

**Safe Water Advisory Group (SWAG) A City Council Advisory Committee Meeting Minutes
Tuesday, August 30, 2022 from 6:30 – 8:30 pm. City Hall Conference Room A and via Zoom**

Attending in person: Brian Goetz, co-chairs; Councilors Rich Blalock and Vince Lombardi, Asst. Fire Chief Bill McQuillen, Andrea Amico, co-chair. Via Zoom: Sen. Rebecca Perkins Kwoka, Hope Van Epps, Laurel Schadler.
Staff: Al Pratt, Stephanie Seacord (recording secretary)
Guest: Jonathan Patali, PhD Toxicologist NHDES

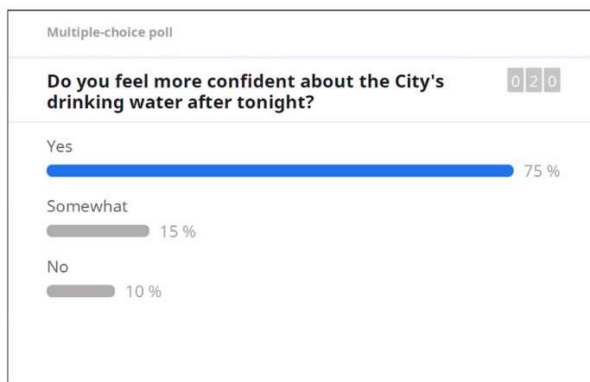
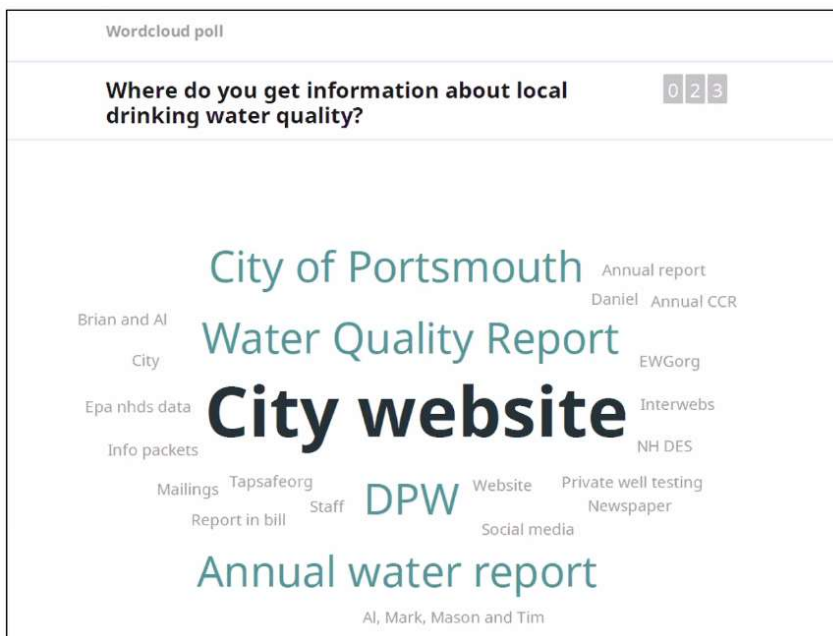
Co-chair Andrea Amico welcomed SWAG members and guests to the third meeting of 2022.

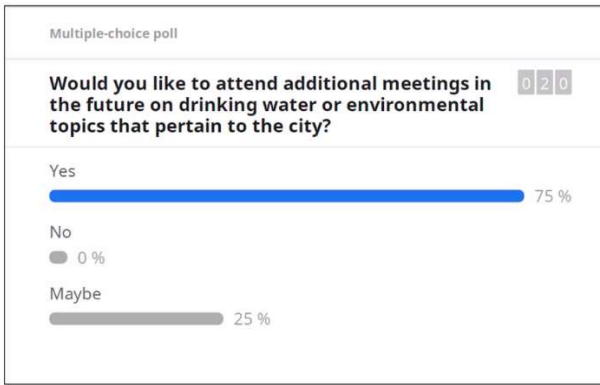
Full SWAG meeting presentation:

https://www.cityofportsmouth.com/sites/default/files/2022-08/SWAG%20Mtg%20Slides%208_30_22.pdf

Minutes: Vince Lombardi moved and Rich Blalock seconded to approve the April 4, 2022 meeting minutes. Approved unanimously.

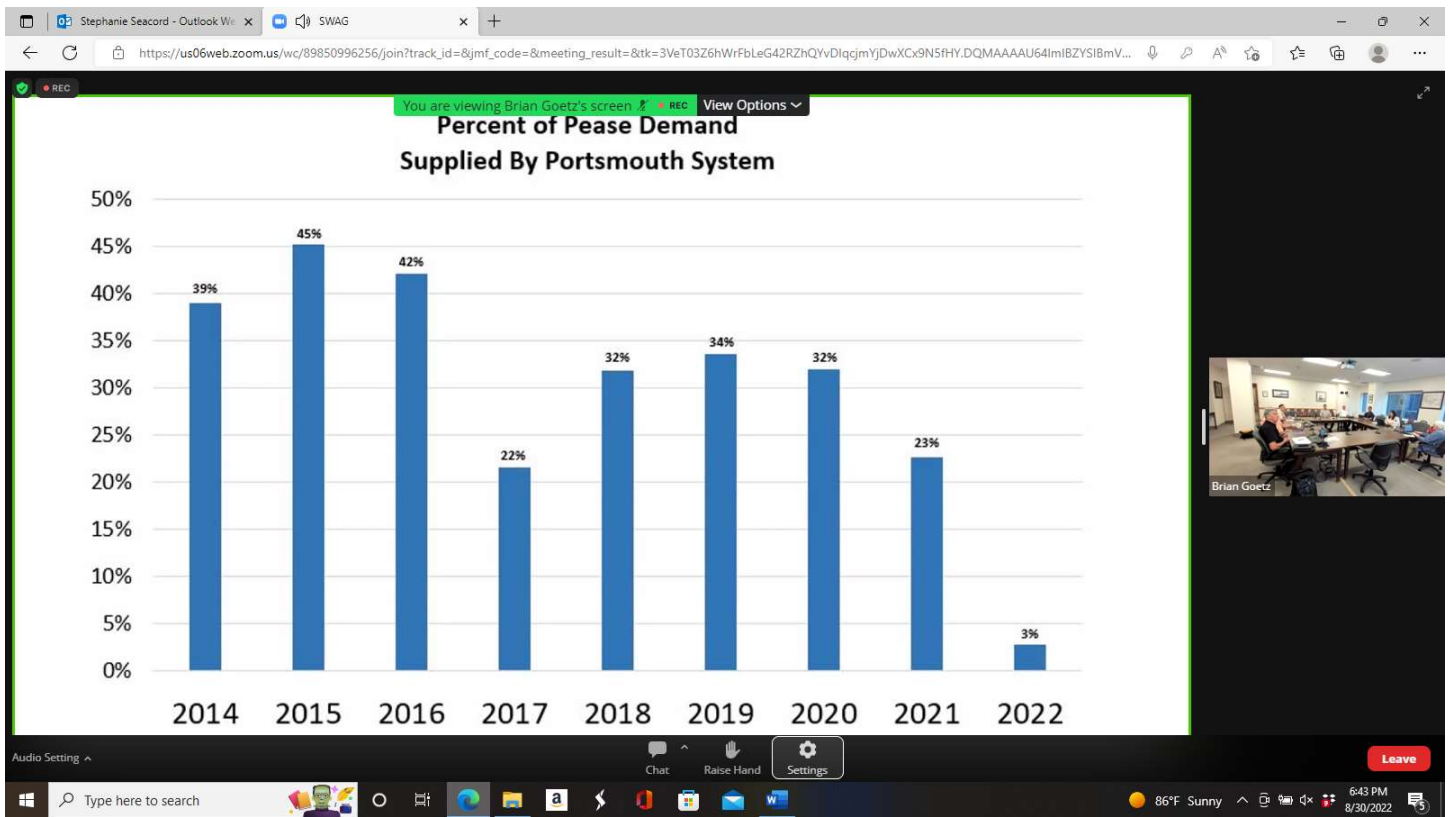
Co-chair, DPW Deputy Director Brian Goetz provided an assessment of the results of the May 3 Community Drinking Water Forum, held during National Drinking Water Week.





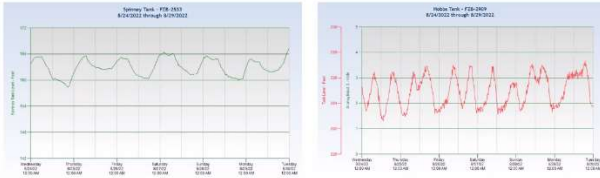
Brian Goetz and Al Pratt provided a Water Supply Update

Noted that although the US Drought Monitoring Survey reports that Seacoast NH is in “Severe Drought” with precipitation below average, the efforts taken by the City of Portsmouth Water Division (e.g. the Portsmouth Water System no longer has to support the Pease demand with new Madbury well, Haven well online) are proving effective in balancing supply and demand. Voluntary water restrictions are in place.

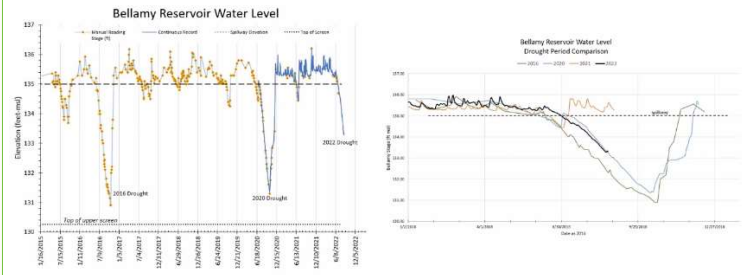


Water tanks cyclically empty during the day and fill and night.

Water Supply and Demands – Tank Levels:
Portsmouth and Pease



Reservoir Levels



Co-chair Andres Amico provided an update on results from PFAS tap sampling projects

Update on results from PFAS tap sampling projects: NRDC Project

- Andrea Amico and a community advocate from Merrimack NH wrote a letter to the US EPA and NH DES requesting additional tap sample analysis in both communities to confirm these results.
- The tap samples were collected on March 1, 2022 and the results are below:

PFPrA Water Sample Results		2022				USEPA ORD		2021			
Sample ID	Sample Description	Eurofins		MDL (ng/L)		Conc. (ng/L)	LOQ (ng/L)**	Eurofins		MDL (ng/L)	
		Conc. (ng/L)	Qualifier*	MDL (ng/L)	RL (ng/L)			Conc. (ng/L)	Qualifier*	MDL (ng/L)	RL (ng/L)
1951010_501	Bellamy Reservoir - treated	2.1	J	1.7	4.3	ND	1 - 10				
1951010_501	Bellamy Reservoir - treated - DUPLICATE	2.4	J	1.7	4.2	ND	1 - 10				
1951010_503	Portsmouth well - treated	2.6	J	1.8	4.4	ND	1 - 10				
1951010_DPW	Portsmouth DPW office tap	2.1	J	1.8	4.5	ND	1 - 10	35***			1.8
1531010_509	MVD 4/5 - treated	3.8	J	1.8	4.5	ND	1 - 10	7		1.8	4.5
1531010_011/005	MVD 4/5 - untreated	4.8	J	1.7	4.3	ND	1 - 10	8.9 (011) & 6.8 (005)		1.9	4.7 - 4.8
1531010_511	Pennichuck VWW interconnection with MVD - treated	2.4	J	1.8	4.4	ND	1 - 10				
1531010_16FRNCH	Allen residence - MVD water - pre home-treatment	3.3	J	1.7	4.3	ND	1 - 10	42			1.7
1531010_16FRNCH	Allen residence - MVD water - pre home-treatment - DUPLICATE	3.4	J	1.8	4.5	ND	1 - 10				
MTBE_8278	Thomas residence - private well - untreated	3.5	J	1.7	4.3	ND	1 - 10	2.9			1.7
MTBE_8178	Dunn residence - private well - untreated	4.4	J	1.8	4.5	ND	1 - 10	5.2			1.7
08-5KB	Surface water - Highland Lake outlet - Sucker Brook	ND		1.7	4.3	ND	1 - 10				
Field Blank	FIELD BLANK (Bellamy Reservoir - treated)	ND		1.8	4.6	ND	1 - 10				
Field Blank	FIELD BLANK (Allen residence - MVD water - pre home-treatment)	ND		1.8	4.4	ND	1 - 10				

*J = Result is less than the reporting limit (RL) but greater than or equal to the method detection limit (MDL) and the concentration is an approximate value.

**Per Mark Strynar (USEPA ORD): Note that method development for this compound has not been conducted, therefore method detection limits are not established. The limit of quantitation (LOQ) could be set at 10 ng/L for a conservative estimate of the lower limit of quantitation. However even with deviation beyond the ideal, linearity of the curve suggests values of 1-2.5 ng/L would be measurable with some additional error associated with that measurement. None of the collected sample had quantifiable levels of PFPrA above the limit of quantitation regardless of the establishment of 1, 2.5 or 10 ng/L as the lower limit of quantitation from ORD analysis.

***Data from Amico residence (Portsmouth public water)

After two sampling tests, the results are inconclusive due to the wide range in findings. Both the Portsmouth and the Merrimack tests showed high levels of PFPrA in the first test and not in the second. The two tests were analyzed at two different Eurofins labs. The report remains unpublished. There are no additional testing opportunities at this time.

Laurel Schadler asked if the analysis was done with a high resolution mass spectrometer which would provide more statistical confidence in the results.

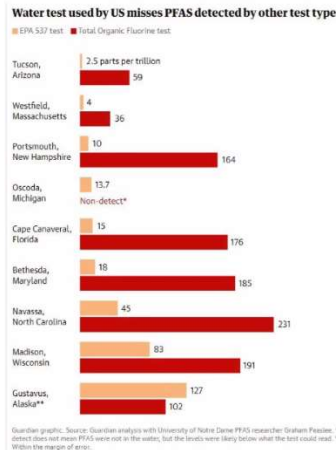
Andrea noted it is frustrating to have no real answers after 4 months, while there are 35 different PFA compounds currently identified but at what are currently defined as “non-detect” levels.

Another test, for detectable amounts of fluorine as a marker for the possible presence of short chain PFAS, was conducted by Dr. Peaslee at Notre Dame. The Guardian reported on the national study.

Update on results from PFAS tap sampling projects:

The Guardian Project

- Portsmouth tap sample has 10 ppt of PFAS using the EPA 537 method and 164 ppt using the TOF method
- The TOF method does not analyze for specific compounds (only total fluorine)
- Dr Graham Peaslee thinks the difference in results from the EPA method and the TOF method could be due to ultra short chain PFAS that cannot currently be tested for using targeted testing methods



Councilor Blalock expressed the concern that the fluorine results would lead to inaccurate conclusions as fluorine is not PFAS. And Portsmouth adds fluoride to the drinking water – what is the relationship in the results between organic fluorine and inorganic fluoride? This is evolving science not concrete information.

Asst. Chief McQuillen suggested it's worth continuing to examine in the interest of future better interpretation.

Brian commented that as a regulated water supply the City is limited to existing EPA standards. It is difficult to be "first" as is the case with PFAS when there is no reference point and determinative health data is lacking. PFAS compounds are pervasive in air, soil, clothing, furnishings, etc.

Councilor Lombardi said this information is misinformation if we don't know what it means. Concerned that The Guardian is a media source not a science journal (Laurel noted the Guardian story had peer review for the Notre Dame lab.)

Andrea said that people can filter their water if it makes them feel better about the effects of all the other PFA compounds. It is important that Portsmouth keeps contributing to the science.

Councilor Blalock commented that we don't want to be the research facility at the cost of the taxpayer.

Discussion that while all of the analysis in these tests has been free there is a cost in terms of the sampling time, assessing the results and trying to determine what to do with the information. Portsmouth has 8.5 years in the database of known compounds and the Water System will continue to test when standards and methods are there.

Laurel applauded the Portsmouth Water System for testing when it's not required as this provides an opportunity for teaching and communicating on the cutting edge of the science.

Jonathan Petali Ph.D. Toxicologist, Environmental Health Program, New Hampshire Department of Environmental Services on June 2022 EPA Health Advisory on PFAS

Full presentation:

<https://www.cityofportsmouth.com/sites/default/files/2022-08/SWAG%20Pateli%20August%2030%2C%202022.pdf>

EPA's Risk Communication

EPA has detailed their risk communication online at:

<https://www.epa.gov/sdwa/questions-and-answers-drinking-water-health-advisories-pfoa-pfos-genx-chemicals-and-pfbs>

- "If water sampling results show levels of PFOA or PFOS, or show levels of GenX chemicals or PFBS in drinking water above the health advisory levels, water systems should promptly notify their state drinking water safety agency and examine steps to reduce PFAS exposure." **NH Public Water Systems test for several PFAS to comply with NH MCLs and report these results to the state.**
- "If you are concerned about levels of PFAS found in your drinking water, contact your doctor or health care professional." **EPA has provided no information for clinicians regarding HAs or PFAS. National Academies of Sciences, Engineering and Medicine (NASEM) made recommendations to ATSDR's clinician guidance a few weeks ago.**
- "Does EPA recommend bottled water distribution in communities with PFAS above the interim and final health advisories?" **No. This is complicated due to regulation of bottled water.**
- **These HAs apply to public water systems, and EPA is currently not considering these risk values for Superfund Sites.**

Implications for New Hampshire

NH has MCLs for 4 PFAS (PFOA, PFOS, PFHxS and PFNA).

- NHDES is closely following EPA's progress towards finalized HAs and MCLs proposals in Fall 2022.
- EPA's MCLs are unlikely to match the HAs.
- EPA's MCLG for PFOA is likely to be zero due to reclassification of carcinogenicity.
- NH MCLGs for PFOA, PFOS, PFHxS and PFNA are already zero.

Existing data does not show PFBS or GenX at concentrations near the EPA's finalized HAs.

NHDES is tracking all progress related to other PFAS compounds being evaluated by EPA (PFHxA, PFBA, PFDA, PFHxS, PFNA), as well as class-based regulatory tools in development.

NHDES Commissioner is due to update the Legislature in November 2022 per HB 1264 (2020). <https://legiscan.com/NH/text/HB1264/2020>

What about other environmental media and sources of exposure?

NHDES does not exclusively evaluate drinking water.

PFAS are found other media, and EPA is still determining how/if these proposed RfDs will apply to other media.

	Reference Dose	TOTAL Daily Dose Limit for Adults (80 kg)	TOTAL Daily Dose Limit for 3-6 Month Infants (7.4 kg)
PFOS (EPA 2022)	0.0079 ng/kg/d	0.639 ng	0.058 ng
PFOA (EPA 2022)	0.0015 ng/kg/d	0.120 ng	0.011 ng

EPA, 2022: <https://www.epa.gov/sdwa/drinking-water-health-advisories->

The EPA Health Advisory is interim and non-enforceable. The standards are expected “this fall” (which probably means December) and will be open for comment by industry and the public. Any standards must pass the feasibility and cost-benefits analysis tests and the proposed levels are non-detect. Also, relative to DES reference guidance for drinking water, states vary on the thresholds they require when regulating water.

NH regulates, and NHDES conducts testing, not just on drinking water but also on soil and fish.

Additional issues related to the EPA FAQs which suggest:

Concerns? Contact local clinicians. Most NH clinicians don’t have the guidance on chemical exposures.

Bottled water? Not regulated for PFAS in most states, though NH has a standard through FDA and if EPA sets a higher standard, the FDA standard prevails.

The aspirational goal is zero. And if EPA identified PFOA as a carcinogen then the implementation goal, like arsenic would be zero. How much PFA is coming from other sources?

In NH, higher detectable levels are being addressed. NH Legislature looking at other contamination issues. NHDES examining waste sites (landfills), local efforts to reduce environmental exposure and private well testing initiatives.

Councilor Blalock thanked Dr. Petali. Asked about the process for destroying PFAS once it’s removed. There’s a firefighting foam take-back program but how is that material destroyed?

City of Portsmouth response to EPA Health Advisory:

Posted EPA Advisory on City website and continue to track.

Pease water treatment continues to result in non-detect. One short-chain PFBA detected likely due to carbon filtration life – due to be replaced this winter. Portsmouth water system sampling quarterly. Three wells (Collins, Portsmouth, Greenland) at higher levels and currently exploring treatment consultant to evaluate further investment to present to the City Council in the Capital Improvement Plan for FY24-29. See data in presentation.

Andrea asked, if the Collins and Portsmouth wells are in the Pease well field should the City talk to the Air Force about reimbursement for any treatment costs (as with Pease Water System)? Other funding tied to specific MCLs but could change with legislation or further Federal application of resources as with arsenic.

Brian provided information from a recent Colorado dust study demonstrating pervasive presence of PFAS:

Dust Sampling:

Samples were taken from multiple locations in each household, including the primary living space as identified by the homeowner (e.g., living room, family room, television room), the kitchen, and the bedroom in which participants reported spending the most time.

Patterns and levels of dust contamination measured in participating EA households are comparable to those reported in selected U.S. studies.

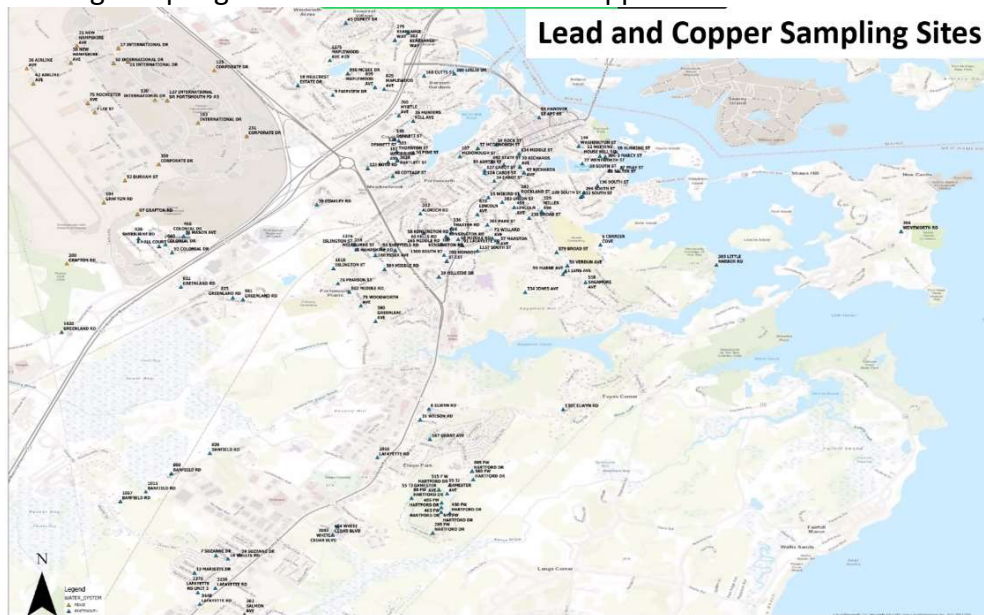
Results – ng/g = parts per billion

PFAS	FOD (%)	Maximum Detected Result (ng/g)	Geometric Mean (ng/g)
PFBS	72	67.9	3.25
PFPeS	11	28.0	NA*
PFHxS	72	267	3.53
PFHpS	11	3.25	NA*
PFOS	100	96.0	12.2
PFDS	56	9.83	NA*
PFDoS	28	16.3	NA*
PFBA	67	160	11.0
PFPeA	56	10.6	NA*
PFHxA	100	34.2	6.54
PFHpA	78	22.2	3.51
PFOA	89	65.1	7.99
PFNA	94	36.8	6.70
PFDA	89	13.4	3.92
PFUnA	44	12.2	NA*
PFDoA	56	10.9	NA*

PFAS	FOD (%)	Maximum Detected Result (ng/g)	Geometric Mean (ng/g)
PFTrA	44	5.10	NA*
PFTA	39	8.31	NA*
PFOSA	17	3.13	NA*
N-MeFOSA	6	5.20	NA*
MeFOSAA	61	38.7	2.35
N-MeFOSE	61	1,440	26.8
EtFOSAA	72	12.9	3.08
N-EtFOSE	17	150	NA*
Fts 6:2	44	54.7	NA*
Fts 8:2	6	12.6	NA*

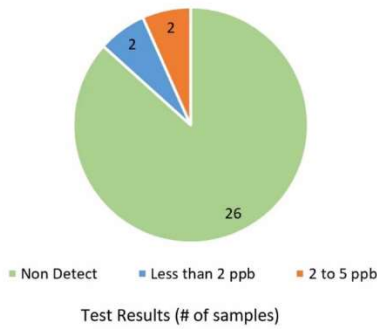
AI Pratt reported on City of Portsmouth lead testing:

Seeking sampling sites in addition to those mapped:



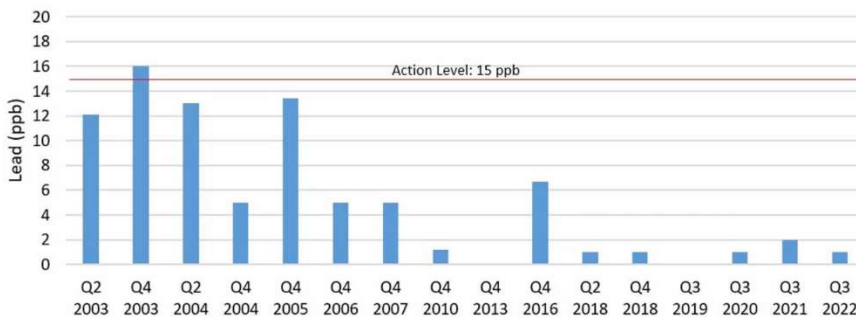
Results of testing:

2022 Portsmouth Lead Monitoring Results



Lead in City Water System decreased substantially. Issue is “at the faucet” i.e. lead contamination in indoor plumbing.

Portsmouth Water System Lead 90% percentile



Holly reported on Lead & Copper sampling team (Hope, Al, Kim and NHDES Beverly)

Low levels of lead in Portsmouth testing – issue is with water ‘from the faucet’ i.e. plumbing in the house rather than from the Water System

Review of a Rochester program: Offered lead sampling to residents via social media, farmers’ market presence and word of mouth. Kiosks checked by former UNH intern. Distributed 800 information packets and received 142 samples in 26 days: 57% on public water, 33% private wells. 68% of the tests were < 1 ppb. But 155 > 15 ppb came from private wells. If Portsmouth adopted a program would need staff to check the kiosks. City could contract with a testing lab – resident contacts for sampling, city pays.

Pilot project in schools to identify elevated lead levels in blood: cost? How many would participate? Maybe free to first 200? How to evaluate private plumbing – inform City, question of the liability.

Hope has secured the support of the new Superintendent to come to the table with other City officials to discuss a testing pilot with nurses and wellness coordination and CTE program to train for lead testing certification (DHHS resources): cost, benefits, common interests?

Hope has raised to the School Board and is getting more information to consider an opt-in program and will report back.

School Board adopt policy for incoming children (NH Legislature – certification required as of 7/24 bill)

Lead-Safe soil testing required for childcare centers – look at Portsmouth schools

Next steps:

- School nurse training

- Educational forum
- What other city school systems (eg Claremont, Rochester) have done – best practices

Andrea asked the committee to consider these topics for the Nov meeting and to email their feedback.

SWAG Discussion of future meeting topics and goals

Potential SWAG Goals/Topics for 2022/2023:

- Community Drinking Water Forum - **done May 2022**
- Ongoing Legislative updates - **update received April 2022**
- Private well owner outreach in collaboration w/NH DES
- Coakley Landfill update
- Monitor emerging contaminants (potential short chain PFAS in City tap water, run off from artificial turf)
- Work with City staff to establish community resources and education on how to dispose of hazardous and PFAS containing products to prevent additional water contamination in our community
- Work with School department to provide education and engagement with students
- Implement a free lead water testing program in the City
- Legionnaires in water
- Discuss other potential sources of PFAS contamination in the City (car washes, solar panels, artificial turf, etc)

No comments from public. Adjourned at 8:40 pm

DRAFT