

## We CAN Clean Up PFAS

We are facing a cost of a half-million dollars per year to filter PFAS out of our reservoir. Instead, we could investigate where that PFAS is coming from, and remove it at the source. This slide deck includes....

- GAC filters: a half million dollars per year
- PFAS hotspots: how DPW can identify PFAS sources
- PFAS remediation: how ConComm can clean up PFAS
- Woburn Superfund site: how water contamination was identified and cleaned up
- Cost estimates: Battelle Labs PFAS water and soil testing
- Relevant materials:
- YouTube video: underground plumes spreading from a hotspot
- Proposed resolution on PFAS testing by DPW
- Proposed resolution on PFAS permit requirements by ConComm

## GAC filters: a half million dollars per year

- Current cost for GAC filters at existing Braintree and Randolph/Holbrook WTPs:  
About \$500,000 per year

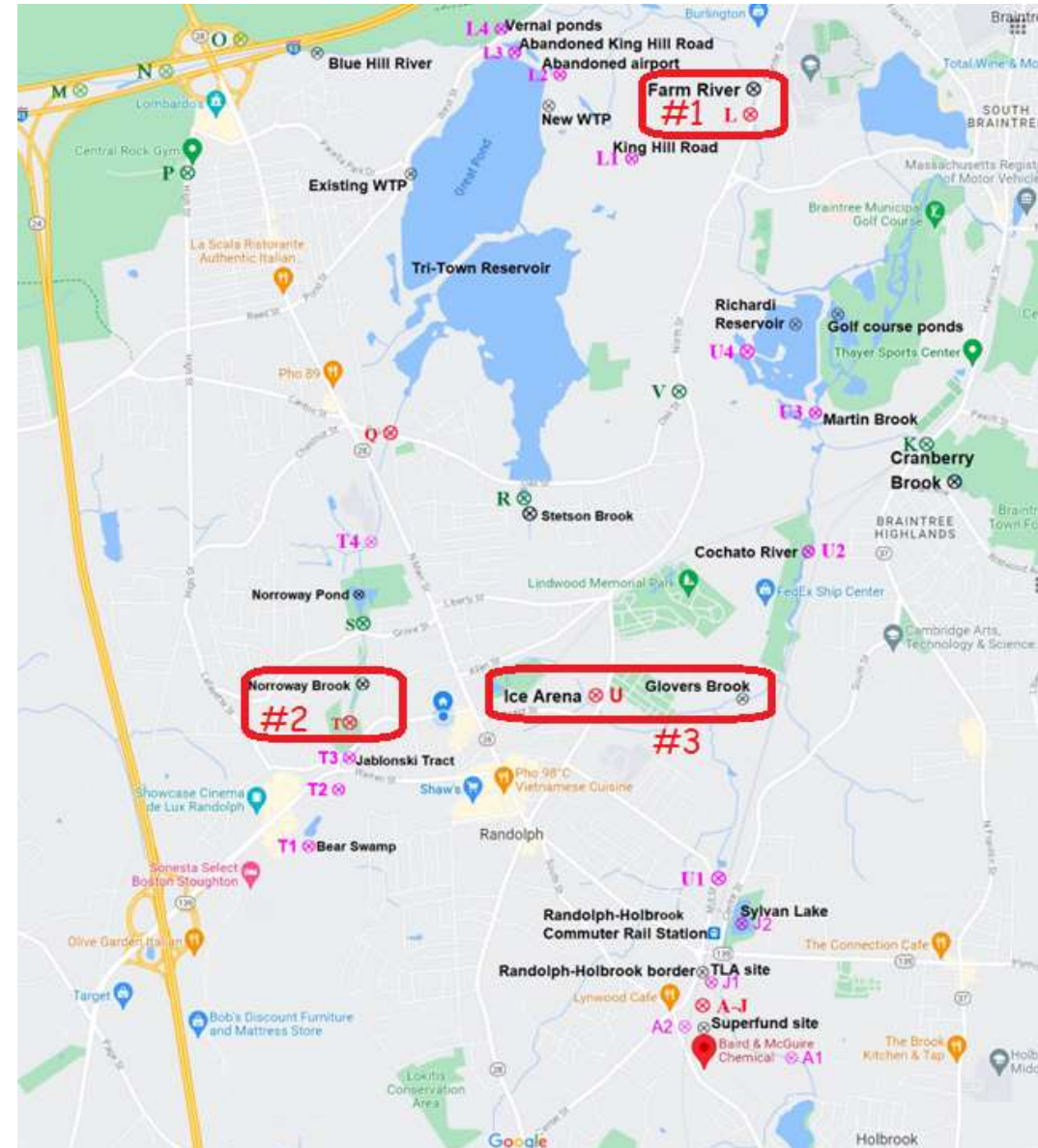
- Future cost for GAC filters at under-construction TriTown WTP:  
About \$500,000 per year



- Future cost for GAC filters with DPW/ConComm testing and remediation:  
About \$250,000 per year, if we cut incoming PFAS in half
- Cost for GAC filters with DPW/ConComm testing and remediation:  
DPW testing: Under \$10,000 per round, x 5 or 6 rounds  
ConComm-ordered remediation: could cost \$100,000++

# PFAS hotspots: how DPW can identify PFAS sources

- MassDEP identified three high-PFAS locations (marked in red: Farm River; Norrway Brook; and Glovers Brook)
- DPW gets water samples upstream and downstream to point toward source (pink spots are the next round)
- After a couple rounds, DPW gets soil samples to identify hotspots





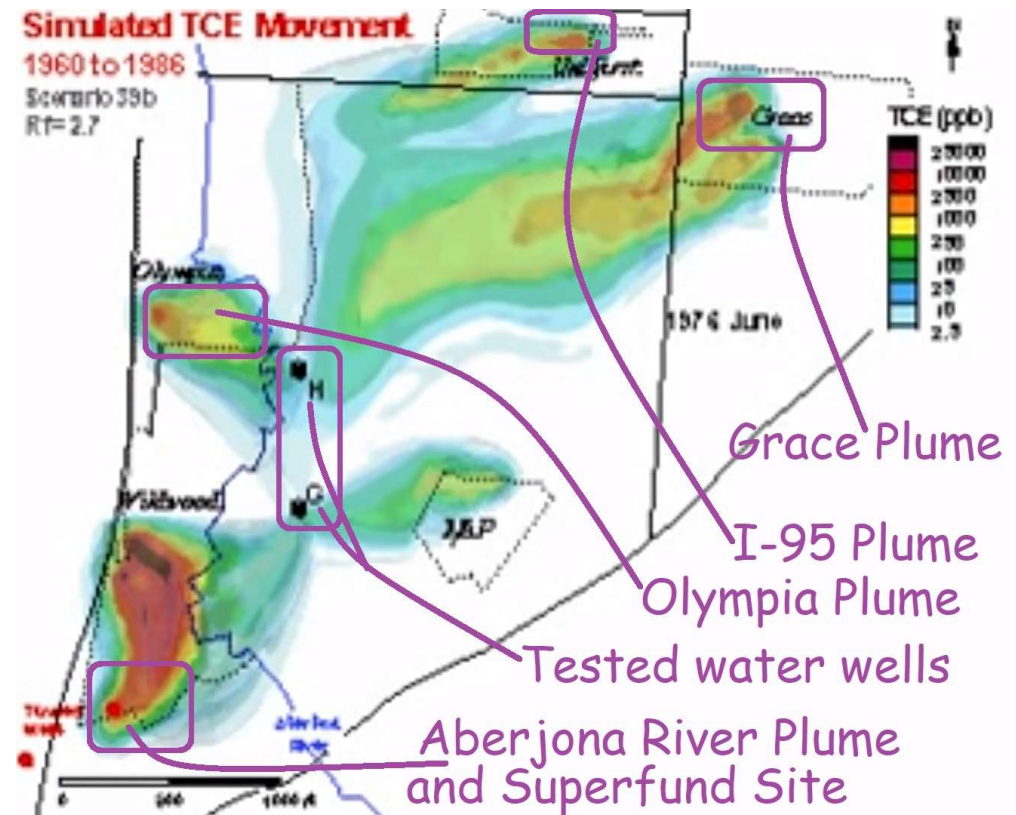
# PFAS remediation: how ConComm can clean up PFAS

- Once a hotspot is identified, “remediation” begins.
- That could include soil removal (many truckloads shipped to toxic waste site)
- Might include removing hotspot sources then paving over soil (as in Woburn photo)
- ConComm could require that brownfield development account for PFAS testing costs, and remediation cost risks



# Woburn Superfund site: how water contamination was identified and cleaned up

- Woburn suffered "TCE contamination" (another "halogenated organic" like PFAS; both cause cancer.
- There are 4 identifiable "plumes" -- where TCE flows underground from 4 different "point sources."
- The goal of the Randolph PFAS project is to identify our underground plumes and point sources.
- One plume in Woburn is a Superfund site called the "Aberjona River"; Randolph/Holbrook also has a Superfund site called "Baird/McGuire"
- The well sites marked "G" and "H" were where contaminated water was found. MassDEP testing in Randolph has identified three possible point sources.
- In Woburn, they found the point sources by water and soil testing upstream from wells "G" and "H". That is proposal for Randolph and Holbrook DPW, based on MassDEP water testing,
- In Woburn, they "cleaned up" the point sources once they were found -- That is proposal for Randolph and Holbrook ConComm.



## **Cost estimates: Battelle Labs PFAS water and soil testing**

- \$278.25 per water sample test on 21-day turnaround
- \$341.25 per soil sample test on 21-day turnaround
- Price based on sending batches of 10 samples at one time
- That means for 20 water tests and 10 soil tests, at sites that we pick on a monthly basis, the grand total would be \$9,292.50 (2 sets of 10 water tests x \$278.25, then 1 set of 10 soil tests x \$341.25).
- That might be enough to identify the TLA hotspot over a 3-month testing period before winter, and then next spring we can repeat the process.

## **Relevant materials:**

- [YouTube video: underground plumes spreading from a hotspot](#)
- [2023 proposal for DPW to find PFAS hotspots](#) (repeated below)
- [2023 proposal to empower ConComm to remediate PFAS hotspots](#) (repeated below)
- [Councilor Gordon's 2022 order on PFAS testing and GAC filtering](#)

# RESOLUTION CONCERNING TESTING OF SOILS AND SURFACE WATERS FOR PFAS

WHEREAS, the Town of Randolph supplies water to the homes and businesses of Randolph, in conjunction with the Tri Water Board and the Joint Water Board; and

WHEREAS, Per- and Polyfluoroalkyl Substances (PFAS) are regulated by the Federal Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (DEP); and

WHEREAS, PFAS refers to a family of chemicals used since the 1950s to manufacture stain-resistant, water-resistant, and certain types of firefighting foam and other products; and

WHEREAS, PFAS are water-soluble compounds that can seep into surface soils, groundwater or surface water and can contaminate rivers, lakes, fish, wildlife and drinking water; and

WHEREAS, the Town of Randolph is required to perform various tests on the quality of the drinking water in the Town, and Randolph does perform those tests as required, including testing for PFAS on output water; and

WHEREAS, testing is required for six PFAS compounds currently regulated by DEP, referred to as PFAS6, pursuant to the October 2, 2020, DEP PFAS public drinking water standard, which established a Massachusetts Maximum Contamination Level (MMCL), of 20 nanograms per liter (ng/L) (or parts per trillion (ppt)) - individually or for the sum of concentrations of these six specific PFAS; and

WHEREAS, the Town is concerned about the sources of the PFAS levels that do appear in the Town's water testing of output water and its sources in input water,

NOW THEREFORE BE IT RESOLVED that the Randolph Town Council supports the Town undertaking additional testing for PFAS in soils and surface waters in and around the Town's drinking water sources. The Town Council supports such sample-gathering and testing by Town employees, including the Department of Public Works, or by an outside lab or consultant. The Town Council supports such testing being conducted in a variety of areas around the Town of Randolph, with a goal to identify any high-concentrations of PFAS to determine possible sources of PFAS contamination.





# RESOLUTION CONCERNING CONSERVATION COMMISSION RULES FOR PFAS

WHEREAS, pursuant to the Town of Randolph Wetlands Ordinance Chapter 196, and the Wetlands Protection Act (MGL c. 131, § 40), the Randolph Conservation Commission is entrusted and empowered to protect the wetlands and adjoining areas in the Town of Randolph by controlling activities including: public or private water supply, prevention and control of pollution, and recreation values, deemed important to the community; and

WHEREAS, as part of that process, the Conservation Commission reviews proposed work or projects that will affect Town wetlands and waterways; and

WHEREAS, the Conservation Commission has the authority to require applicants to submit information and plans, impose conditions which the Commission deems necessary to protect resource area, and to impose reasonable fees for the purpose of securing outside consultants to aid in the review of proposed projects; and

WHEREAS, Per- and Polyfluoroalkyl Substances (PFAS) are emerging contaminants which pre-dated the Conservation Commission application forms and policies and procedures; and

WHEREAS, the people of Randolph desire to reduce the amount of PFAS entering our reservoir, by identifying and removing PFAS sources upstream:

NOW THEREFORE BE IT RESOLVED that the Town Council of the Town of Randolph supports the Conservation Commission taking the following actions:

1. That the Conservation Commission amend its application materials to require that information be provided on known PFAS levels at the site of any proposed work or project, and that testing for PFAS be done on any surface waters on the site.
2. That the Conservation Commission impose reasonable fees upon applicants for the purpose of securing outside consultants or experts on any project where there is an indication of the presence of PFAS on site, to generate a report including soil and water testing conducted by certified PFAS testing labs, and possible sources of said PFAS.
3. That the Conservation Commission include conditions, where appropriate, in permits for sites where PFAS is present that require ongoing monitoring and testing for PFAS in surface waters and soils.
4. That the Conservation Commission include conditions, where appropriate, in permits for sites where PFAS is present, concerning remediation of PFAS, including insurance for such remediation and any downstream damages, where appropriate.

