

# Per- and Polyfluoroalkyl Substances (PFAS)

## CURRENT DATA AND UPDATES

### [February 18, 2021 Data Table](#)

### [Calendar Year 2020 Data Table](#)

Monthly monitoring of our treated water has been initiated for the 2021 calendar year. This will help determine our compliance with the recently adopted drinking water standard of 20 parts per trillion (ppt), for water systems in Massachusetts. Previous monitoring in 2020 has improved our knowledge of how PFAS is impacting our water system and we continue to work with State regulators, consultants, and others to address PFAS in Acton's drinking water. The three treatment plants (South Acton, Clapp/Whitcomb, and Conant 1) serving water to our customers during January were at or below the drinking water standard, meaning the sum of the six regulated PFAS compounds were at or below the maximum allowable limit of 20 ppt. Based on our January sampling results and the trends observed in the second half of 2020, we will reintroduce the North Acton Water Treatment Plant to the sources serving water to our customers. Additional sampling will be completed to monitor if this source can continue to be used in a limited capacity. This will enable us to perform required maintenance on other facilities and continue with construction on the Central Acton Water Treatment Plant. More information on that project can be found on our website <https://www.actonwater.com/about-us/cawtp/>.

On September 24, 2020, the Massachusetts Department of Environmental Protection (MassDEP) announced the final regulations for PFAS in drinking water and continue to clarify how laboratory results should be calculated and reported. The MassDEP Press release can be found here: MassDEP Press Release <https://www.mass.gov/news/baker-polito-administration-establishes-strict-standards-for-pfas-in-drinking-water-to-protect>. The District is also aware that MassDEP is expanding the sensitive subgroup to include individuals diagnosed by their health care provider to have a compromised immune system. It is our understanding that MassDEP reviewed updated European assessments of PFAS and thought it was prudent to include this population.

At the September 14, 2020 Board of Water Commissioners' meeting, the Board voted to sign on to PFAS litigation against manufacturers of these chemicals. The law firm of Napoli Shkolnick, PLLC with offices in New York and soon in Massachusetts, was selected to represent the District as an affected party.

For those interested in learning more about PFAS, Green Acton and the League of Women Voters – Acton Area, hosted a virtual forum on October 14. Details can be found here <https://greenacton.org/2020/10/29/pfas-panel-discussion-follow-up/#more-6421>

## WHAT DID THE PUBLIC NOTICE SAY?

### [June 26, 2020 Public Notice](#)

The Public Notice provided to all Postal Patrons in Acton on June 26, 2020 is a required notice by the MassDEP. We understand it may have been dense, confusing, and unexpected. The document may be summarized in a series of major take away messages.

- The Acton Water District (AWD) proactively sampled for PFAS based on the presence of two Superfund Sites in Acton and the push towards further regulation of PFAS at the State and Federal level. Based on the results of initial testing, all production wells and treatment plants serving our system were sampled for PFAS.
- PFAS exposure can occur from drinking water and many other sources in the home and some workplaces.
- Currently two of our five water treatment plants have tested above the MassDEP Guideline and proposed drinking water regulatory limit of 20 parts per trillion (ppt) for six PFAS compounds.
- MassDEP is currently focused on the sum of six, out of thousands of PFAS compounds believed to exist. The six compounds include Perfluorooctane sulfonic acid (PFOS), and Perfluorooctanoic acid (PFOA), Perfluorononanoic acid (PFNA), Perfluorohexanesulfonic acid (PFHxS), Perfluoroheptanoic acid (PFHpA), and Perfluorodecanoic acid (PFDA).
- If you are in the sensitive subgroup, including pregnant women, nursing mothers, and infants, MassDEP advises not to consume water with greater than 20 ppt of the six PFAS substances of concern. Using bottled water that has been tested as PFAS free is recommended for the sensitive subgroup to use for drinking, cooking foods that absorb water, and preparing infant formula.
- PFAS as a chemical class are still considered an emerging contaminant and the ability to reliably test for PFAS in the ppt range is relatively new and challenging. Data takes time to be generated and interpreted. PFAS is also the first time we as a public water supplier have been tracking a contaminant at the ppt level. Typically, we work with contaminants in the part per million (ppm) and part per billion (ppb) concentrations.
- We are in the early stages of addressing PFAS and will provide updates as new information is available. Please sign up for email updates by sending an email with your name address, and email address to [wq@actonwater.com](mailto:wq@actonwater.com) with "Updates" in the subject line.
- The treatment facility with the highest concentration of PFAS is not currently serving water to the system pending further investigation.

### **CLARIFICATIONS ON THE PFAS MAILING**

During the days following the public notice regarding PFAS, we have heard from many concerned customers. It is also our understanding that many more conversations are occurring on various social media platforms. If you have not read the public notice document, visited our webpage or visited the informative links (new ones added below), we highly encourage you to do so. This may seem like a large request, however, PFAS is a complicated matter with multiple aspects to understand.

We would like to emphasize that the public notice document is a requirement of the Massachusetts Department of Environmental Protection (MassDEP) and most of the language contained therein was dictated by them. As conveyed to us by MassDEP staff on Thursday July 2, the actions in the public notice are only recommendations. The District and MassDEP have not told anyone that they must use alternate water sources or install filters.

During the July 13, 2020 Board of Water Commissioners' meeting, District officials and staff, leadership from MassDEP, and residents discussed PFAS concerns, answered questions, and listened to one another. The portion of that meeting relating to PFAS may be viewed here: <https://www.youtube.com/watch?v=5UEzewmQ4mE>

### **HOW DOES PFAS GET INTO MY DRINKING WATER?**

According to the United States Environmental Protection Agency, PFAS are a group of man-made chemicals that includes PFOA, PFOS, GenX, and many other chemicals. PFAS have been manufactured and used in a variety of industries around the globe, including in the United States since the 1940s. PFOA and PFOS have been the most extensively produced and studied of these chemicals. Both chemicals are very persistent in the environment and in the human body – meaning

they don't break down and they can accumulate over time. There is evidence that exposure to PFAS can lead to adverse human health effects.

PFAS can be found in:

- **Food** packaged in PFAS-containing materials, processed with equipment that used PFAS, or grown in PFAS-contaminated soil or water.
- **Commercial household products**, including stain- and water-repellent fabrics, nonstick products (e.g., Teflon), polishes, waxes, paints, cleaning products, and fire-fighting foams (a major source of groundwater contamination at airports and military bases where firefighting training occurs).
- **Workplace**, including production facilities or industries (e.g., chrome plating, electronics manufacturing or oil recovery) that use PFAS.
- **Drinking water**, typically localized and associated with a specific facility (e.g., manufacturer, landfill, wastewater treatment plant, firefighter training facility).
- **Living organisms**, including fish, animals and humans, where PFAS have the ability to build up and persist over time.

Certain PFAS chemicals are no longer manufactured in the United States as a result of phase outs including the [PFOA Stewardship Program](#) in which eight major chemical manufacturers agreed to eliminate the use of PFOA and PFOA-related chemicals in their products and as emissions from their facilities. Although PFOA and PFOS are no longer manufactured in the United States, they are still produced internationally and can be imported into the United States in consumer goods such as carpet, leather and apparel, textiles, paper and packaging, coatings, rubber and plastics.

## PART PER TRILLION

In order to understand what a chemical measurement means, one needs to have a basic understanding of the type of measuring units used, and what they mean. As mentioned above, most of our contaminants are measured using concentration units such as ppm and ppb. But what is a ppm, ppb, or ppt for that matter, in plain English?

As an example, let's use an example of liquid chlorine added to our water in the treatment process at 1.0 ppm. This value refers to one part of chemical (in this case liquid chlorine) found in one million parts of our water. To realize how small a value this actually is, read the analogies listed below:

### One part per million (ppm) equals:

- 1 inch in 16 miles

### One part per billion (ppb) equals:

- 1 inch in 16,000 miles

### One part per trillion (ppt) equals:

- 1 inch in 16 million miles (600+ times around the earth)

## HOW CAN I STAY INFORMED?

If you do not typically receive a water bill from the Acton Water District and wish to receive future updates regarding PFAS, please visit this website periodically or send an email to [wq@actonwater.com](mailto:wq@actonwater.com) with "Updates" in the subject line. Please include your name, address, and email to be informed of new information and future developments related to PFAS.

## WHAT TREATMENT PLANT SERVES MY HOME?

Many people have tried to determine where the water serving them is from. Our water system is a dynamic system that includes five treatment plants (currently four are in operation), four treated water storage tanks, and over 130 miles of water main. Because the water all pumps into the system, and system hydraulics (how the water moves around in the pipes) can change based on time of day, season, water demand, and how we are operating the various systems, it is difficult to pinpoint this information. For some customers it is relatively easy to pinpoint but other areas are more challenging, and an answer provided today could be different in a week. Given our current knowledge of PFAS, the numbers reported at our treatment plants should represent a worst-case scenario, as the water blends, it is anticipated that PFAS concentrations would be lower.

## **WHAT IF I AM NOT SUPPLIED WATER BY AWD?**

In consultation with MassDEP, our initial Public Notice regarding PFAS is being sent to every Postal Patron in Acton. This includes many people who do not receive water from our sources of supply but may have an interest in knowing that PFAS is present in the community. If you have questions regarding PFAS in your primary water supply, you may wish to contact one of the following water systems that may serve recipients of our Public Notice. Contact phone numbers listed are from publicly available records and may not be current.

Concord Water Division 978-318-3250

Littleton Water Department 978-540-2222

Pine Hill Condominium 978-264-0166

Strawberry Hill Apartments 781-894-3952

Acton Indoor Tennis/Nashoba Sportsman's Club 978-263-9059

Planet Gymnastics/All Seasons Tennis 978-263-1900

## **PRIVATE WELL RESOURCES**

In the spring of 2020, the Acton Board of Health mailed a fact sheet regarding PFAS to owners of private wells that they had contact information for. Additional resources and information are available for private well owners which can be found here: <https://www.mass.gov/info-details/per-and-polyfluoroalkyl-substances-pfas-in-private-well-drinking-water-supplies-faq>. You may contact the Acton Health Department at 978-929-6632 for additional information on private wells.

## **ARCHIVE OF STATUS UPDATES**

As new updates are provided, the previous information will be available here organized by date.

[June 25, 2020](#)

[July 9, 2020](#)

[July 22, 2020](#)

[August 10, 2020](#)

September 29, 2020

[December 16, 2020](#)

## **WATER FILTERS**

For customers wishing to reduce exposure from PFAS in drinking water by filtration in the home should follow the guidance of MassDEP featured below. The Acton Water District does not make

recommendations on filters. If you currently own a filter, it is best to contact the manufacturer directly to determine if it is effective at reducing or removing PFAS. If a current filter is not effective, the manufacturer may be able to advise you on an alternate filter that can be installed using existing equipment.

From MassDEP:

### **Home Water Filters**

There are also home water treatment filters capable of removing PFAS from drinking water for the countertop or under the sink. Filters certified by NSF have been demonstrated to be effective in removing two of these compounds, PFOS and PFOA, to below the USEPA Health Advisory of 70 parts per trillion (ppt). Many of these filters will likely be able to reduce PFAS levels to well below 70 ppt, however **MassDEP has no independently verifiable monitoring results demonstrating this performance**. If you chose to install a filter, you should check to see if the manufacturer has monitoring results demonstrating that the device can reduce PFAS to below your level of concern. For example, MassDEP recently proposed a drinking water limit, or Maximum Contaminant Level, of 20 ppt for the sum of the levels of six PFAS compounds.

### **Discharge of Reverse Osmosis Reject Water**

MassDEP's Title 5 regulations prohibit the discharge of water purification or filtration devices to septic systems. The groundwater discharge regulations provide that such discharges to a dry well or otherwise to the ground would need a permit, unless they are registered with MassDEP through the Underground Injection Control (UIC) program. Here is the link to MassDEP's guidance on UIC wells: <https://www.mass.gov/service-details/standard-design-guidelines-for-shallow-uic-class-v-injection-wells#:~:text=Standard%20Design%20Guidelines%20for%20Shallow%20UIC%20Class%20V,Minimum%20Design%2C%20Installation%2C%20Monitoring%2C%20Maintenance%20%26%20Recordkeeping%20Standards>

## **RESOURCES/LINKS**

### **USEPA PFAS Resources**

<https://www.epa.gov/pfas>

### **MassDEP PFAS Resources for Public Water Supplies**

<https://www.mass.gov/info-details/per-and-polyfluoroalkyl-substances-pfas>

### **MassDEP PFAS Regulatory Process**

<https://www.mass.gov/lists/development-of-a-pfas-drinking-water-standard-mcl>

### **MassDEP Bottled Water PFAS Results**

<https://www.mass.gov/doc/bottled-water-tested-for-pfas>

### **MassDEP Certified Labs**

<https://www.mass.gov/info-details/per-and-polyfluoroalkyl-substances-pfas#laboratories,-testing-and-sample-collection->

### **MassDPH**

<https://www.mass.gov/service-details/per-and-polyfluoroalkyl-substances-pfas-in-drinking-water>

### **Green Acton**

<https://greenacton.org/2020/07/06/pfas-101/>

### **Agency for Toxic Substances and Disease Registry (ATSDR) Guide for Clinicians**

<https://www.atsdr.cdc.gov/pfas/docs/clinical-guidance-12-20-2019.pdf>

### **American Water Works Association PFAS Cycle**

<https://www.awwa.org/Portals/0/AWWA/ETS/Resources/HowPFASCycleThroughtheEnvironmentV2.jpg?ver=2019-11-14-104702-713>

**Safe Water Massachusetts**

<https://www.safewatermass.org/>