



MassDEP Fact Sheet

Per- and Polyfluoroalkyl Substances (PFAS) in Public Drinking Water Supplies - Questions and Answers for Public Water Suppliers

Introduction

This fact sheet provides answers to questions frequently asked by public water suppliers about Per- and Polyfluoroalkyl Substances (PFAS) on evaluating whether Public Water Supply (PWS) sources contain PFAS and on what a PWS should do if PFAS are detected in a public drinking water supply. A separate MassDEP fact sheet “PFAS in Drinking Water: Questions and Answers for Consumers” is available for PWS to provide to consumers and describes the sources of PFAS compounds, health effects, and MassDEP recommendations to reduce consumer exposure. This consumer factsheet is available at <https://www.mass.gov/doc/massdep-fact-sheet-pfas-in-drinking-water-questions-and-answers-for-consumers>.

1. What is the Massachusetts public drinking water standard?

On October 2, 2020, MassDEP published its PFAS public drinking water standard or Massachusetts Maximum Contaminant Level (MMCL) of 20 nanograms per liter (ng/L), or parts per trillion (ppt) for the sum of the concentrations of six specific PFAS. The six PFAS are: perfluorooctane sulfonic acid (PFOS); perfluorooctanoic acid (PFOA); perfluorohexane sulfonic acid (PFHxS); perfluorononanoic acid (PFNA); perfluoroheptanoic acid (PFHpA); and perfluorodecanoic acid (PFDA). MassDEP abbreviates this set of six PFAS as “PFAS6.” This drinking water standard is set to be protective against adverse health effects for all people consuming the water. For information on the PFAS6 drinking water standard see: [310 CMR 22.00: The Massachusetts Drinking Water Regulations](#). For more information about the technical details behind the MMCL, see MassDEP’s technical support document at: [Per- and Polyfluoroalkyl Substances \(PFAS\): An Updated Subgroup Approach to Groundwater and Drinking Water Values](#).

2. Are Public Water Systems required to test for PFAS?

Yes, all public water suppliers are required to test for PFAS. These monitoring requirements will be included in future MassDEP-issued Water Quality Sampling Schedules. PWS are also required to test all **new** sources of drinking water, including replacement sources and satellite wells for PFAS. See [Per- and Polyfluoroalkyl Substances \(PFAS\) Drinking Water Regulations Quick Reference Guide](#) for additional details.

3. Which PFAS contaminants does MassDEP require testing for?

Currently, there are three U.S. EPA testing methodologies for testing drinking water for PFAS. The current MassDEP Drinking Water regulations, 310 CMR 22.00 only approved testing drinking water by USEPA Methods 537 and 537.1. Future changes to 310 CMR 22.00 are expected to include USEPA Method 533. These methods test for either 14 or 18 PFAS compounds and all three methods include the PFAS6 compounds that are part of the MassDEP MMCL. PWS that do PFAS testing must use the [PFAS Laboratory Analytical Report Form](#) and send the results to the appropriate MassDEP regional office. When the eDEP laboratory reporting system is updated to include the ability to upload PFAS test results, PFAS reports for PWS monitoring samples shall be submitted through eDEP. Electronic reporting of testing results via eDEP is not currently available; MassDEP will notify PWSs and laboratories when it becomes available.

4. What laboratory should I use? What detection limits should labs be using?

The PWS should ask for reporting limits of 2 ng/L (ppt) or lower for each of the PFAS6 chemicals. All other PFAS contaminants should be reported at this level as well or, if not achievable, at the lowest feasible Minimum Reporting Level (MRL). Currently, there are three U.S. EPA testing methodologies for testing drinking water for PFAS. Laboratories will

analyze drinking water for PFAS using either USEPA Method 537, 537.1, or 533. Please note that USEPA Method 533 is not yet approved for public water supply testing in Massachusetts. As of November 1, 2020 the DWP relies on certification for PFAS analysis from the [Massachusetts Laboratory Certification Program](#).

5. Are there special considerations for PFAS sampling and analysis?

Sampling for PFAS can be challenging because it is found in many consumer products, including certain clothing fabrics and food packaging, and the analytical detection limits are so low. MassDEP's Drinking Water Program has a Field Sampling Guide for PFAS available at <https://www.mass.gov/doc/field-sampling-guide-for-pfas/download>. The Association of State Drinking Water Administrators developed a Lab Testing Primer, available at <https://www.mass.gov/doc/lab-testing-primer-for-pfas/download>.

6. Does MassDEP provide funding for PFAS testing or other services for Public Water Suppliers?

Funding is currently available for PFAS testing of drinking water. MassDEP has contracted with UMass and five labs to provide free PFAS testing to PWS. If your PWS has not already completed PFAS baseline sampling, you can indicate your interest in free sampling by completing a brief survey at <https://www.mass.gov/forms/pfas-free-sampling-initiative-notice-of-interest-form-for-public-water-systems> or sending a request with the information described in the survey (E.g. PWS name, PWS ID#, # of sources already tested, number of sources to be tested, and system population) to program.director-dwp@mass.gov, Subject: "PFAS free lab analyses."

Massachusetts announced a total of 27 grant awards to 26 PWSs in support of costs associated with the design of PFAS treatment systems in September 2020 and March 2021. In addition, further grant opportunities for PFAS may be offered, and 0% interest loans for PWS to install treatment for PFAS may be available. For more information on PFAS funding opportunities, see <https://www.mass.gov/info-details/water-resources-grants-financial-assistance>.

7. Why do the laboratory testing results for PFAS vary?

Variation is to be expected; PFAS can be detected in drinking water down to very low concentrations. Check that appropriate quality assurance and quality control was completed on any laboratory results you receive. The best way to fully track PFAS levels in drinking water is to test multiple drinking water samples of over time.

8. How do I interpret laboratory results: MRL, RL, J values, etc.?

Please see the following document:

<https://www.mass.gov/doc/how-to-interpret-my-pfas-laboratory-report/download>

You may also contact your MassDEP Regional Drinking Water Program for assistance with interpreting laboratory results.

9. What if a PFAS compound is detected but there is no established health guideline for it?

Please contact your MassDEP Regional Drinking Water Program. Depending on the level, an individual drinking water risk assessment may be warranted by the MassDEP Office of Research and Standards.

10. What are the current requirements and recommendations if PFAS is detected?

See [Per- and Polyfluoroalkyl Substances \(PFAS\) Drinking Water Regulations Quick Reference Guide](#) for a summary of requirements regarding confirmatory samples, Public Notices, and increased monitoring. MassDEP's regional offices will be working with PWSs that detect PFAS to ensure that appropriate corrective actions are taken.

11. What treatment technologies are available to remove PFAS?

Granular activated carbon (GAC), ion-exchange resin, and reverse osmosis (RO) filters have been shown to be effective in removing PFAS. The type of treatment technology you will need depends on the specific PFAS compounds and their levels

in the source water. A pilot study will be required prior to installing treatment. Some resources to identify appropriate treatment technologies are:

- USEPA webpage: Reducing PFAS in Drinking Water with Treatment Technologies: <https://www.epa.gov/sciencematters/reducing-pfas-drinking-water-treatment-technologies>
- Interstate Technology & Regulatory Council (ITRC) fact sheets on PFAS: <https://pfas-1.itrcweb.org/>
- The Water Research Foundation's report and webcast on PFAS treatment. Go to their webpage www.waterrf.org and search for "Treatment Mitigation Strategies for Poly- and Perfluorinated Chemicals".

12. What does a PWS do with the waste stream from PFAS treatment?

If the PWS is using GAC or ion-exchange treatment, the GAC media and the ion-exchange resins can be incinerated. The PWS can also use high-pressure membranes such as nanofiltration or reverse osmosis to remove PFAS, but this will result in a concentrated waste stream. There is currently a lack of options for disposal of the concentrated PFAS waste stream. There are some destructive treatment technologies in development.

13. What should a PWS know about bottled water to address consumer questions?

Consumers can contact the bottled water company to see if the water was tested for PFAS. In addition, MassDEP surveyed all Massachusetts permitted bottled water companies to determine if they sampled their water sources for PFAS and to request that they voluntarily share the results of such testing with MassDEP for posting to the Commonwealth's website. See the current list of Massachusetts permitted Bottled Water companies that have voluntarily provided MassDEP with their results for posting at [bottled water companies](#).

14. Can a PWS support customer use of Point of Use (POU) or Point of Entry (POE) devices to reduce PFAS?

Unless specifically required by the MassDEP Drinking Water Program, a public water supplier is not required to install POU/POE treatment devices. MassDEP is not, at this time, approving POU and POE treatment devices as the means for PWSs to fully comply with drinking water standards.

However, as a temporary treatment solution, a PWS may recommend or support the installation of POU devices at their customers' homes and businesses to address customer concerns. A Point of Use (POU) device is a treatment device installed on a single faucet or spigot used for the purpose of reducing contaminants in drinking water at that one tap. POU devices can sit on the counter, attach to the faucet, or be installed under the sink. A point entry device (POE) is a treatment device that is installed after the water meter to treat all of the water in the home.

In 2016, the National Sanitation Foundation (NSF) developed a [test protocol \(P473\)](#) for products that reduce PFOA and PFOS in drinking water to meet EPA's health advisory level of 70 ng/L. However, the number of PFAS being studied and the levels of concern have changed since 2016. Currently, there are no independent organizations testing and certifying POU or POE filters for removal of PFAS compounds to meet these lower levels of concern. For your reference, there has been testing done by some other government agencies and academic institutions including: [Minnesota](#), the [USEPA](#), New Hampshire, Colorado and [N.C. State University](#).

Because there is no national certification standard for POU/POE devices for PFAS treatment at the low levels currently being regulated, it is recommended that a PWS considering supporting the customer installation of POU or POE devices first test the particular device(s) on their source water to confirm that the device(s) are effective in removing PFAS6 present in their water down below 20 ng/L. Once the devices are put in place, and prior to operation, initial testing is recommended to confirm that devices are installed and operating properly. An ongoing operations and maintenance plan including routine monitoring plan should be put in place to verify the continued effectiveness of the devices and to determine the length of time between filter replacements. For general information on POU/POE devices see

<https://www.mass.gov/service-details/home-water-treatment-devices-point-of-entry-and-point-of-use-drinking-water>.

See [Per- and Polyfluoroalkyl Substances \(PFAS\) in Private Well Drinking Water Supplies FAQ](#) for information regarding the limited scenarios under which on-site disposal options exist for wastewater discharged from reverse osmosis POU/POE treatment devices. If the water entering your reverse osmosis (RO) treatment device has a PFAS6 concentration exceeding the drinking water standard, then on-site disposal (i.e. Title 5 system or MassDEP registered UIC well) of RO wastewater is not an option.

15. Is technical and financial assistance available to PWS to evaluate their drinking water sources for PFAS and implement treatment?

Technical assistance is available from MassDEP and our technical assistance providers. Please contact your MassDEP Regional Office Drinking Water Program or Program.director-dwp@mass.gov: Subject PFAS Technical Assistance.

The Massachusetts Drinking Water State Revolving Fund loan program (DWSRF) provides low interest (2%) loans for drinking water infrastructure projects. MassDEP has established High Priority status for project proposals that will provide treatment of drinking water affected by concentrations of PFAS compounds above the MCL of 20 ppt. Contingent on the availability of funds, PFAS mitigation projects may be eligible to receive additional subsidy in the form of 0% interest rate loans in addition to some principal forgiveness on the loans for lower-income communities. Applications for construction loans for projects that appear in the 2020 Intended Use Plan (IUP) are due in October 2020, see <https://www.mass.gov/lists/state-revolving-fund-applications-forms>. During the 2020 calendar year, MassDEP is encouraging communities that have tested and identified PFAS at concentrations at or above the MCL in their water systems to apply for emergency funding through the DWSRF. Requests for emergency PFAS mitigation project financing are subject to review and approval by MassDEP and the Clean Water Trust. For more information on DWSRF please contact Ms. Maria Pinaud, Director of Municipal Services, by email at Maria.Pinaud@mass.gov.

Technical assistance on a wide range of financial, managerial and technical issues is available for communities serving < 10,000 people. Contact jstarbard@rcapsolutions.org at RCAP Solutions or dkaczanski@massrwa.org at Mass Rural Water Association for a “no cost” consultation or site visit.

My questions were not answered here. Who should I contact?

Contact the MassDEP Drinking Water Program at program.director-dwp@mass.gov, Subject: PFAS.

Who are the MassDEP Drinking Water Program PFAS contacts?

| Region | Name | Phone # | Email |
|-----------|--------------------------------------------------------------------------------------------------|--------------|--------------------------------------------------------------------------|
| Western | Catherine Wanat | 413-755-2216 | Catherine.Wanat@mass.gov |
| Central | Robert Bostwick | 508-849-4036 | Robert.Bostwick@mass.gov |
| Northeast | Amy LaPusata | 978-694-3291 | Amy.lapusata@mass.gov |
| Southeast | William Schwartz | 508-946-2818 | William.Schwartz@mass.gov |
| Boston | Margaret Finn | 617-292-5746 | Margaret.Finn@mass.gov |
| Boston: | Program.director-dwp@mass.gov , Subject: PFAS | | |

PFAS information is changing rapidly so this Factsheet will be updated periodically and provided to all public water suppliers.
