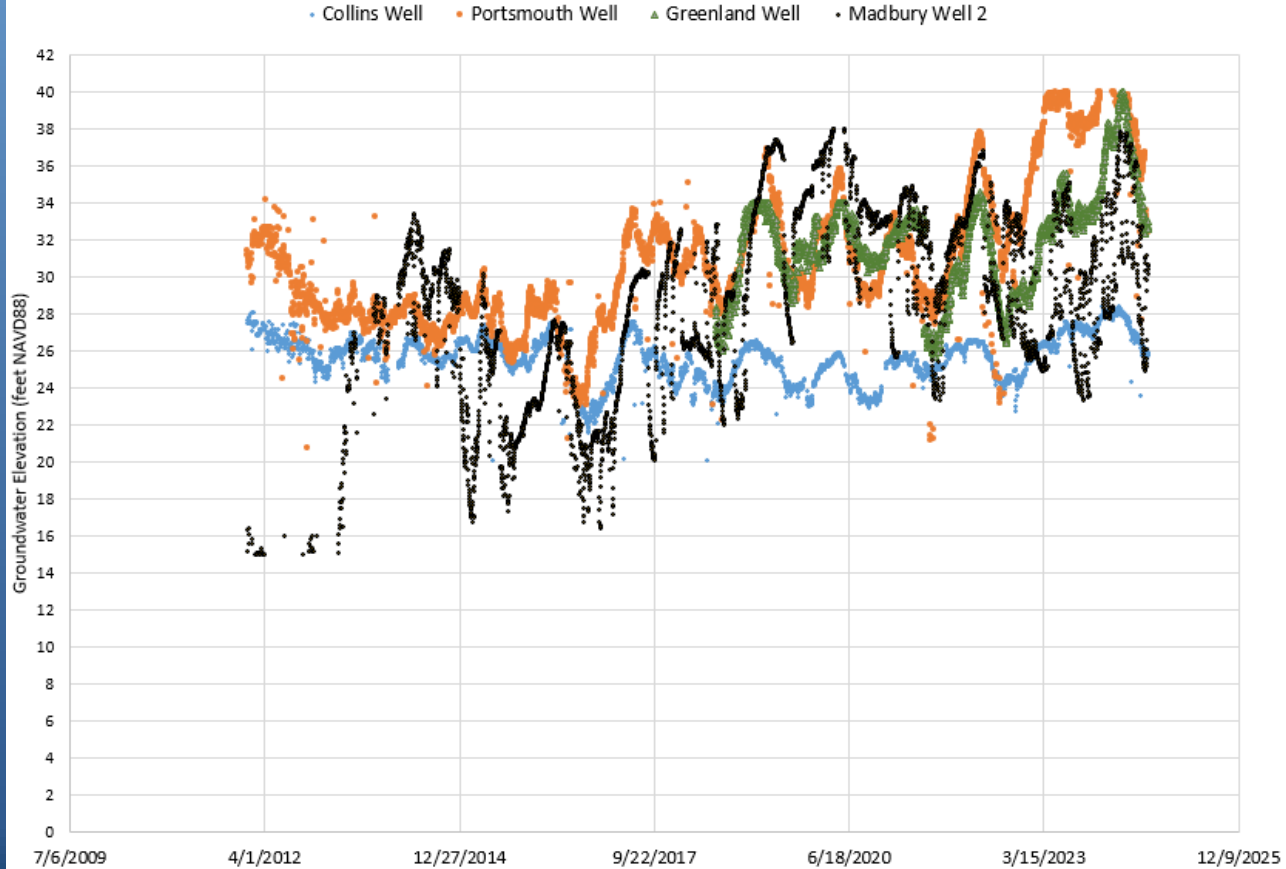
Stream Flow



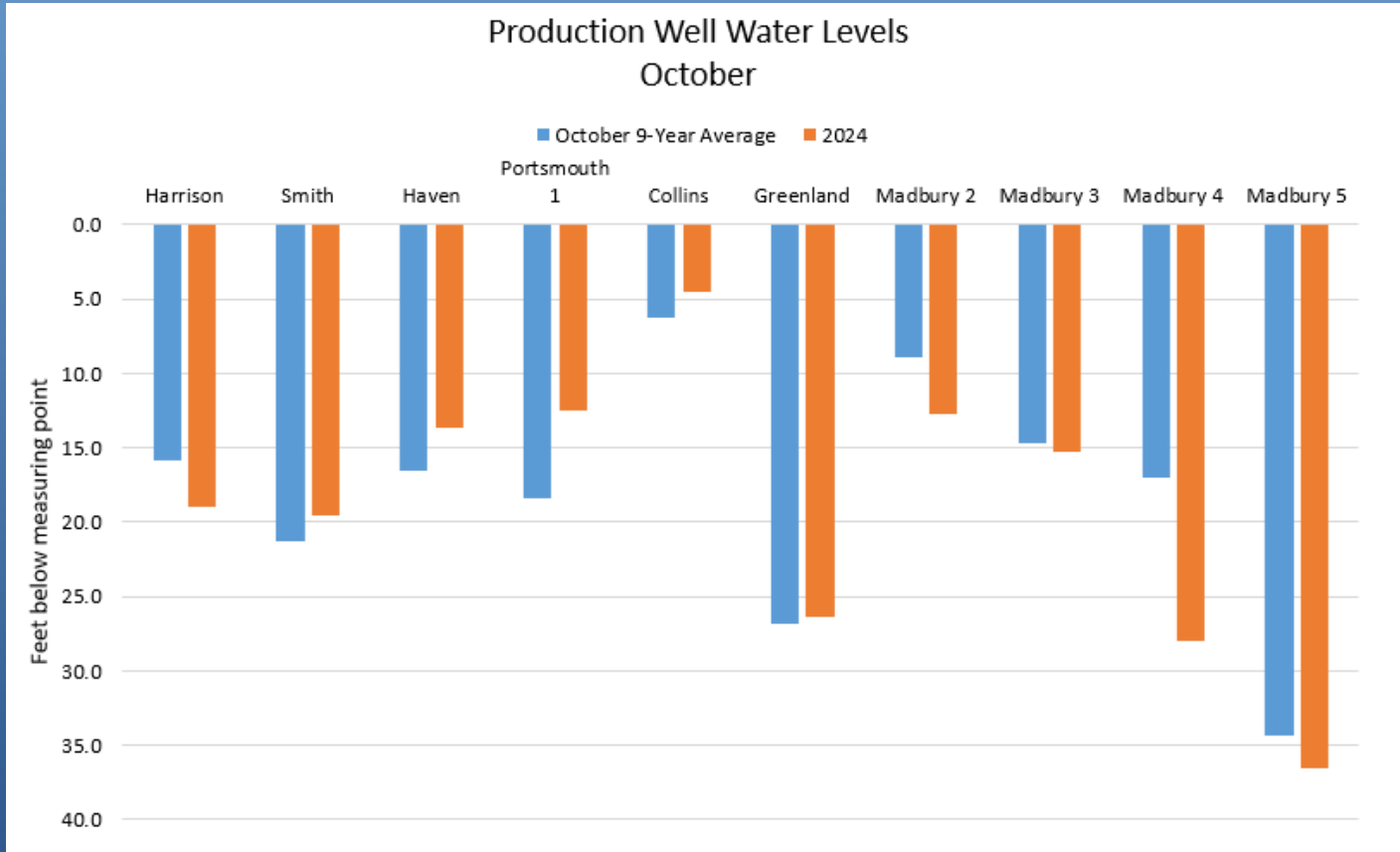
Explanation - Percentile classes						Flow
lowest-10th percentile	5	10-24	25-75	76-90	95 90th percentile -highest	
Much below Normal		Below normal	Normal	Above normal	Much above normal	

Groundwater Levels

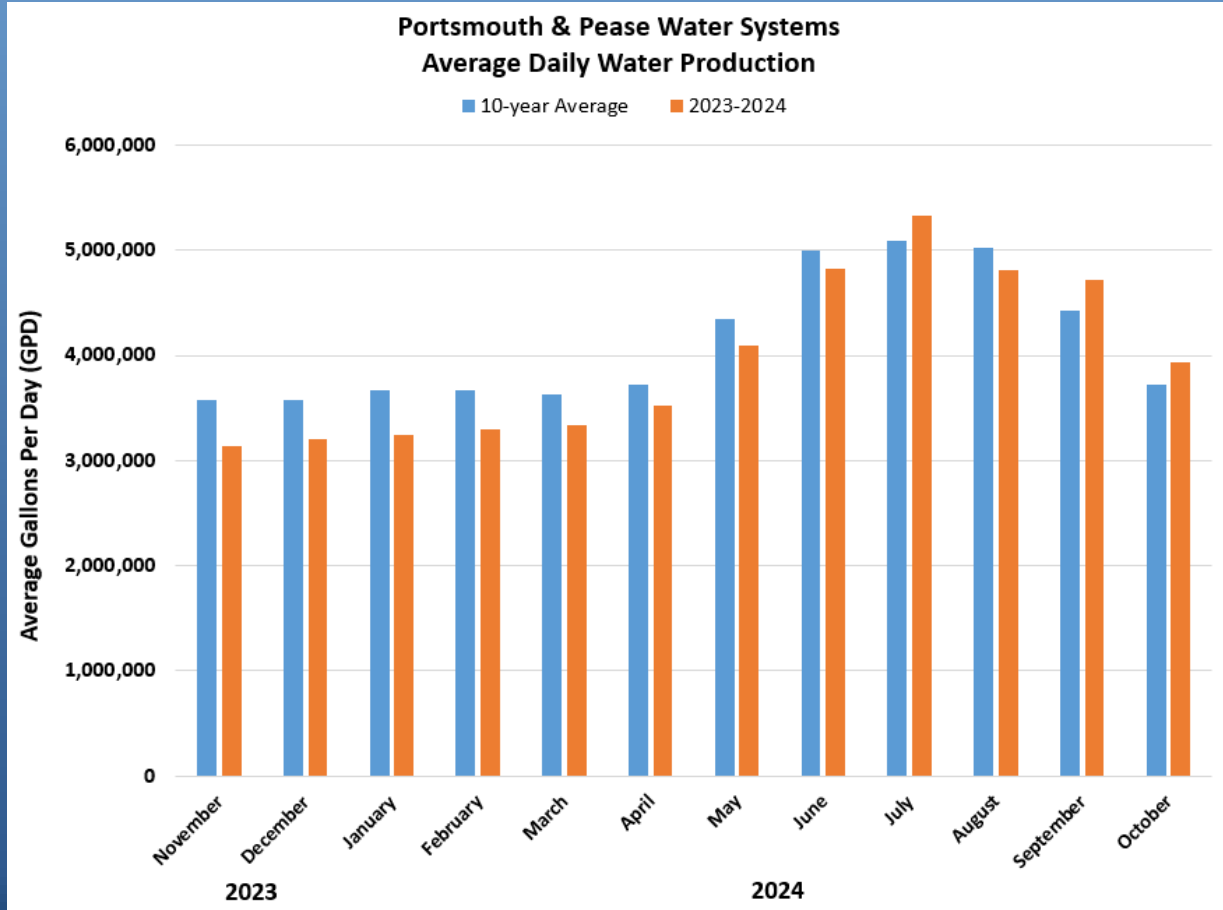
Supply Well Water Elevations



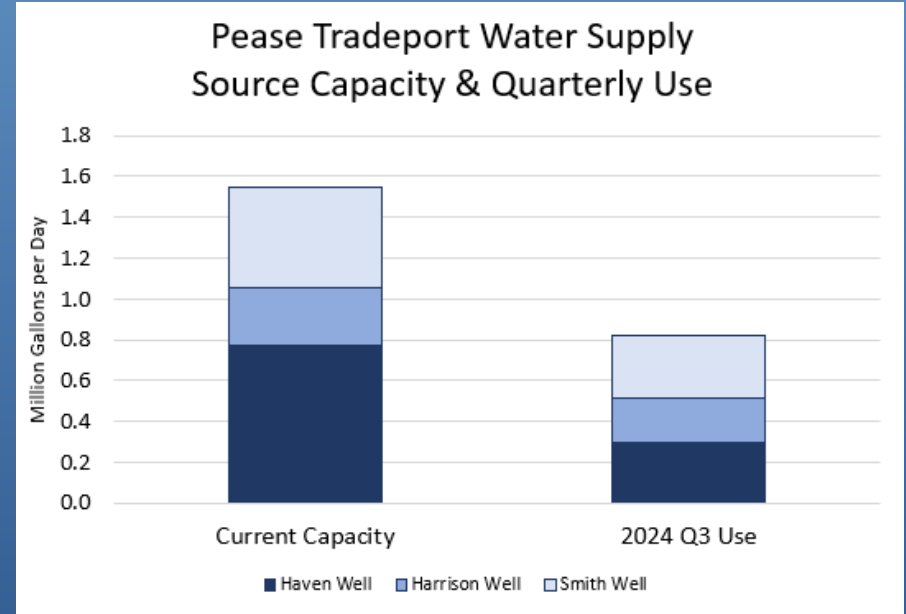
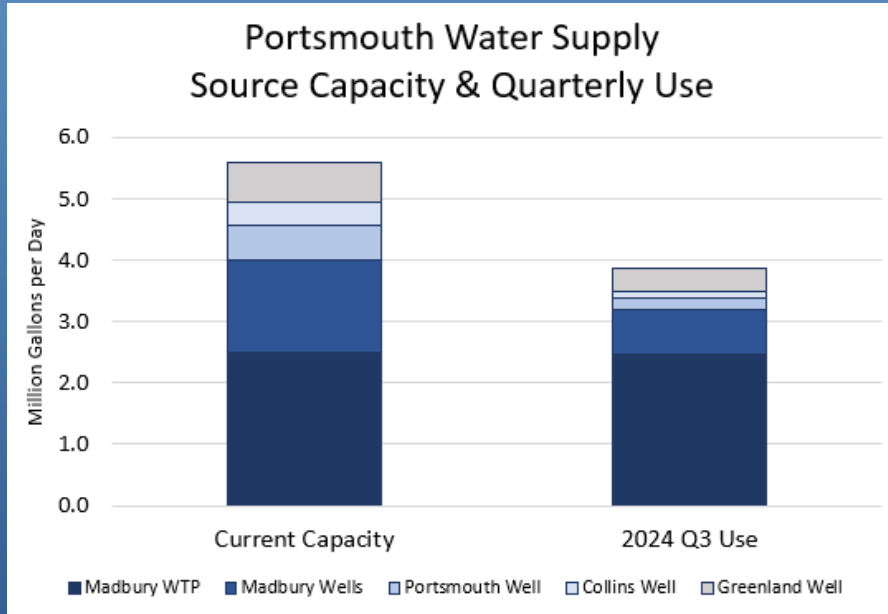
Groundwater Levels



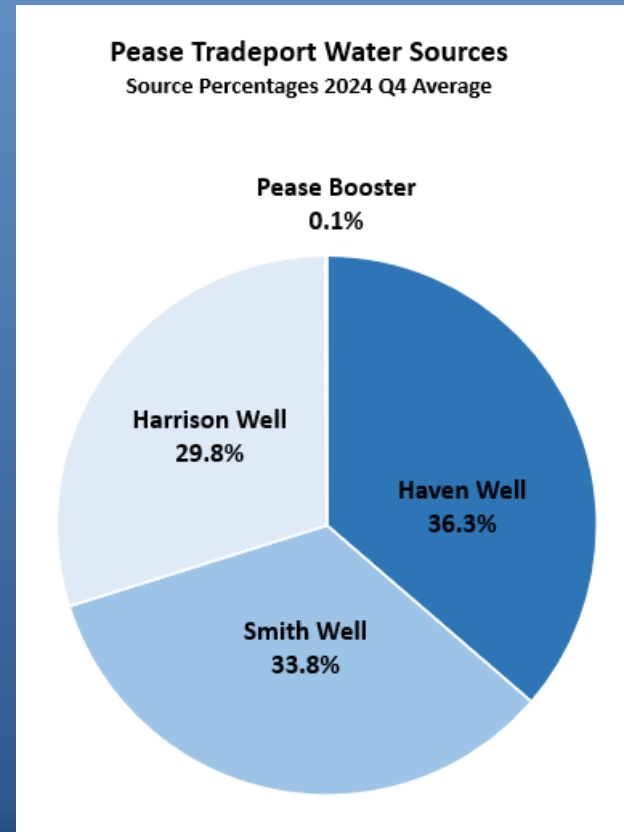
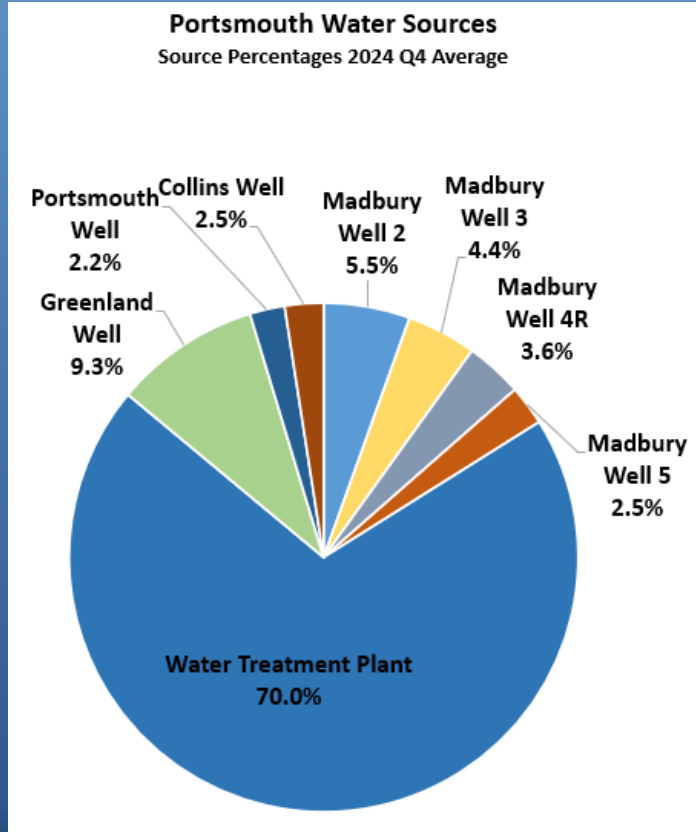
Supply Production



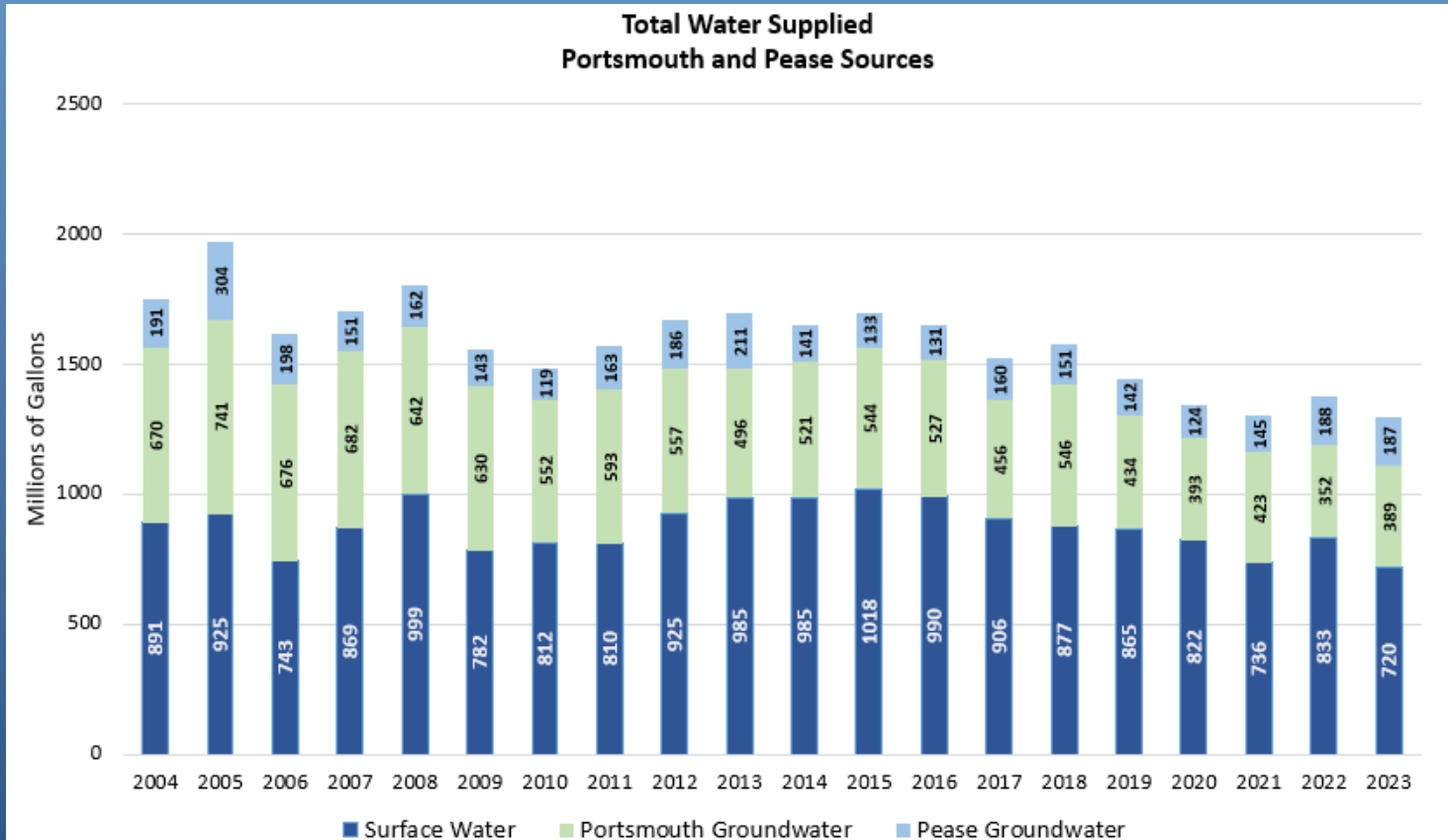
Supply Versus Demand and Source Utilization



Supply Utilization



Supply Utilization



Projects Update

On-Going Projects

- Lafayette Tank Storage and Pressure Study
- Greenland Well PFAS Treatment Design
- Portsmouth & Collins Wells PFAS Treatment Design
- Hydraulic Model Update
- Little Bay Transmission Main
- Little Bay Road Water Main Replacement
- Vaughan Street Water Main Replacement
- Transmission Main Air Release Valve & Access

On-Going Projects (continued)

- Smith Well Maintenance
- Collins Well 2 Permitting
- Service Line Inventory
- Service Line Replacement Plan
- Seacoast Reliability Project
- Portsmouth/Dover Emergency Interconnect
- Bellamy Dam Intake Modifications
- Water System Energy Audit
- Master Plan Update

PFAS Treatment Design

- Greenland Well
 - Preliminary design near completion
 - Granular Activated Carbon
 - New building needed
 - Road and power upgrades required
 - Proceeding with final design



PFAS Treatment Design

- Portsmouth & Collins Wells
 - Preliminary design near completion
 - Water from wells be combined for treatment at one facility
 - Granular Activated Carbon
 - Provisions for additional treatment incorporated in design
 - Submit Preliminary Design and cost estimate to Air Force



PORTSMOUTH WATER SYSTEM'S SERVICE LINE OUTREACH & LEAD TESTING UPDATES

BY MASON CACERES

ASSISTANT WATER RESOURCE MANAGER



TALKING POINTS

- SERVICE LINE INVENTORY
 - TIMELINE UPDATE
 - CUSTOMER NOTIFICATIONS FOLLOWING SUBMISSION
 - FREE LEAD TESTING OFFERED BY CITY OF PORTSMOUTH
- LEAD AND COPPER RULE IMPROVEMENTS (LCRI)
 - NEXT STEPS
 - LATEST LEAD & COPPER RESULTS (Q3 COMPLIANCE TESTING)



SERVICE LINE INVENTORY – TIMELINE UPDATE

Service Line Inventory Submissions

- October 16, 2024 – City of Portsmouth submits baseline inventory of domestic, fire, and irrigation service lines located throughout Portsmouth and Pease Tradeport Water Systems.

Compliance Outreach Efforts

- November 12, 2024 – Notification letters received by customers with unidentified service line materials and those made of galvanized steel. Total of 3,192 letters distributed.

Customer Responses to Notification Letters

- Ongoing – Heavy influx of calls and emails following outreach letters. Majority of recipients requesting free lead test.
- 137 sample kits compiled and dropped off so far.

Ongoing Efforts to Receive State Funding for Service Line Replacements & Identification Efforts

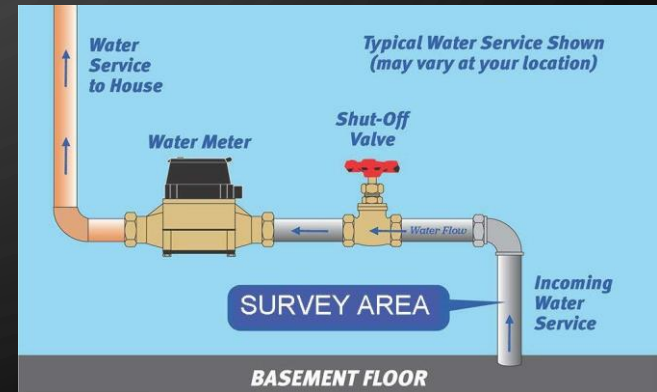
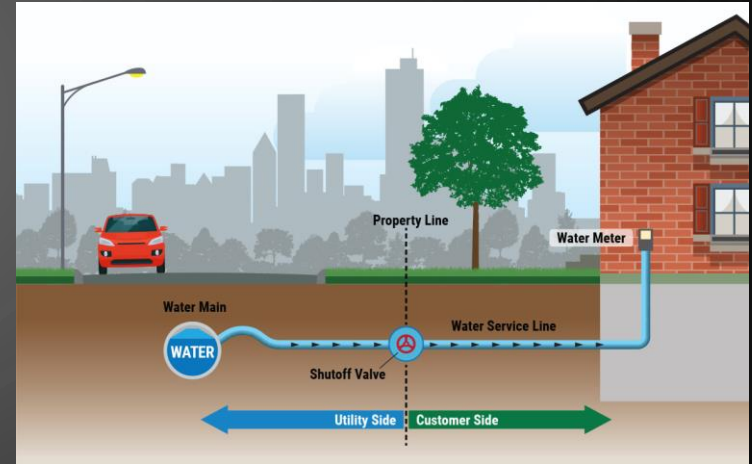
- The Drinking Water State Revolving Loan Fund (DWSRF) Lead Service Line Replacement (LSLR) funding is available for both inventory and construction activities associated with the full replacement of service lines identified as lead or GRR.

Inventory Status

- Today – 594 private-side service lines left to identify. 87% of those identified are copper. More work to do on city-side inspections via potholing with 2,700 left to visually inspect or digitize existing records. Water systems have until 2037 to identify all unknowns.

CUSTOMER NOTICE LETTERS

- Required by EPA and NHDES to notify all property owners with lead, galvanized requiring replacement, or unknown service lines of lead exposure potential.
- 3 template letters were compiled and sent using guidance documents from NHDES:
 1. To those with galvanized steel lines (privately-owned portions): 135 distributed – suggests action to replace line
 2. To those with unknown material on city-owned portion: 2,465 distributed – no further action
 3. To those with unknown material on privately-owned portion: 592 distributed – suggests scheduling inspection of line
- Language included in letters was concerning to the community.



SERVICE LINE NOTICE LETTERS - CONTINUED

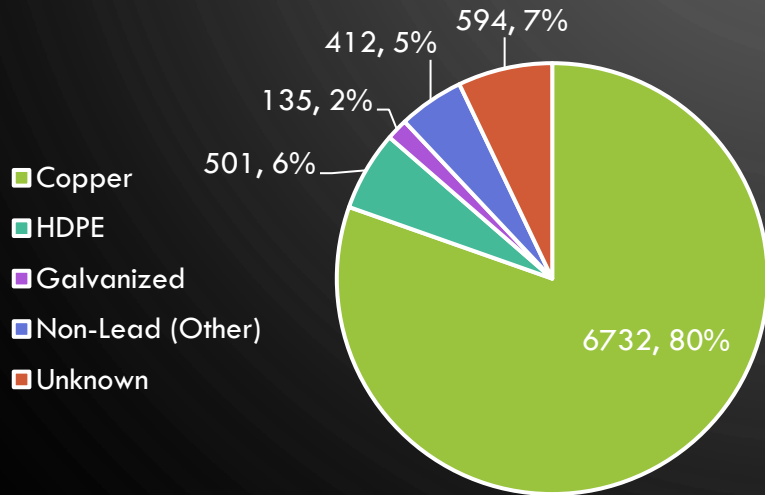
- Information included in outreach:
 - Health effects of lead,
 - What you can do to reduce exposure,
 - Testing your water (free testing opportunity),
 - Identifying service line material (prompted inspection, or notice of future potholing efforts),
 - Why you should replace galvanized service lines and next steps to do so.
- System-specific information not included in letters:
 - Have yet to find a lead component or service line throughout both the Portsmouth and Pease Tradeport Water Systems.
 - 7,780 privately-owned services identified out of 8,400 connections.
 - There are existing records that have not yet been digitized. These had to be listed as “unknowns” in inventory.
 - Annual monitoring of lead has indicated 90th percentile concentration of 1 ppb or below since 2018.
 - Sources of lead can be linked to a property’s internal plumbing and fixtures (lead solder).



<https://www.cityofportsmouth.com/publicworks/water/water-service-line-dashboard>

SERVICE LINE INVENTORY STATUS REPORT - TOTAL

Portsmouth's Customer-Owned Service Lines



- Total service connections throughout Portsmouth and Pease Tradeport Water Systems: 8,374
- Pipe materials identified on customer side: 7,780
 - 594 unknown remaining across both systems
 - Of those identified, 87% are copper, 6% plastic, 5% non-lead (other)
- 135 galvanized services found so far
 - Makes up <2% of identified service lines
 - Will require replacement under LCRI
 - Steps to replace line included in notification letters
 - List of contractors on City's website
- Comparison with other systems

FREE LEAD TESTING EFFORTS

• Currently have 3 sampling and testing programs in place for lead in drinking water.

1. Opportunity highlighted in customer notice letters – funded by NHDES (**137 distributed, so far**)
 - To participate, customer must have an unknown service line, or one made of galvanized steel. Renters can request a kit.
2. Safe Water Advisory Group opportunity – funded by City of Portsmouth (**65 kits distributed, 33 tested**)
 - Anyone can participate - one sample per household/property.
3. Lead and Copper Rule annual monitoring – compliance sampling program carried out by all Public Water Systems (PWSs)
 - Sample sites selected based on tier structure (Fig. 1)
 - Portsmouth requests homeowner participation.

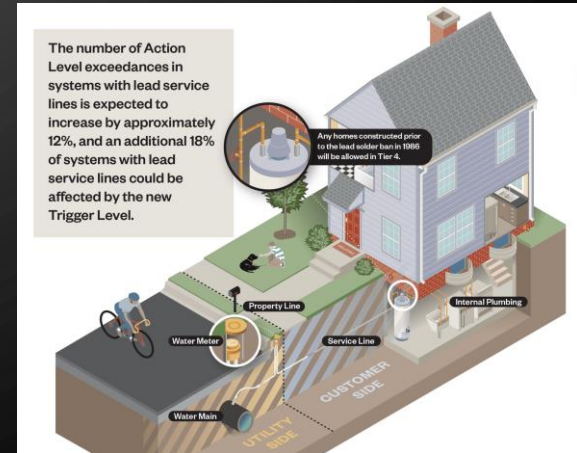
Data will be available to the public through NHDES Onestop Database



Lead service line

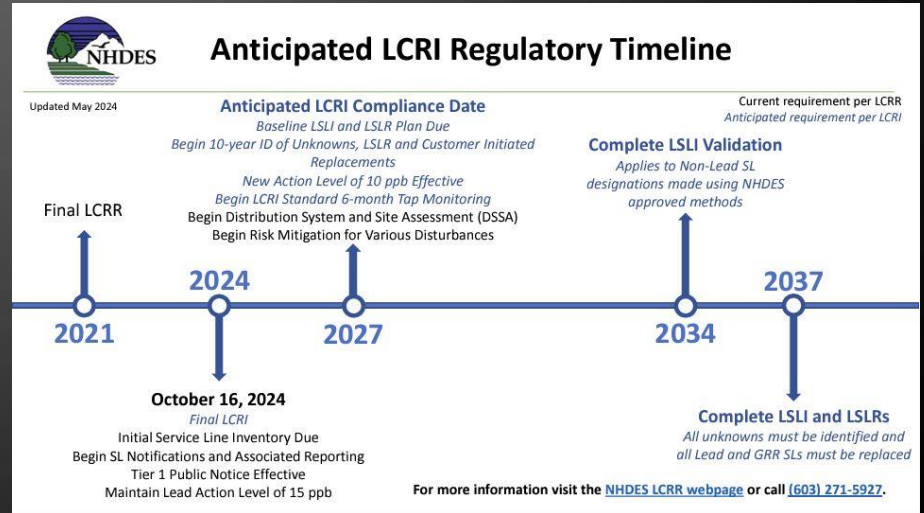
- Tier 1** Single-family homes with LSLs
Use only these sites unless insufficient sites are present.
- Tier 2** Other buildings with LSLs
- Tier 3** Single-family homes with galvanized service lines downstream of a current or former LSL
- Tier 4** Single-family homes with copper and lead solder
- Tier 5** Representative sites

Fig. 1



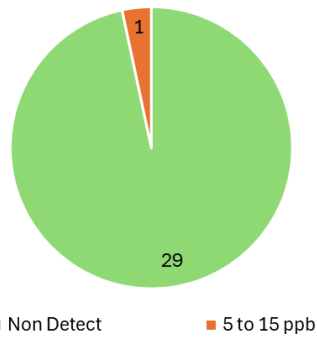
NEXT STEPS

- New annual compliance monitoring sample sites due by January 31, 2025 following new site selection structure.
- Currently working plans to pothole unknown areas of the system. Start in Spring, 2025.
- Providing pitcher filters to homeowners following galvanized replacements.
- Lowering of lead action limit from 15 ppb to 10 ppb starting 2027.
- Must verify/identify 100% of unknown service line materials by 2037
- Must replace 100% of LSLs and GRRs by 2037.



LEAD & COPPER COMPLIANCE TESTING RESULTS – QUARTER 3, 2024

2024 Portsmouth Lead Monitoring Results

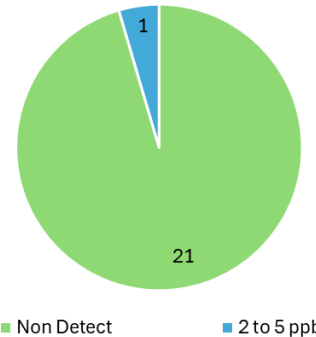


Test Results (# of samples)

*One detection of lead at 6.6 ppb
out of 30 collected samples.

12 participants had galvanized lines

2024 Pease Tradeport Lead Monitoring Results



Test Results (# of samples)

*One detection of lead at 2.6 ppb
out of 20 collected samples.

LEAD & COPPER COMPLIANCE TESTING RESULTS

PORTSMOUTH WATER SYSTEM LEAD AND COPPER COMPLIANCE HISTORY

<u>Date</u>	<u>Sampling Frequency</u>	<u># Samples Collected & Analyzed</u>	<u>Lead 90th percentile (ppb)</u>	<u>Copper 90th percentile (ppm)</u>
July 2024	Annual	30	1	0.115
July 2023	Semi-Annual	60	1	0.167
January 2023	Semi-Annual	61	1	0.244
2022	Annual	30	1	0.141
2021	Annual	31	2	0.238
2020	Annual	31	1	0.117
2019	Annual	32	0	0.205
July 2018	Semi-Annual	61	1	0.187
January 2018	Semi-Annual	62	1	0.162
2016	Triennial (once every 3 yrs.)	34	7	0.135
2013	Triennial (once every 3 yrs.)	30	1	0.110
2010	Triennial (once every 3 yrs.)	30	1	0.130
2007	Annual	30	5	0.185
2006	Annual	30	5	0.194
2005	Annual	30	13	0.239
July 2004	Semi-Annual	61	5	0.261
January 2004	Semi-Annual	61	13	0.291
July 2003	Semi-Annual	61	16	0.296
January 2003	Semi-Annual	60	12	0.252

QUESTIONS?



<https://portsnh.co/serviceinventory>



Mason Caceres – Assistant Water Resource Manager
email: mecaceres@cityofportsmouth.com
phone: 603-312-3804



DoD Policy Update on EPA PFAS MCLs

- ❖ EPA finalized MCLs for PFAS in April 2024
- ❖ Per the EPA, “Public water systems have five years (by 2029) to implement solutions that reduce these PFAS if monitoring shows that drinking water levels exceed these MCLs”.
- ❖ These PFAS MCLs will impact the Portsmouth and Collins wells in the Southern well field near Pease and treatment of these wells are now needed
- ❖ DoD issued a policy on 9/3/24 “Prioritization of Department of Defense Cleanup Actions to Implement the Federal Drinking Water Standards for Per- and Polyfluoroalkyl Substances Under the Defense Environmental Restoration Program”.

Compound	Final MCLG	Final MCL (enforceable levels) ¹
PFOA	Zero	4.0 parts per trillion (ppt) (also expressed as ng/L)
PFOS	Zero	4.0 ppt
PFHxS	10 ppt	10 ppt
PFNA	10 ppt	10 ppt
HFPO-DA (commonly known as GenX Chemicals)	10 ppt	10 ppt
Mixtures containing two or more of PFHxS, PFNA, HFPO-DA, and PFBS	1 (unitless) Hazard Index	1 (unitless) Hazard Index



ENERGY, INSTALLATIONS,
AND ENVIRONMENT

ASSISTANT SECRETARY OF DEFENSE

3400 DEFENSE PENTAGON
WASHINGTON, DC 20301-3400

CLEARED
For Open Publication
DATE 04/20/24

September 3, 2024

MEMORANDUM FOR ASSISTANT SECRETARY OF THE ARMY (INSTALLATIONS, ENERGY AND ENVIRONMENT)
ASSISTANT SECRETARY OF THE NAVY (ENERGY, INSTALLATIONS AND ENVIRONMENT)
ASSISTANT SECRETARY OF THE AIR FORCE (INSTALLATIONS, ENVIRONMENT AND ENERGY)
DIRECTOR, NATIONAL GUARD BUREAU (JOINT STAFF, J3/4/7)
DIRECTOR, DEFENSE LOGISTICS AGENCY (INSTALLATION MANAGEMENT)

SUBJECT: Prioritization of Department of Defense Cleanup Actions to Implement the Federal Drinking Water Standards for Per- and Polyfluoroalkyl Substances Under the Defense Environmental Restoration Program

On April 26, 2024, the Environmental Protection Agency (EPA) published a final National Primary Drinking Water Regulation (NPDWR) establishing nationwide drinking water standards for certain per- and polyfluoroalkyl substances (PFAS) under the Safe Drinking Water Act (SDWA). This rule applies to public drinking water systems. DoD remains committed to fulfilling our PFAS-related cleanup responsibilities and will take necessary actions to incorporate SDWA levels into our cleanup program, in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the National Contingency Plan (40 C.F.R. Part 300). The CERCLA process can take time to complete, but also provides a consistent, science-based approach across the Nation for cleanup and includes federal and state environmental regulator review and public participation. This memorandum describes DoD's plans to incorporate the drinking water rule into DoD's ongoing PFAS cleanups and prioritize actions to address private drinking water wells with the highest levels of PFAS from DoD activities.

EPA's drinking water rule includes enforceable maximum contaminant levels¹ (MCL) for five PFAS: perfluorooctanoic acid (PFOA), perfluorooctane sulfonic acid (PFOS), perfluorononanoic acid (PFNA), hexafluoropropylene oxide dimer acid (HFPO-DA, commonly known as GenX), and perfluorohexane sulfonic acid (PFHxS). It also includes a Hazard Index (HI) MCL, for a mixture of at least two or more of PFHxS, PFNA, perfluorobutane sulfonic acid (PFBS), and HFPO-DA (GenX) chemicals. The rule provides five years for regulated public water systems to comply with these MCLs as specified below.

- Individual MCLs in parts per trillion (ppt):
 - PFOS = 4 ppt
 - PFOA = 4 ppt

¹ SDWA defines a "maximum contaminant level" or MCL to be "the maximum permissible level of a contaminant in water which is delivered to any user of a public water system." 42 U.S.C. § 300f(3).

DoD Policy Update on EPA PFAS MCLs

DoD hosted a community engagement session on 11/19/2024



Guidance Details: Enduring Solutions for Interim Actions

- DoD anticipates a significant number of private drinking water wells (e.g., thousands) will require interim actions to reduce PFAS levels.
 - To expedite implementation of more enduring solutions, DoD will focus on sustainable solutions when considering alternatives. DoD will consider in prioritized order:
 - Providing connections to public water systems;
 - Installing whole house treatment systems;
 - Providing point of use treatment systems; and
 - Providing bottled water.
- DoD also intends to expedite action at public water systems where authorized, prioritizing the most impacted sites for earlier action.
 - For public water systems above the MCLs impacted by PFAS from DoD activities, the DoD Components will work with those systems and regulators to address PFAS impacts.



Guidance Details: Remedial Investigations and Remedial Actions

- DoD will address drinking water wells and public water systems with concentrations below three times the MCLs as part of the remedial action process.
- DoD will address drinking water down to the MCLs or background, as appropriate, once background levels have been established during the remedial investigation and in accordance with CERCLA.
 - If the outcome of the CERCLA background assessment conducted during the remedial investigation is that background levels of PFAS are below the MCLs, then DoD will take remedial actions to address PFAS that will meet the MCLs as the final cleanup levels*.
 - If background levels of PFAS are found above an MCL at a site, DoD will work collaboratively with regulators and transparently with the public to determine the appropriate remedial goals (i.e., final cleanup levels) at that site.

* Where MCLs have been identified as relevant and appropriate under the circumstances of the release

PFAS Average – 12 Month Rolling New Hampshire Regulated Compounds - All Sources In Compliance (Oct 2023 - Sept 2024)

		EPA MCL (2024)	NH MCL	RA Wt**	MADBURY WTP FINISHED	MADBURY WELL 2	MADBURY WELL 3	MADBURY WELL 4	MADBURY WELL 5	PORTSMOUTH WELL	COLLINS WELL	GREENLAND WELL
12-MONTH ROLLING AVERAGE 2024 Q3												
Perfluorohexanesulfonic acid(PFHxS)	ng/L	10	18	0.0	0.0	0.0	0.0	0.0	0.0	5.6	1.9	0.0
Perfluorooctanesulfonic acid (PFOS)	ng/L	4	15	0.0	0.0	0.0	0.0	0.0	0.0	5.0	4.2	2.9
Perfluorooctanoic acid (PFOA)	ng/L	4	12	2.6	2.6	2.7	2.9	1.1	3.0	7.5	3.4	4.6
Perfluorononanoic acid (PFNA)	ng/L	10	11	0.0	0.0	0.0	0.0	0.0	0.0	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	0.7	1.0	2.4	0.6
Perfluorobutanesulfonic acid (PFBS)	ng/L			0.0	0.0	0.0	0.0	0.0	3.2	4.9	9.1	2.3
Hazard Index*		1		0.0	0.0	0.0	0.0	0.0	0.1	0.7	0.4	0.1

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

Legislative Update – Rep. David Meuse

Public Comment