SWAG Meeting

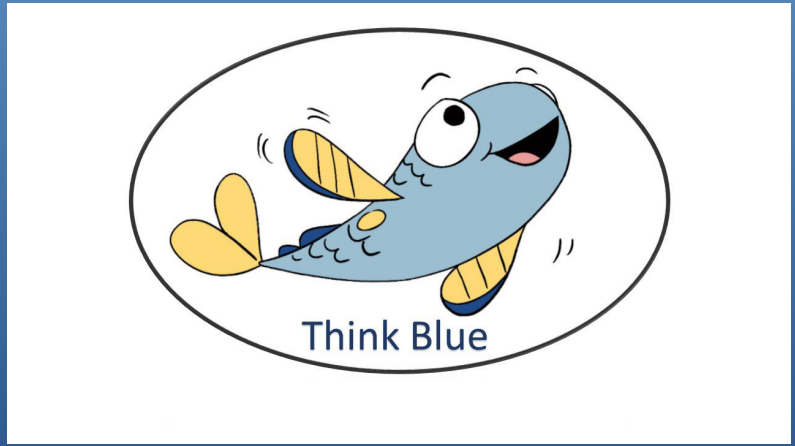
June 27, 2024 | 6:30-8:30pm

Hybrid Meeting: Portsmouth City Hall School Dept. Conference Room and via Zoom

Agenda

1. Introduction & Approval of minutes
2. Water Supply & Master Plan Update
3. EPA PFAS MCL Update
4. Pease Water System Contamination 10 year recap
5. National PFAS Conference update
6. Service Line Inventory for Lead Regulations update
7. Katrie Hillman's new role
8. Mission update
9. Future field trip
10. Q&A
11. Public comment

Portsmouth and Pease Water Update



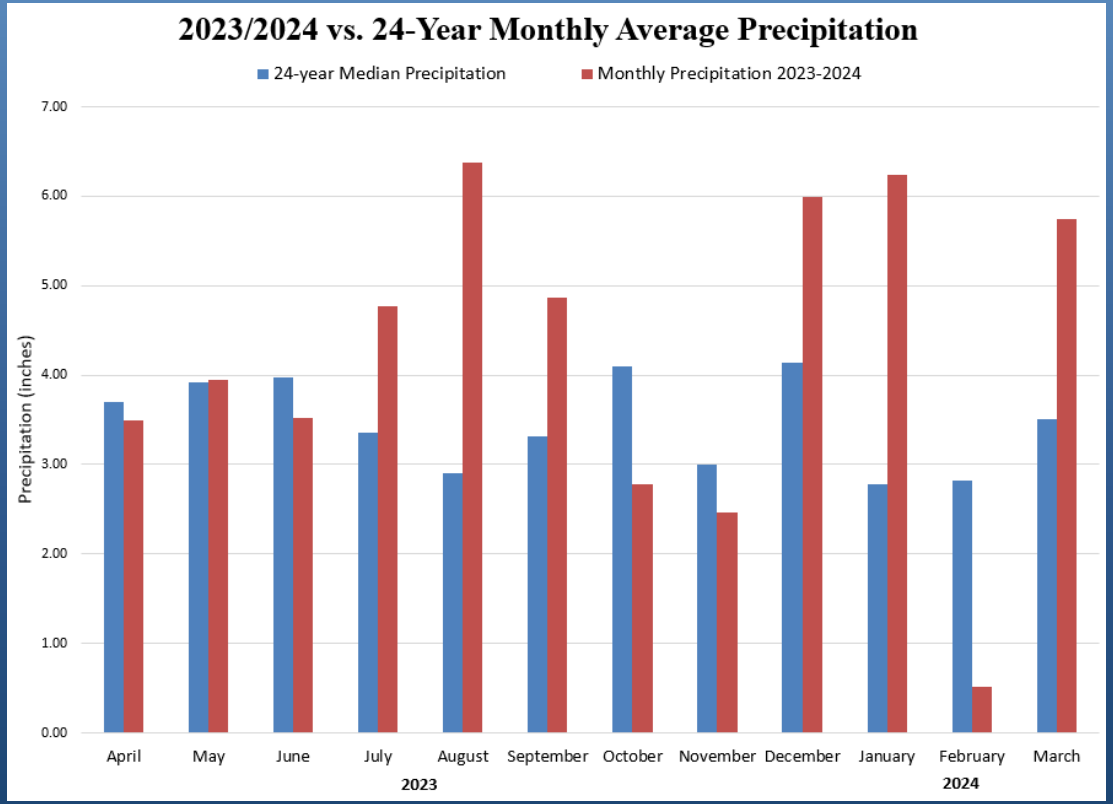
Safe Water Advisory Group
June 27, 2024

Water Supply Update – 1st Quarter

City of
Portsmouth
Department of Public Works

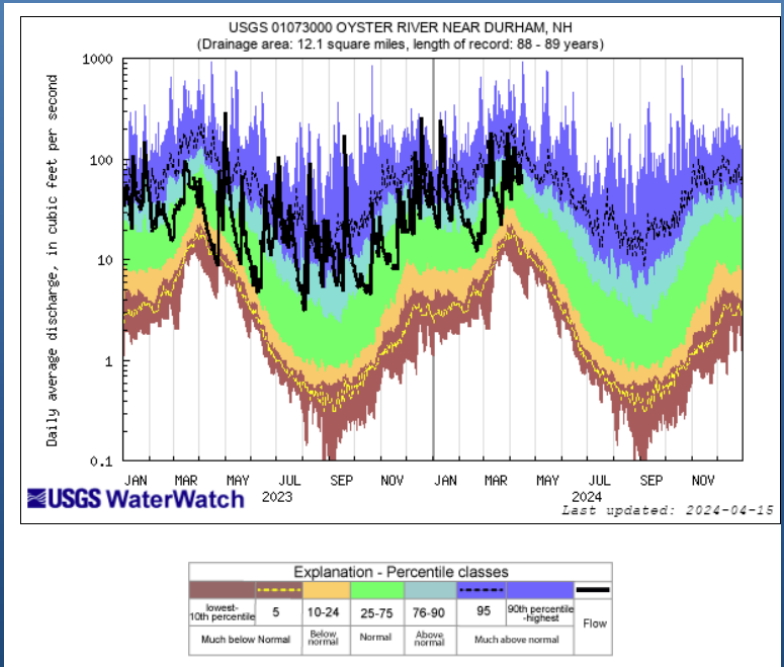
Portsmouth and Pease International Tradeport
Drinking Water Status Report
2024 – First Quarter

Precipitation – Slightly Above Normal

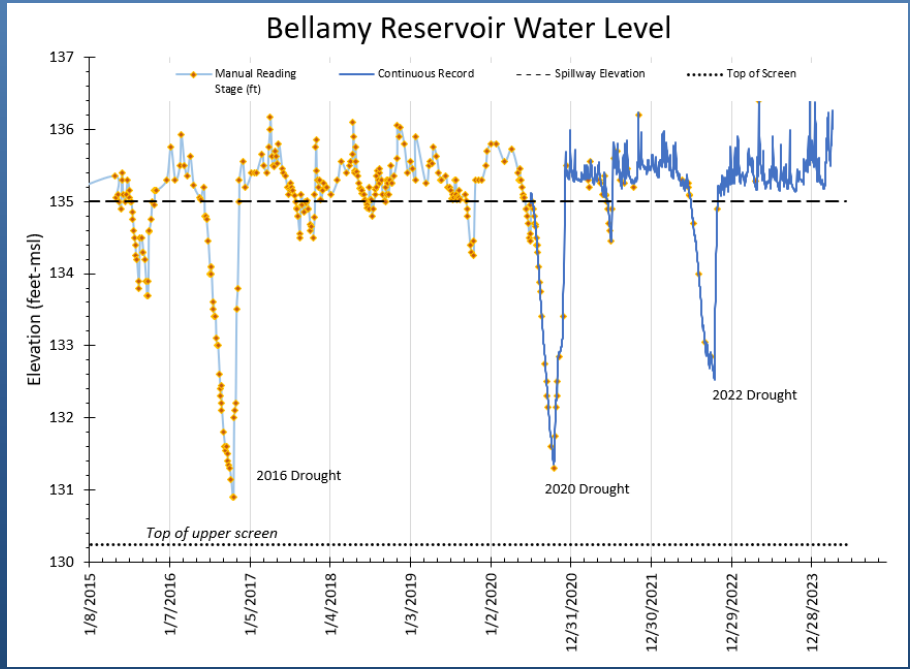


Surface Water Conditions

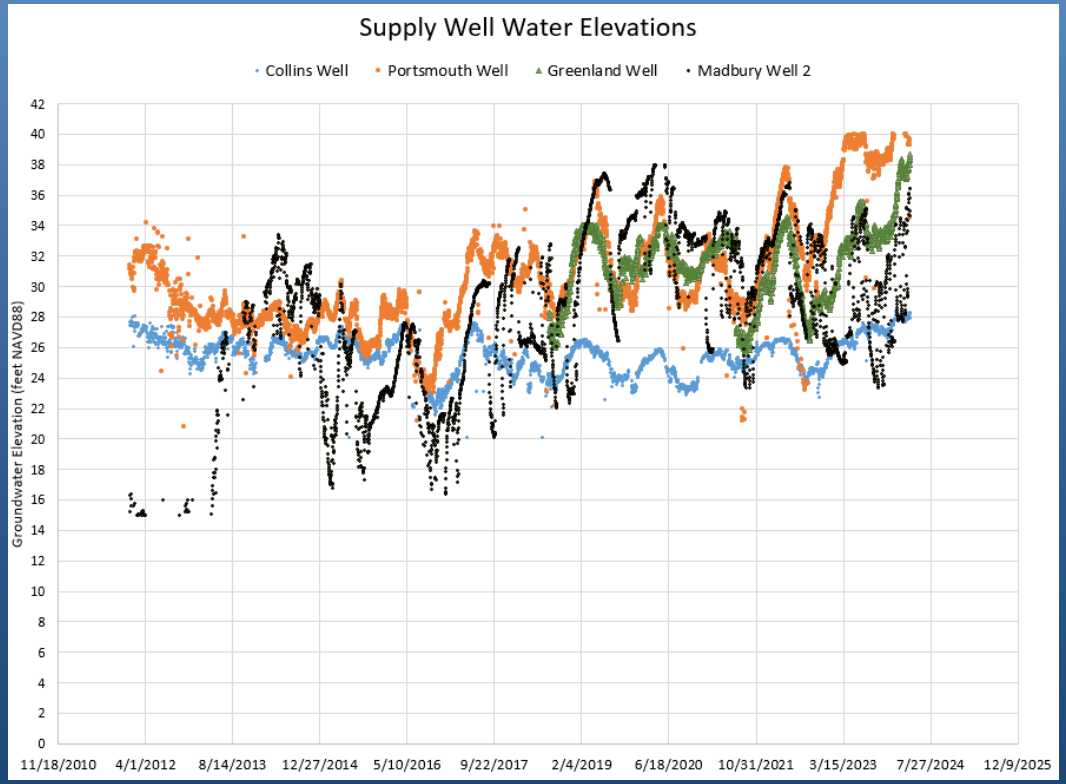
River Flows



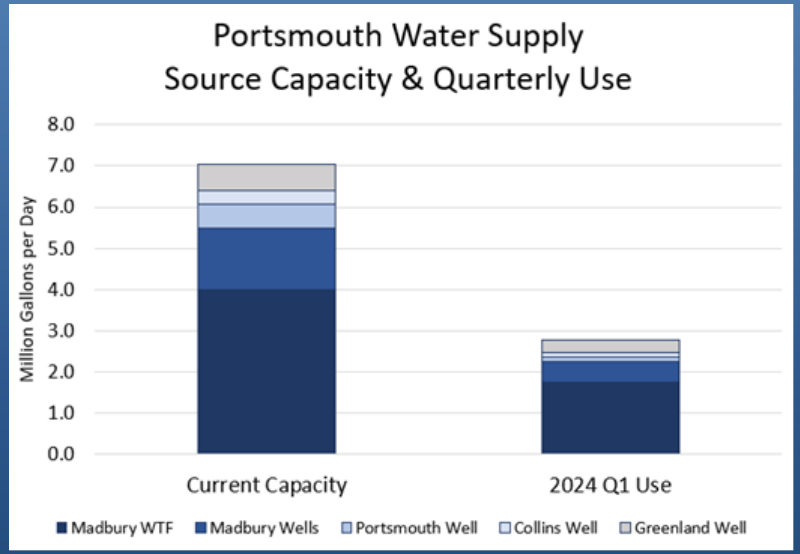
Reservoir Level

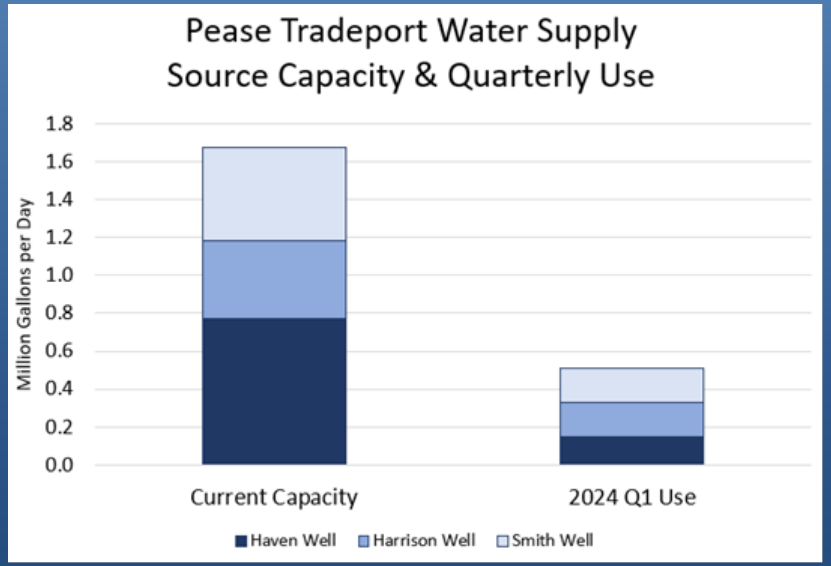


Groundwater Levels

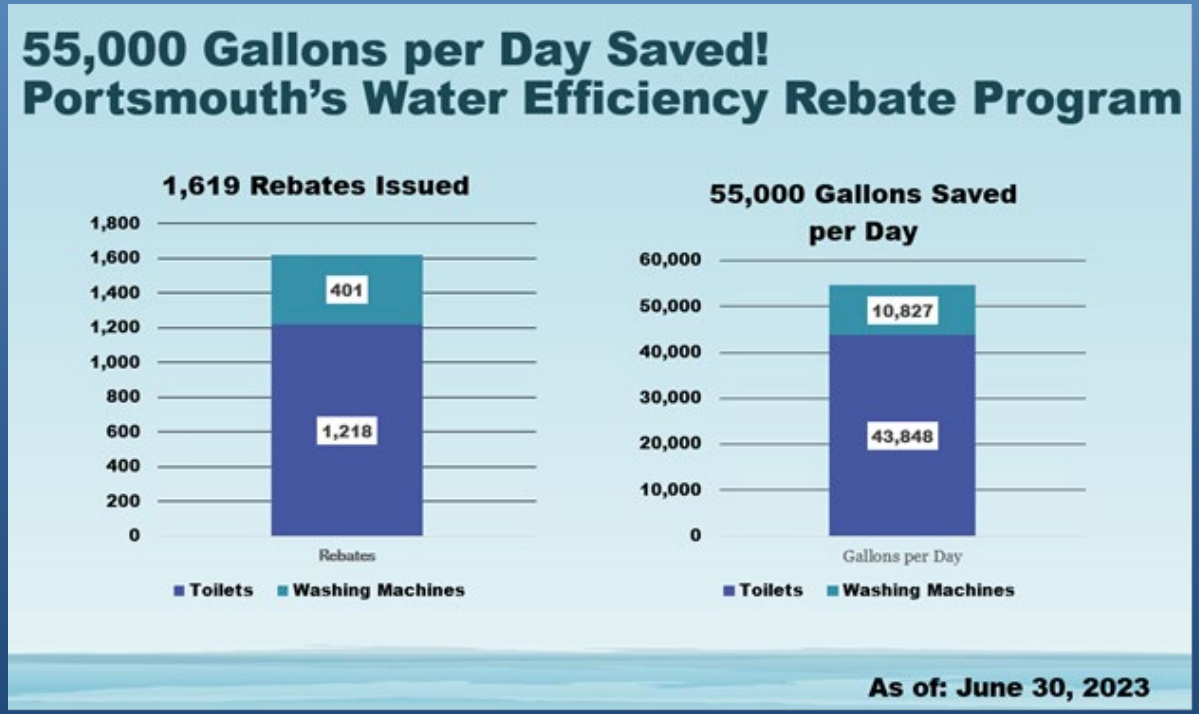


Supply Versus Demand and Source Utilization





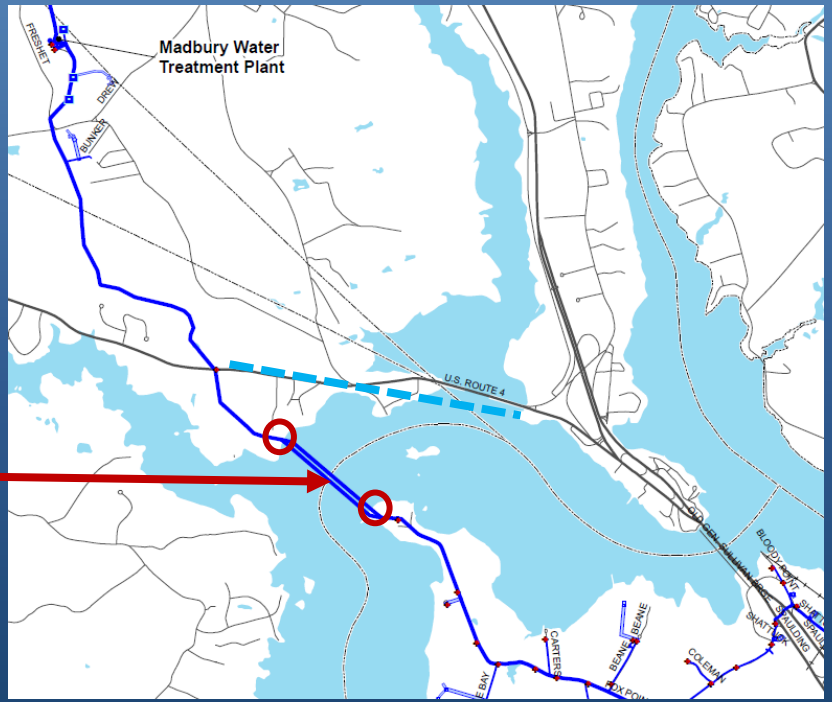
Water Efficiency Rebates and Savings



Little Bay Water Transmission Main Project

- Due to high bid on new waterline under the bay ($26M), project has been split into three phases:

1. Install new valves on either side of the bay for the two existing pipes. Install the connection for the third pipe. Currently out to bid for late winter/early spring construction.
2. Bid the full new line project in the spring. Move forward with project if we receive a favorable bid.
3. Investigate possibility of creating an interconnection with Dover's water system down Route 4 to the traffic circle.

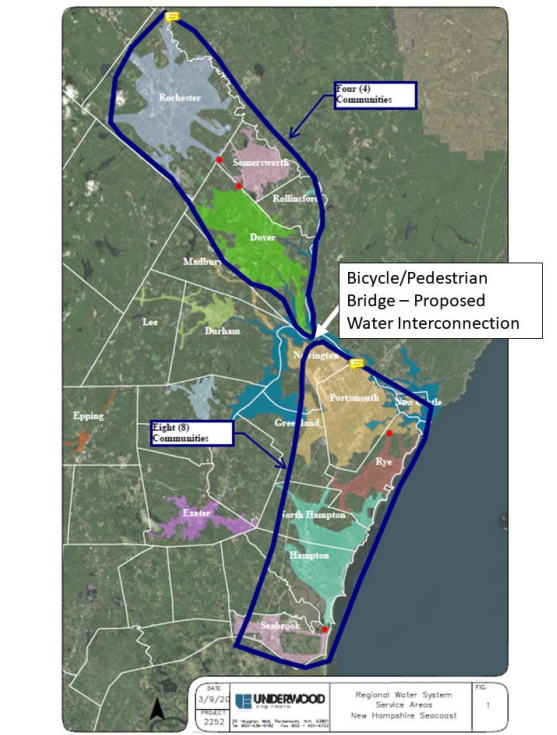


All New Valves Have Been Installed!

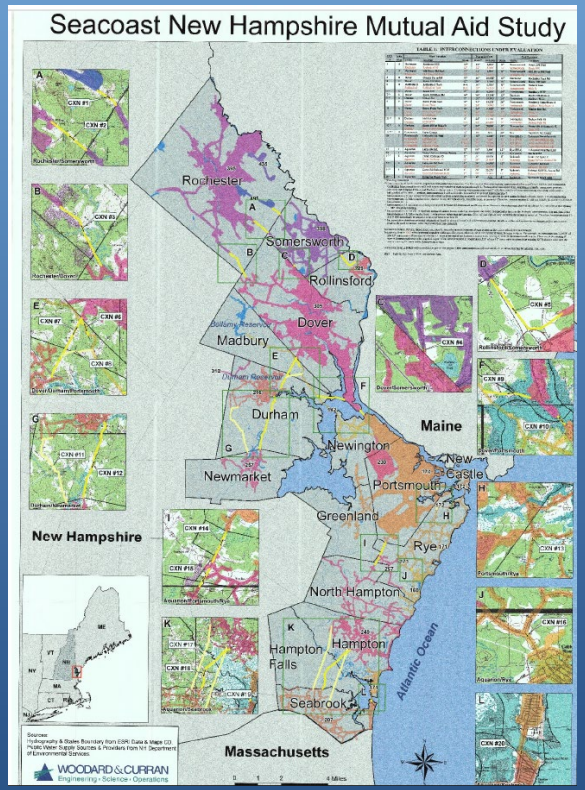
Little Bay Waterline Resiliency Project - Lessons Learned

- The two existing 20-inch lines that run under the bay are in better condition than we expected.
- We tested how much of a loss of flow we get when one line is shut off. One line is still capable of transmitting flow from Madbury to Newington. This is good because we now know that with working valves on both sides of the bay, we can isolate one of the waterlines for repair if a leak were to occur.
- By tapping and installing the start of the third line down to the bay on the Durham side we will reduce further need to access and excavate that area if we proceed with the installation of that line at a later date.
- Our plan for now is to continue to work with our engineers on revising the plans and permit submissions for future bidding of the third waterline.

Portsmouth – Dover Emergency Interconnection



- DOT currently re-bid the bridge replacement project in early 2024. One bidder, again, too high to award.
- Pipe interconnection with Dover was included in the project
  - $3.5 million in congressionally directed funding will go toward the new water line



Seacoast NH Emergency Interconnection Study - 2024 Update

The State of New Hampshire
Department of Environmental Services

Robert R. Scott, Commissioner

STATE OF NEW HAMPSHIRE
DEPARTMENT OF ENVIRONMENTAL SERVICES
Seacoast NH Emergency Interconnection Study Update
RFQL DES 2024-02

- Study is Ongoing
- Anticipate December 2024 completion

Master Planning – 2023/2024 - Currently Under Way with Haley Ward Engineers

- Tank Inspections and Cleaning
- Hydraulic Assessment of Southern Portion of System and Greenland Area Pressure
- Update the Hydraulic Model of the Entire Water System
- Update of the 2013 Master Plan underway

AQUEOUS

INFRASTRUCTURE MANAGEMENT

Phone: 877.821.6138 | office@aqueousco.com

Report Da

Account Overview

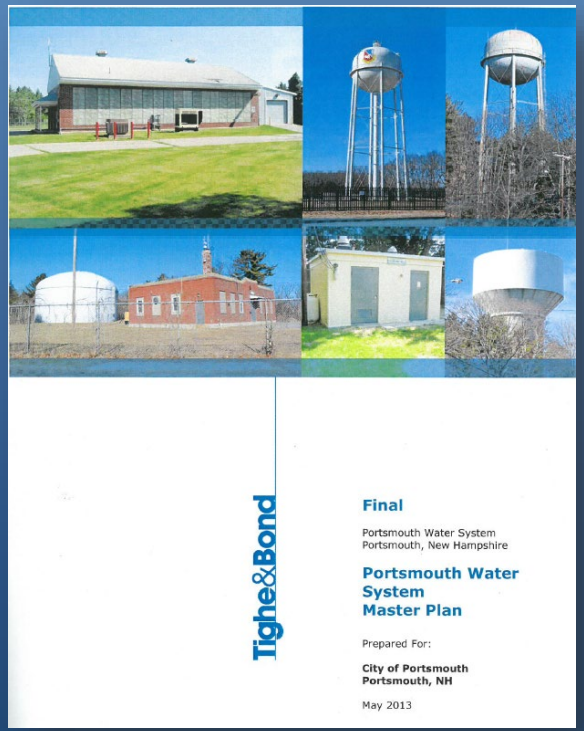
Portsmouth NH Water System
Lafayette 7.5 MG Tank
Finished Water
96'H x 114'D
7500000
95 Constitution Ave, Portsmouth, NH 03801, USA
43.035506
-70.787505
Clean (Sediment Removal)|Inspection

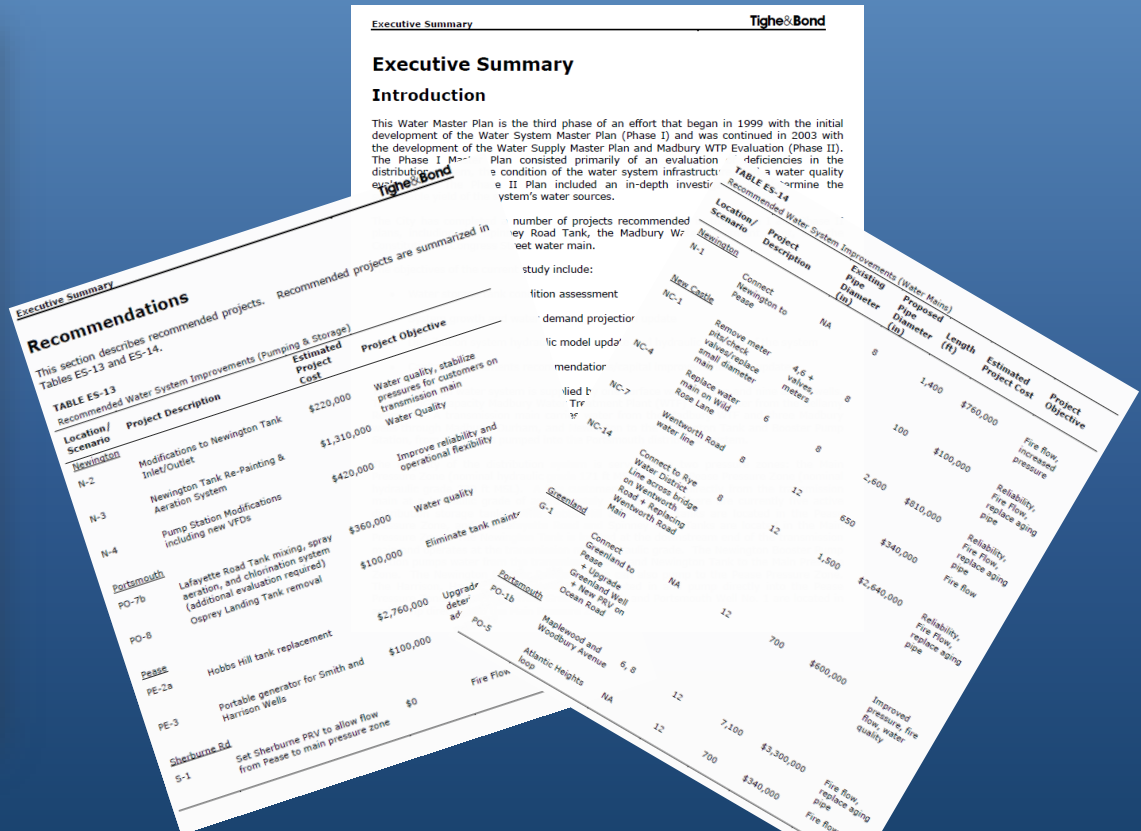
e:

Report Review & Approval

David Cornish, President

2013 Water System Master Plan Recommendations 2024 Status





23 Recommendations

- June 2024 Status
  - ☑ 14 Completed
  - ☑ 5 In- Progress
  - ☑ 1 Not Pursued
  - ☐ 3 Future

	Newington						
1)	N-2 ☑	Modifications to Newington Tank Inlet/Outlet				$220,000	Water quality, stabilize pressures for customers on transmission main
2)	N-3 ☑	Newington Tank Re-Painting & Aeration System				$1,310,000	Water Quality
3)	N-4 ☑	Pump Station Modifications including new VFDs				$420,000	Improve reliability and operational flexibility
	Portsmouth						
4)	PO ☑	Lafayette Road Tank mixing, spray aeration, and chlorination system (additional evaluation required)				$360,000	Water quality
5)	PO- ☑	Osprey Landing Tank removal				$100,000	Eliminate tank maintenance
	Pease						
6)	PE-2a ☑	Hobbs Hill tank replacement				$2,760,000	Upgrade aged and deteriorated tank, provide adequate storage volume
7)	PE-3 ☑	Portable generator for Smith and Harrison Wells				$100,000	Reliability
	Sherburne Rd						
8)	S-1 ☑	Set Sherburne PRV to allow flow from Pease to main pressure zone				$0	Fire Flow
	Newington						
9)	N-1 ☑	Connect Newington to Pease	NA	8	1,400	$760,000	Fire flow, increased pressure
	New Castle						
10)	NC-1 ☑	Remove meter pits/check valves/replace small diameter main	4,6 + valves, meters	8	100	$100,000	Reliability, Fire Flow, replace aging pipe
11)	NC-4 ☑	Replace water main on Wild Rose Lane	6	8	2,600	$810,000	Reliability, Fire Flow, replace aging pipe
12)	NC-7	Wentworth Road water line	8	12	650	$340,000	Fire flow
13)	NC-14	Connect to Rye Water District Line across bridge on Wentworth Road + Replacing Wentworth Road Main	8	12	1,500	$2,640,000	Reliability, Fire Flow, replace aging pipe

	Greenland						
14)	G-1 ☑	Connect Greenland to Pease + Upgrade Greenland Well + New PRV on Ocean Road	NA	12	700	$600,000	Improved pressure, fire flow, water quality
	Portsmouth						
15)	PO-1b ☑	Maplewood and Woodbury Avenue	6, 8	12	7,100	$3,300,000	Fire flow, replace aging pipe
16)	PO-5	Atlantic Heights loop	NA	12	700	$340,000	Fire flow

☑ 17) Portsmouth to acquire all of New Castle water distribution system?

☑ 18) Madbury Wellfield improvements and replacement program? New Well 4R. New screen for Well 2?

☑ 19) Portsmouth & Rye Interconnect with 4,000 ft of new 16-in diameter main?

☑ 20) Reduce surface water production and increase groundwater use to lower TTHM and HAA5 formation? (Disinfection By-Products)

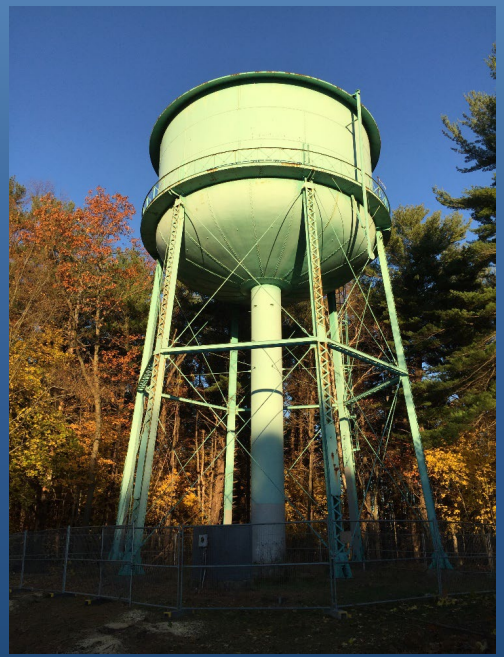
☑ 21) Develop new bedrock supply wells as recommended by Emery & Garrett?

☑ 22) Implement Integrated System Supply and Management Plan?

☑ 23) North Mill Pond Area water main upgrades to increase fire flows

Pease – Hobbs Hill Tank Replacement Completed in 2016

Osprey Landing Tank Removal Completed in 2019



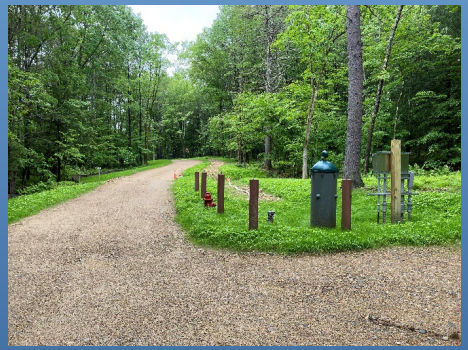
Newington Booster Station Construction
New Booster Pumps and Aeration
Completed in 2020

Water System Improvements (Water Mains)
Wild Rose Lane Waterline Replacement
Completed in 2022

Madbury Well Upgrades

Madbury Well 4R (Replacement)
2015 Drilling

Madbury Well 5
Installation and Permitting
2018
720,000 Gallons-per-Day



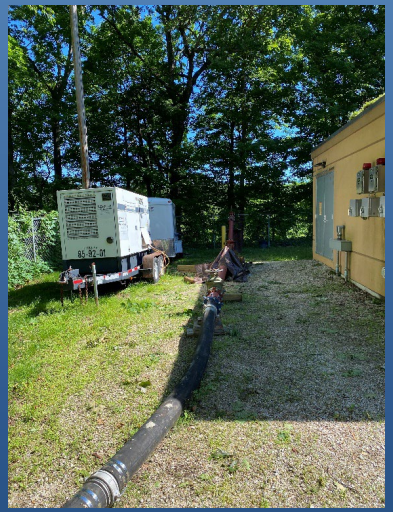
New Well 5

New Pumphouse for Well 4R and 5

Other Major Projects Since 2013

Other Well Upgrades

Greenland Well Replacement
and New Pumphouse
2018
648,000 Gallons-per-Day



Greenland Backup Well
2024

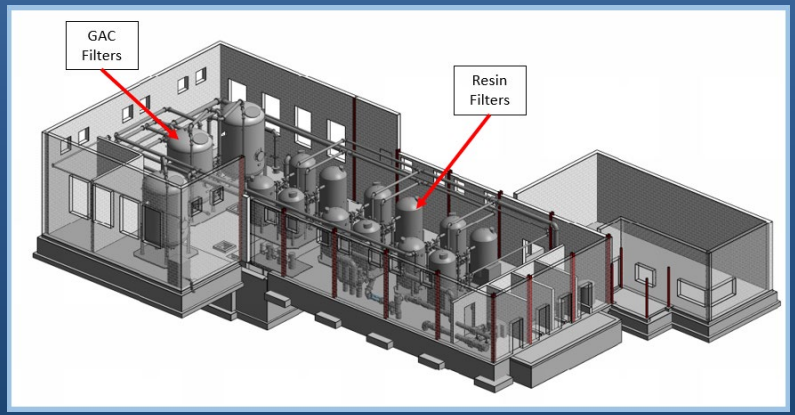
Collins Well 2
Drilled in 2021 (ongoing)

Pease – PFAS Treatment

September 2016 – Granular Activated Carbon Treatment Installed

April 2021 – Construction Completed

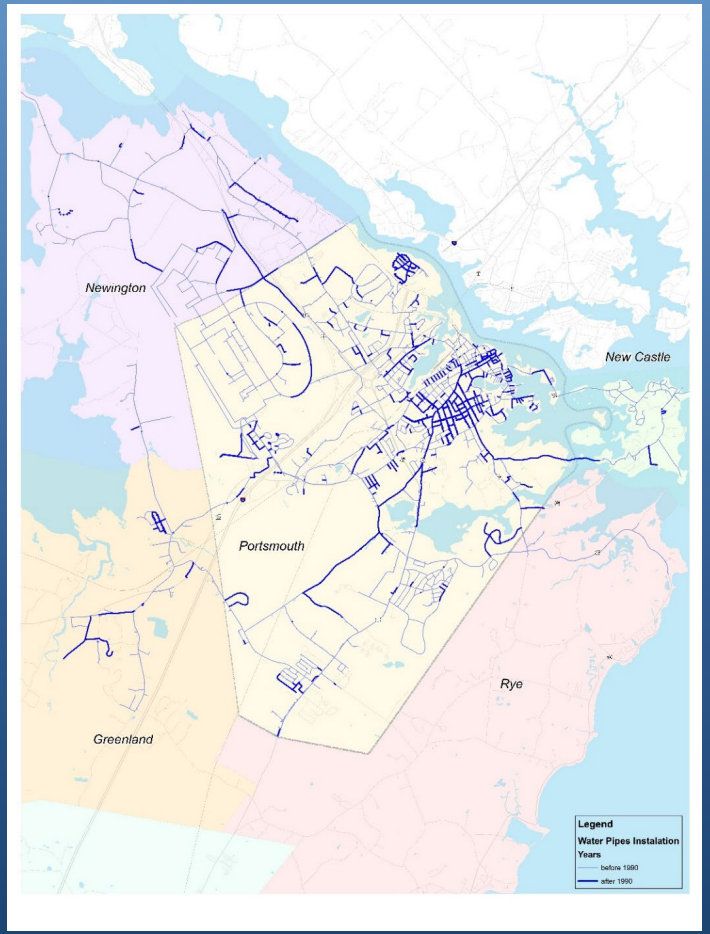
April 2019 – Construction of New Treatment Begins



Madbury Water Treatment Backwash Tank and Pump Project Completed in 2021

Water Main Replacements:

2011-2020 – 23.6 miles



Other Studies Since 2013

- Madbury Wellfield Assessment
  - Madbury Well 4 Replacement
  - Madbury Well 5 Permitting and Construction
  - Madbury Well 2 and 3 Upgrades
- Greenland Well Upgrades
  - Pump Testing
  - Well and Building Replacement
- Groundwater Study
- Pease PFAS Treatment
  - Treatment Assessment
  - Treatment Piloting
  - Design and Construction
  - Ongoing Piloting
- New Castle Water System Study
- Collins Well
  - Pump Testing
  - Collins Well #2 installation and permitting
- Greenland Breakfast Hill area water study
- 2023 – Lafayette Road and Southern area of System Water Study (will commence this summer)

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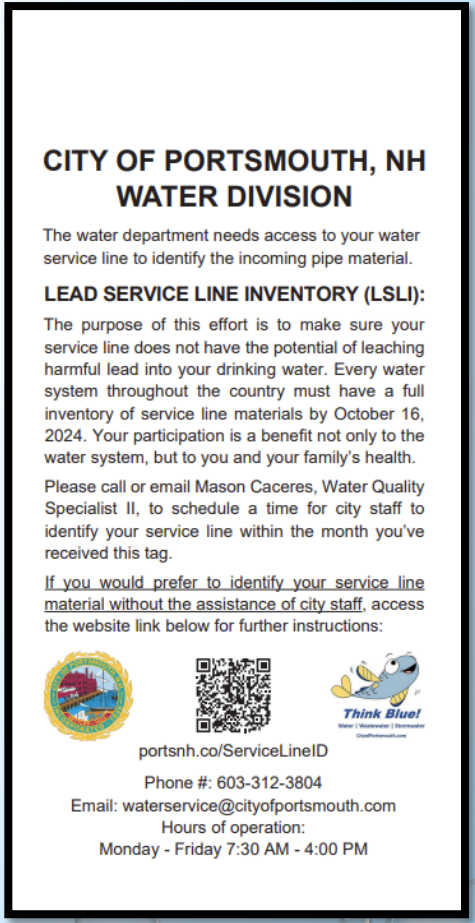
PORTSMOUTH WATER SYSTEM'S FREE LEAD TESTING & SERVICE LINE INVENTORY UPDATES

BY MASON CACERES

ASSISTANT WATER RESOURCES MANAGER

TALKING POINTS

- FREE LEAD TESTING OPPORTUNITY UPDATES
  - RESULTS
    - DETECTED VS. NON-DETECTED CONCENTRATIONS
    - AT-HOME SAMPLE LOCATIONS
    - OUTREACH ANALYSIS
- LEAD AND COPPER RULE REVISION - SERVICE LINE INVENTORY UPDATES
  - GENERAL TIMELINE OF PROGRESS
  - PROGRESS REPORTS BY ZONE & AS A WHOLE
  - KEY TAKEAWAYS & NEXT STEPS FOR LCRR/LCRI



CITY OF PORTSMOUTH, NH
WATER DIVISION

The water department needs access to your water service line to identify the incoming pipe material.

LEAD SERVICE LINE INVENTORY (LSLI):

The purpose of this effort is to make sure your service line does not have the potential of leaching harmful lead into your drinking water. Every water system throughout the country must have a full inventory of service line materials by October 16, 2024. Your participation is a benefit not only to the water system, but to you and your family's health.

Please call or email Mason Caceres, Water Quality Specialist II, to schedule a time for city staff to identify your service line within the month you've received this tag.

If you would prefer to identify your service line material without the assistance of city staff, access the website link below for further instructions:

Think Blue!

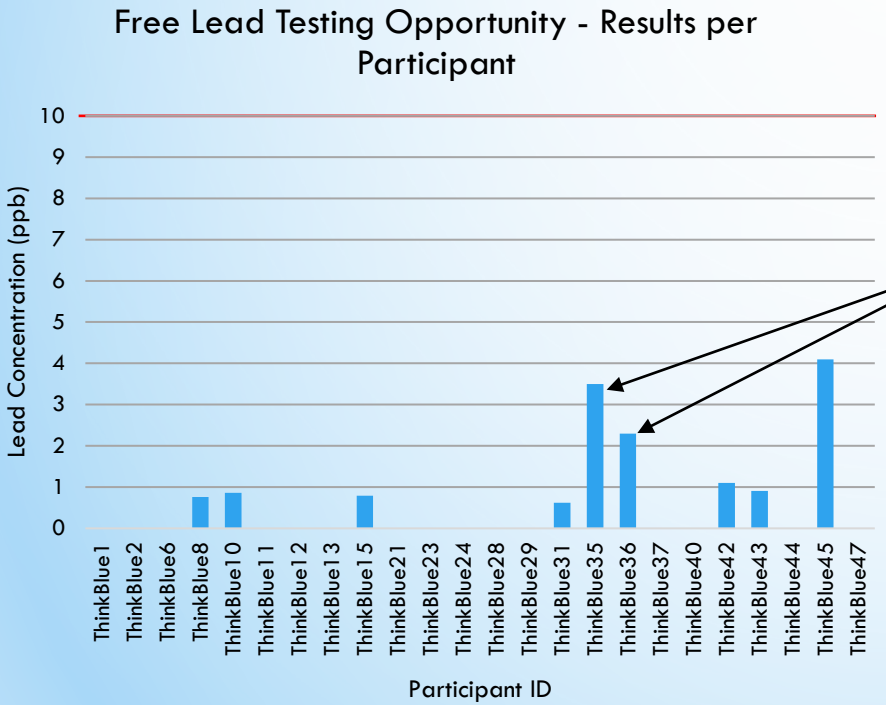
portsnh.co/ServiceLineID

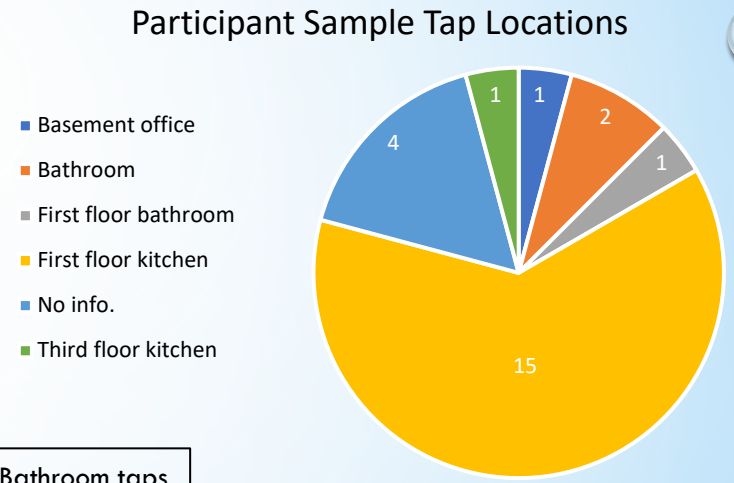
Phone #: 603-312-3804
Email: waterservice@cityofportsmouth.com
Hours of operation:
Monday - Friday 7:30 AM - 4:00 PM

FREE LEAD TESTING OPPORTUNITY

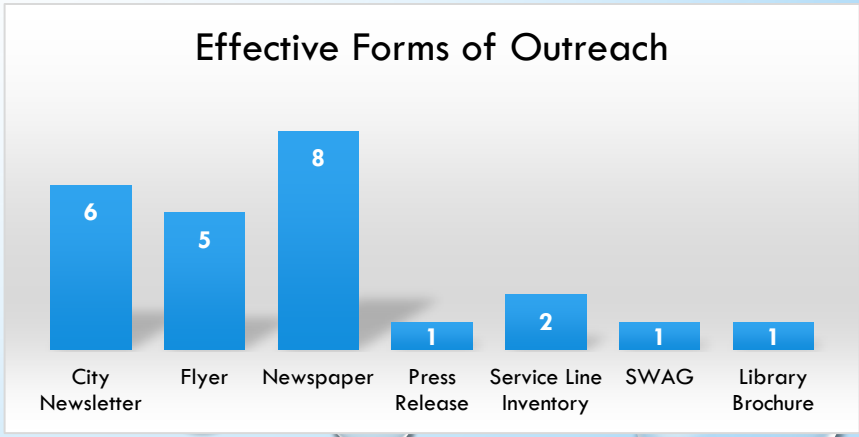
- Press release published October 5, 2023.
- Other forms of outreach:
  - Portsmouth Herald
  - City Newsletters
  - Post cards distributed during Lead Poisoning Prevention Week
    - Extras left at public facilities
  - Residents notified through service line inventory process
- 49 responses to outreach - participants provided email with “ThinkBlue” retrieval code.
- 24 have submitted their samples and received results.
- Leaves half of sample pool that have not followed through with collection process.
  - Reminder emails sent – 6 responses stating they would still like to participate.

RESULTS SINCE ROLLOUT (OCTOBER 2023)





Bathroom taps



LEAD SERVICE LINE INVENTORY – TIMELINE UPDATE

Launch Customer-Side Inspection Efforts

- February 5, 2024 – Portsmouth Water Division staff start door-to-door and scheduled service line material identifications with 1,718 unknown materials.

Start Potholing Efforts

- May 22, 2024 – Portsmouth Water Distribution Crew staff begin potholing efforts to identify unknown city-side service lines.

Success with Identification Zones 1-3

- May 31, 2024 – Exhausted outreach and scheduled identification efforts for customer-side inspections within target zones 1-3. Total of 813 services visually inspected.

Continued Identification Efforts with Zones 4 & 5

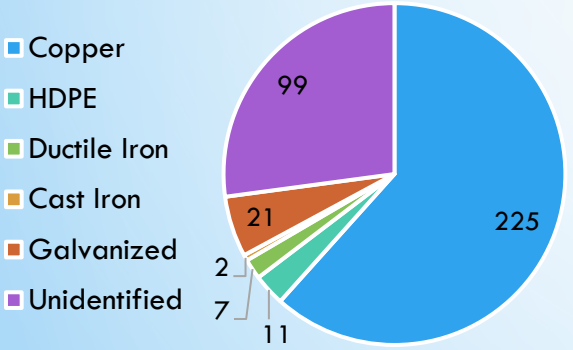
- June 18, 2024 – Outreach letters sent to property owners located within zone 4 (final zone in Portsmouth), and those within zone 5 (surrounding towns served by Portsmouth Water).

Inventory Status

- Today – 905 customer-side service lines left to identify. 91% of those identified (from start of efforts) are copper. More work to do on city-side via potholing.

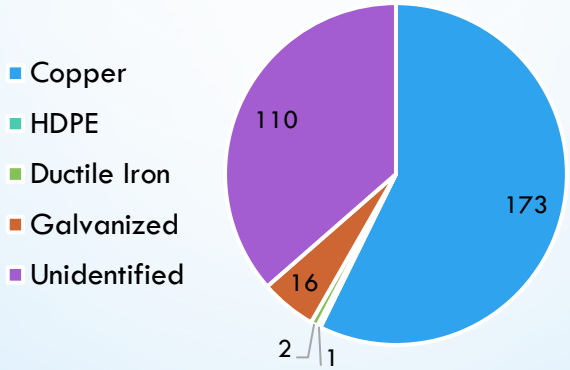
INVENTORY UPDATES BY ZONE

Zone 1 Customer-Owned Service Line Materials

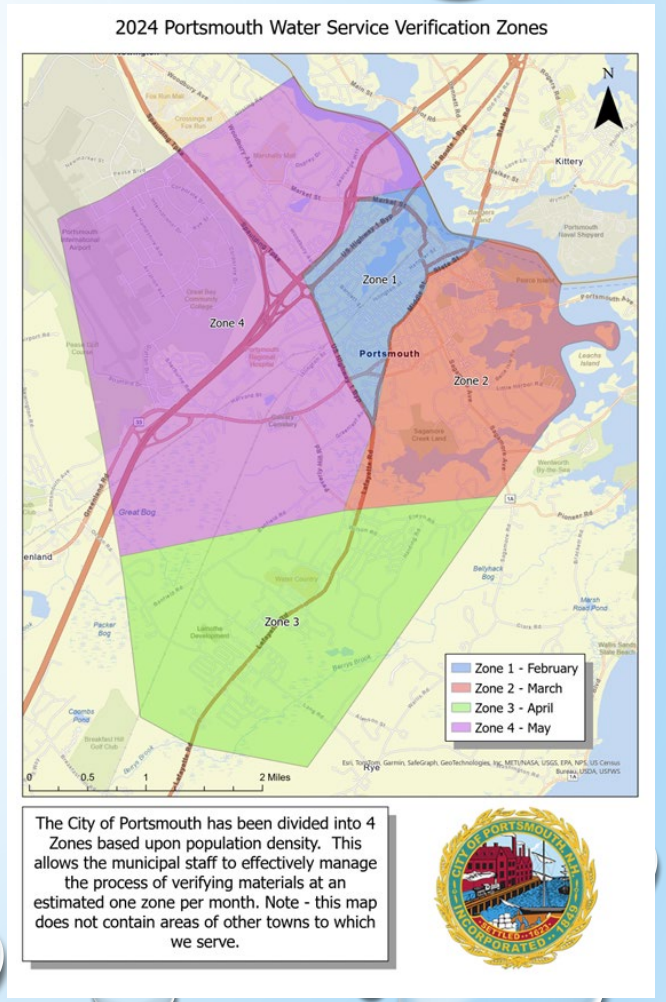


Total service connections within Zone 1 = 365

Zone 2 Customer-Owned Service Line Materials

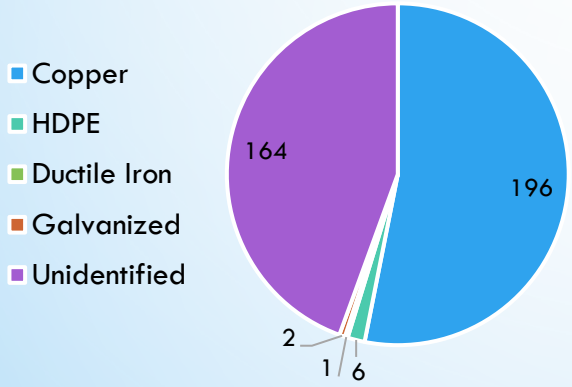


Total service connections within Zone 2 = 305



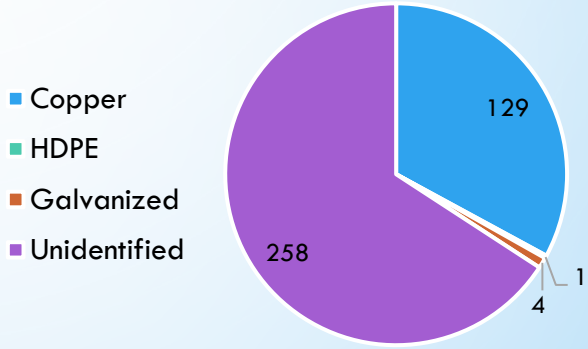
INVENTORY UPDATES BY ZONE - CONTINUED

Zone 3 Customer-Owned Service Line Materials



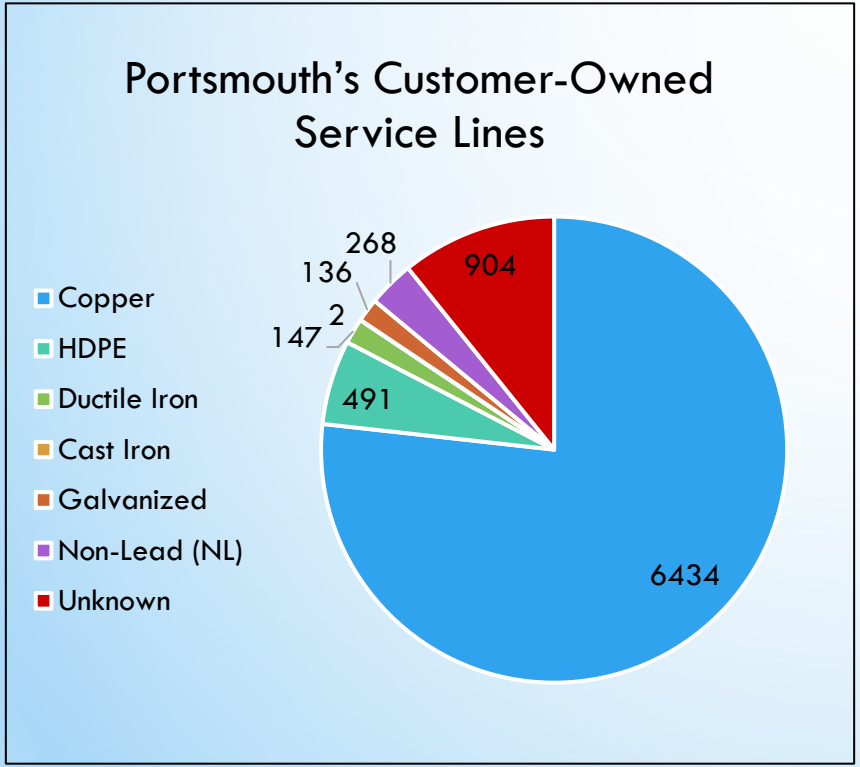
Total service connections within Zone 3 = 372

Zone 4 Customer-Owned Service Line Materials (ongoing)



Total service connections within Zone 4 = 392

SERVICE LINE INVENTORY STATUS REPORT - TOTAL

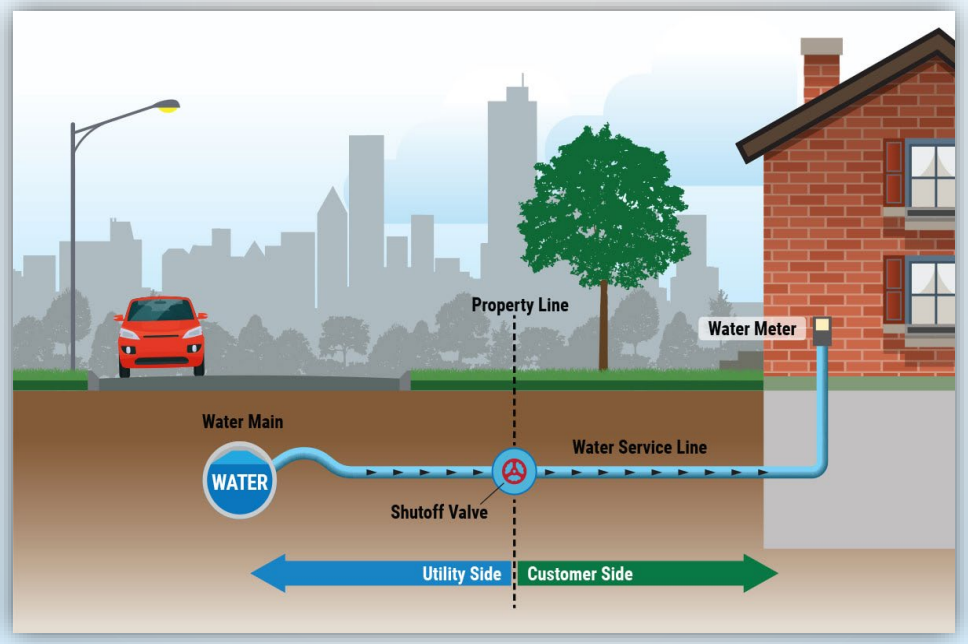


- Total service connections throughout Portsmouth's distribution system: 8,382
- Pipe materials identified on customer side: 7,470
  - 904 remaining
- **No sign of lead service lines (on either side)!**
- 136 galvanized services found so far
  - Will require notification to property owners within 30 days of Oct. 16 and eventual replacement under LCRI.

KEY TAKEAWAYS & NEXT STEPS

- Inventory of service line materials will be submitted by October 16, 2024.
  - Zone 4 & 5 customer-side identifications currently underway.
  - City-side potholing continues in targeted developments.
- Must replace 100% of LSLs and GRRs within 10 years.
- Must verify 100% of unknown service line materials within 10 years.
- Lowering of lead action limit from 15 ppb to 10 ppb.
- Additional outreach and required pitcher-filter distribution for systems with more than 3 action level exceedances in a 5-year period.
- Lead and Copper Rule compliance sampling starts next week (Quarter 3 – all systems)

QUESTIONS?



https://portsnh.co/servicelineinventory

Mason Caceres – Water Quality Specialist II
email: mecaceres@cityofportsmouth.com
phone: 603-312-3804

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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

Do we want to consider recommending to the Mayor that the SWAG revise their mission statement 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. 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.

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