Board of Health

Plainville, Massachusetts

190 South Street - P. O. Box 1717 - 02762

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IMPORTANT INFORMATION ABOUT TESTING YOUR POTABLE WATER WELL

Why am I receiving this notice?

On January 4, 2023, the Plainville Board of Health received a letter from the Department of Environmental Protection (DEP) dated December 22, 2022. This letter described DEP's intention to have the existing monitoring wells that are installed around Lake Mirimichi to begin testing for PFAS in addition to the required testing that has been performed at those monitoring wells since 2008. This additional testing is to identify and evaluate potential PFAS sources and assess if the closed landfill is a potential source of PFAS in downgradient wells. The DEP letter is attached and provides a detailed description.

The Board of Health notified DEP that the properties located on Hillside Avenue, Branch Avenue and Lakeside Drive are provided drinking water through individual on-site potable water wells and there was not any access to municipal water.

The Department of Environmental Protection responded and agreed to also test some of the private wells located on the aforementioned streets for PFAS. This testing will NOT cost the homeowner any money.

What do I need to do?

If your well is selected to be tested, a representative from the Board of Health will contact you either by mail or in person to ask you to sign a "Request for Access" agreement from the Department of Environmental Protection, allowing them to enter your property by appointment for the purpose of gathering a water sample.

What wells will be tested?

DEP will select and test 3 – 4 wells on each street for PFAS. These wells will be selected based on location and depth. Based on those test results, DEP will determine if the remaining wells should be tested. If your well was not selected, you may wish to have it tested yourself. DEP recommends private wells are tested annually for total coliform bacteria and nitrate/nitrite especially if you also have an on-site wastewater system and every 10 years for naturally occurring contaminants such as iron, lead manganese etc. and volatile organic compounds (VOCs) which are most commonly man-made such as gasoline and industrial solvents. DEP also recommends all private wells should be tested for PFAS.

Why are the wells being tested now?

On October 2, 2020, Massachusetts Department of Environmental Protection (MassDEP) promulgated a new drinking water regulation for water supplies with the **maximum** contaminant level (MCL) of 20 nanograms per liter (ng/L or parts per trillion -ppt) for PFAS6. Prior to that the ORSG Health Advisory was 70 ng/L.

Should I be concerned?

Some people who drink water containing PFAS in excess of the MCL may experience certain adverse effects. These could include effects on the liver, blood, immune system, thyroid, and fetal development. These PFAS may also elevate the risk of certain cancers. It should be noted that the most recent PFAS test for the town well located at the end of Oxbow Drive on Lake Mirimichi had a level of 4.49 ng/L or parts per trillion.

What is PFAS6?

PFAS6 includes perfluorooctanoic acid (PFOA), perfluorooctane sulfonic acid (PFOS), perfluorononanoic acid (PFNA), perfluorohexanesulfonic acid (PFHxS), perfluorodecanoic acid (PFDA) and perfluoroheptanoic acid (PFHpA). PFAS are man-made chemicals that have been used in the manufacturing of certain fire-fighting foams, moisture and stain resistant products, and other industrial processes.

What do I need to do?

If you are concerned about PFAS in your private water well prior to receiving any test results, you should read the attached MassDEP Fact Sheet for information and web links.

- If you have specific health concerns regarding exposure, you should consult a health professional, such as your doctor.
- Consumers in a sensitive subgroup (pregnant or nursing women, infants and people diagnosed by their health care provider to have a compromised immune system), are advised not to consume, drink, or cook with water when the level of PFAS6 is above 20 ng/L.
- Consumers in sensitive subgroups are advised to use bottled water for drinking and cooking of foods that absorb water (like pasta).
- For infant formula, use bottled water or use formula that does not require adding water.
- For older children and adults not in a sensitive subgroup, the 20 ng/L value is applicable to a lifetime of consuming the water. For these groups, shorter duration exposures present less risk. However, if you are concerned about your exposure while steps are being taken to assess and lower the PFAS concentration in the drinking water, use of bottled water will reduce your exposure.
- Bottled water should only be used if it has been tested. The Massachusetts Department of Public Health requires companies licensed to sell or distribute bottled water or carbonated non-alcoholic beverages to test for PFAS. See https://www.mass.gov/info-details/water-quality-standards-for-bottled-water-in-massachusetts#list-of-bottlers-
- For information on selecting home treatment devices that are effective in treating the water for PFAS6, review the MassDEP Fact Sheet – Home Water Treatment Devices – Point of Entry and Point of Use factsheet for consumers at MassDEP Fact Sheet - Home Water Treatment Devices at https://www.mass.gov/service-details/home-water-treatment-devices-point-of-entry-and-point-of-use-drinking-water-treatment
- In most situations the water can be safely used for washing foods, brushing teeth, bathing, and showering.
- Boiling the water will not destroy PFAS6 and will somewhat increase its level due to evaporation of some of the water.

What is being done?

If PFAS is found in the private water wells, your Board of Health will work with the Department of Environmental Protection to determine if any further steps are necessary.

- Alternative Water that complies with the drinking water standard is being made available free of charge at a self-service water filling station located at **49 Whiting Street, North Attleborough, DPW Office.**

The Board of Health will continue to keep you updated as information becomes available.

Where can I get more information?

Links to additional information can be found on the Town of Plainville Website:
www.plainville.ma.us/1358/Board-of-Health

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Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection
Southeast Regional Office • 20 Riverside Drive, Lakeville MA 02347 • 508-946-2700

Charles D. Baker
Governor

Karyn E. Polito
Lieutenant Governor

Bethany A. Card
Secretary

Martin Suuberg
Commissioner

December 22, 2022

Angelo Liquori – Environmental Manager
Republic Services
14 Belcher Street
Plainville, MA 02762

RE: Assessment of Per and Polyfluoroalkyl Substances

AT: Plainville Sanitary Landfill
Belcher Street
Plainville, MA 02332
Facility Identification No.: 39223

Dear Mr. Liquori:

THIS IS AN IMPORTANT NOTICE
FAILURE TO RESPOND AND TAKE ADEQUATE ACTION IN RESPONSE TO THIS NOTICE COULD RESULT IN SERIOUS LEGAL CONSEQUENCES.

The Department of Environmental Protection, Bureau of Air and Waste, Solid Waste Management Section ("MassDEP" or "Department") has reviewed the of per and polyfluoroalkyl substances ("PFAS") analytical results for surface water samples collected at Lake Mirimichi and a City of Attleboro Surface Water Supply, both located hydraulically downgradient of the Plainville Landfill ("Landfill"). PFAS was detected in these samples at concentrations exceeding the Massachusetts Maximum Contaminant Level ("MMCL") and the Massachusetts Contingency Plan ("MCP") Reportable Concentrations Category GW-1 ("RCGW-1") standards of 20 nanograms per liter ("ng/L"). This review was conducted to determine if any additional monitoring/assessment is required at the Plainville Landfill pursuant to Massachusetts Solid Waste Regulations, 310 CMR 19.000: *Solid Waste Management Regulations.* Based on the results and its review, the Department has determined that additional assessment is warranted to evaluate

PFAS at the Landfill and determine whether the Landfill is a source of PFAS detected in the vicinity of Lake Mirimichi downgradient of the Landfill.

BACKGROUND:

The Plainville Sanitary Landfill is located on Belcher Street in the northeast section of Plainville, with owner of record listed as Laidlaw Waste Systems C/O Republic Services ("Republic Services"). The Landfill is situated on a 186-acre parcel, of which, approximately 47-acres resides in the Town of Wrentham. The majority of waste disposed at the Landfill consisted of residential and commercial waste, while other sources included; ash, contaminated soils, construction and demolition waste, industrial waste, and solids residue from Water Treatment Plants. The Landfill operated from 1975 to 1998 and was subsequently closed and capped in accordance with the Solid Waste Regulations.

The Landfill is bounded to the north by vacant land and wooded areas, to the west by Rabbit Hill Stream and Rabbit Hill Pond, and to the east by wooded areas, a residential neighborhood, and a campground in the Town of Foxborough. To the south of the Landfill is Route 495, wetlands, and Lake Mirimichi, a 170-acre reservoir located in the Towns of Plainville and Foxborough. The Wading River rises out of the eastern shore of Lake Mirimichi and flows southeasterly through the Towns of Foxborough and Mansfield.

Lake Mirimichi and the Wading River, extending from the lake and down-stream to the Wading River Treatment Plant, are within a Zone A of a Class A surface water body (310 CMR 22.00) used as drinking water sources. The Wading River Treatment Plant ("WRTP"), owned and operated by the City of Attleboro, directs water from the Wading River to a 4.5-acre Infiltration Bed for treatment. The City of Attleboro operates Surface Water Supply No. 4016000-05S ("Surface Water Supply") which intakes water from the infiltration area for additional treatment and distribution.

Republic Services has been conducting Post-Closure Environmental Monitoring at the Landfill at select groundwater and surface water monitoring locations specified in existing MassDEP's May 20, 2008 Revised Post Closure Operation and Maintenance Plan approval and Brown and Caldwell's Environmental Monitoring Plan – Revision 5 dated February 2010. The environmental monitoring program for the Landfill includes semiannual collection and analysis of water samples from up-gradient, and downgradient monitoring wells located between the Landfill and Lake Mirimichi and surface water locations at Lake Mirimichi. Monitoring is being conducted in accordance with 310 CMR 19.132: *Environmental Monitoring Requirements.*

As reported in previous environmental assessments by Republic Service's environmental consultant:

> *"a groundwater plume emanates from the south side of the landfill and flows and discharges to the northern end of Lake Mirimichi. The lateral extent of the plume is well defined by the compound 1,4-dioxane. The area impacted by the Landfill includes portions of the Site and state property north of Interstate 495 that overlie the groundwater plume; properties between I-495 and Lake Mirimichi that overlies the groundwater plume; wetlands between the Landfill and the Lake that receive discharge from the groundwater*

plume; and the northern portions of the lake that receive plume related contaminants through groundwater discharge."

Per & Polyfluoroalkyl Substances

Per- and polyfluoroalkyl substances ("PFAS") are a family of chemicals used since the 1950s to manufacture stain resistant, water resistant, and non-stick products. PFAS are widely used in common consumer products as coatings, on food packaging, outdoor clothing, carpets, leather goods, ski, and snowboard waxes, and more. Certain types of firefighting foam historically used by the U.S. military, local fire departments, and airports to fight oil and gasoline fires may contain PFAS. Landfills can be sources of PFAS because they are the ultimate repositories for PFAS-contaminated industrial waste, sewage sludge from wastewater treatment facilities, and waste from site mitigation, as well as for PFAS-bearing consumer wastes.

Because PFAS are water soluble and highly resistant PFAS from firefighting foams, manufacturing sites, landfills, spills, air deposition from factories and other releases can seep into surface soils. From there PFAS can leach into groundwater and surface water and result in contamination of drinking water as well impacts to fish and wildlife.

PFAS Regulations/Standards

On December 13, 2019, the MassDEP revised the MCP to include Reportable Concentrations and cleanup standards for soil and groundwater to address sites contaminated with PFAS. On October 2, 2020, the MassDEP published its PFAS drinking water standard or Massachusetts Maximum Contaminant Level ("MMCL") of 20 nanograms per liter ("ng/L"), or parts per trillion ("ppt") applicable to community ("COM") and non-transient non-community ("NTNC") systems for the sum of the concentrations of six (6) specific PFAS ("PFAS6"). The Massachusetts Drinking Water Regulations, 310 CMR 22.00 ("Drinking Water Regulations") were revised to reflect these requirements. This MMCL is set to be protective against adverse health effects for all people consuming water containing PFAS6. The six (6) PFAS are:

- Perfluorodecanoic Acid ("PFDA")
- Perfluoroheptanoic Acid ("PFH_pA")
- Perfluorohexanesulfonic Acid ("PFH_xS")
- Perfluorononanoic Acid ("PFNA")
- Perfluorooctanesulfonic Acid ("PFOS")
- Perfluorooctanoic Acid ("PFOA")

PFAS Testing

Results from PFAS testing of the City of Attleboro Surface Water Supply in May 2021 revealed detections of PFAS6 at concentrations exceeding MMCL (34 ng/L). The Town of Attleboro has subsequently removed the Wading River Treatment Plant from service (this plant is not designed to treat PFAS). The MassDEP received PFAS analytical results from surface water samples collected from Lake Mirimichi in June 2021 which also indicated detections of PFAS6 at concentrations exceeding MMCL (36 ng/L).

MASSDEP FINDINGS/DETERMINATIONS

PFAS6 has been detected at a City of Attleboro Surface Water Supply and Lake Mirimichi at concentrations exceeding the MMCL. The Surface Water Supply at the Wading River Treatment Plant is fed by the Wading River which flows out of Lake Mirimichi . Previous assessment and post-closure monitoring currently being performed at the Plainville Landfill indicates that groundwater from the Landfill flows southerly and discharges into wetlands and adjacent Lake Mirimichi. Based on its evaluation, the Department has determined that additional assessment is warranted to evaluate PFAS at the Plainville Landfill and determine whether it is a potential source of PFAS that has been detected downgradient.

Pursuant to Massachusetts Solid Waste Regulations at 310 CMR 19.132: *Environmental Monitoring Requirements* the operators/owners of Massachusetts landfills shall conduct landfill monitoring on a schedule established in a permit or as determined by the Department to detect the release of contaminants. The parameters (i.e., contaminants) that are required to be tested in groundwater and surface waters at landfills are listed at 310 CMR 19.132(2)(h)1&2. Currently, this parameter list does not include PFAS. Pursuant to 310 CMR 19.132(2)(h)4., the Department may require the testing of additional parameters as it deems necessary to evaluate the threat or potential threat of a such a contaminant to public health, safety, and the environment.

Based on MassDEP's review of available information, and in accordance with the Massachusetts Solid Waste Statute MGL c. 111 s. 150A, the Massachusetts Solid Waste Regulations at 310 CMR 19.000, MassDEP's Landfill Technical Guidance Manual, and MassDEP's Standards & Guidelines for Contaminants in Massachusetts Drinking Waters, MassDEP has determined the following:

1. Beginning with the environmental monitoring work scheduled for the first round of 2023, Laidlaw Waste Systems shall include sampling and analysis for PFAS, together with all other required parameters, at each groundwater monitoring well, surface water/leachate and non-potable office well as approved by MassDEP on May 20, 2008 and specified in the Brown and Caldwell's Environmental Monitoring Plan – Revision 5 dated February 2010. MassDEP requires that PFAS sampling occur no later than March 31, 2023.

2. Mmonitoring shall include analyzing the samples for PFAS using EPA Method 537.1 for the full list of method analytes. PFAS sampling shall be performed as outlined in the MassDEP's June 2021 *Field Sampling Guide for PFAS*.

3. The MMCL standard of 20 ng/l (parts-per trillion or ppt) is for the sum of six specified PFAS compounds: perfluorooctane sulfonic acid (PFOS); perfluorooctanoic acid (PFOA); perfluorohexane sulfonic acid (PFHxS or PFSxS); perfluorononanoic acid (PFNA); perfluoroheptanoic acid (PFHpA), and perluorodecanoic acid (PFDA). When some, or all, of these compounds occur together in drinking water, the detected concentrations for these PFAS compounds should be summed and compared to the MMCL.

4. The results of the environmental monitoring required above shall be submitted to MassDEP in accordance with the timeframes specified in *310 CMR 19.132(2) Groundwater and*

Surface Water Monitoring but no later than 60 days from the date of sampling.

5. This approval does not otherwise supersede or alter any other provisions of the monitoring requirements specified in the MassDEP's May 20, 2008 approval as amended by Brown and Caldwell's Environmental Monitoring Plan – Revision 5 dated February 2010.

REVIEW OF DECISION:

Pursuant to 310 CMR 19.033(4)(b), if Laidlaw Waste Systems is aggrieved by MassDEP's decision to issue this decision, Laidlaw Waste Systems may, within twenty-one days of the date of issuance, file a written request that the decision be deemed provisional, and a written statement of the basis on which the Applicant believes it is aggrieved, together with any supporting materials. Upon timely filing of such a request, the decision shall be deemed a provisional decision with an effective date twenty-one days after MassDEP's receipt of the request. Such a request shall reopen the administrative record, and MassDEP may rescind, supplement, modify, or reaffirm its decision. If MassDEP reaffirms its decision, the decision shall become final decision on the effective date. Failure by the Applicant to exercise the right provided in 310 CMR 19.033(4)(b) shall constitute waiver of the Applicant's right to appeal.

RIGHT TO APPEAL

Right to Appeal: This approval has been issued pursuant to M.G.L. Chapter 111, Section 150A, and 310 CMR 19.033: Permit Procedure for an Application for a Permit Modification or Other Approval, of the "Solid Waste Management Regulations". Pursuant to 310 CMR 19.033(5), any person aggrieved by the final permit decision, except as provided for under 310 CMR 19.033(4)(b), may file an appeal for judicial review of said decision in accordance with the provisions of M.G.L. Chapter 111, Section 150A and M.G.L. Chapter 30A no later than thirty days following the date of issuance of the final permit decision to the applicant. The standing of a person to file an appeal and the procedures for filing such an appeal shall be governed by the provisions of M.G.L. c. 30A. Unless the person requesting an appeal requests and is granted a stay of the terms and conditions of the permit by a court of competent jurisdiction, the permit decision shall be effective in accordance with the terms of 310 CMR 19.033(3).

Notice of Appeal - Any aggrieved person intending to appeal a final permit decision to the Superior Court shall first provide notice of intention to commence such action. Said notices of intention shall include the MassDEP Facility Number (39223) and shall identify with particularity the issues and reason why it is believed the final permit decision was not proper. Such notice shall be provided to the Office of General Counsel of the MassDEP and the Regional Director for the regional office which processed the permit application, if applicable, at least five days prior to the filing of an appeal.

Office of General Counsel
Department of Environmental Protection

Regional Director
Department of Environmental Protection

One Winter Street
Boston, MA 02108

20 Riverside Drive
Lakeville, MA 02347

No allegation shall be made in any judicial appeal of a final permit decision unless the matter complained of was raised at the appropriate point in the administrative review procedures established in 310 CMR 19.000, provided that a matter may be raised upon a showing that it is material and that it was not reasonably possible with due diligence to have been raised during such procedures or that matter sought to be raised is of critical importance to the environmental impact of the permitted activity.

Please direct any questions regarding this matter to me at mark.dakers@mass.gov / (774) 454 4477 or to Doug Coppi at douglas.coppi@mass.gov/ (508) 946-2833 or write to the letterhead address. MassDEP staff will make itself available for a pre-application meeting to discuss the scope of work should you wish one.

Very truly yours,

Seth Pickering
BAW/DRD
FOR

Mark Dakers, Chief
Solid Waste Management Section

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MassDEP Fact Sheet

Per- and Polyfluoroalkyl Substances (PFAS) in Drinking Water: Questions and Answers for Consumers

1. What are PFAS and how are people exposed to them?

Per- and Polyfluoroalkyl Substances are a group of chemical compounds called PFAS. Two PFAS chemicals, perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS), were extensively produced and are the most studied and regulated of these chemicals. Several other PFAS that are similar to PFOS and PFOA exist. These PFAS are contained in some firefighting foams used to extinguish oil and gas fires. They have also been used in a number of industrial processes and to make carpets, clothing, fabrics for furniture, paper packaging for food and other materials (e.g., cookware) that are resistant to water, grease and stains. Because these chemicals have been used in many consumer products, most people have been exposed to them.

While consumer products and food are the largest source of exposure to these chemicals for most people, drinking water can be an additional source of exposure in communities where these chemicals have contaminated water supplies. Such contamination is typically localized and associated with a specific facility, for example, an airfield at which they were used for firefighting or a facility where these chemicals were produced or used.

2. What is the Massachusetts 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) applicable to community (COM) and non-transient non-comminuty (NTNC) systems 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.

3. What are the EPA Health Advisories for PFAS?

On June 15, 2022, EPA released four drinking water health advisories for PFAS contaminants. These health advisories are:

- Interim updated Health Advisory for PFOA = 0.004 nanograms per liter (ng/L), or parts per trillion (ppt)
- Interim updated Health Advisory for PFOS = 0.02 ng/L
- Final Health Advisory for GenX chemicals = 10 ng/L

- Final Health Advisory for PFBS = 2,000 ng/L

Drinking water health advisories provide information on contaminants that can cause human health effects and are known or anticipated to occur in drinking water. EPA's health advisories are non-enforceable and non-regulatory and provide technical information to states agencies and other public health officials on health effects, analytical methods, and treatment technologies associated with drinking water contamination. EPA's lifetime health advisories identify levels to protect all people, including sensitive populations and life stages, from adverse health effects resulting from exposure throughout their lives to these PFAS in drinking water.

At this time, MassDEP is working to review the new EPA Interim Health Advisories and will determine next steps based upon that review. When EPA establishes an MCL for PFOA and PFOS, which they have indicated will occur over the next 2 years, MassDEP will adopt an MCL for these PFAS at least as stringent as EPA's.

For more information about EPA Health Advisories for PFAS see Drinking Water Health Advisories for PFAS Fact Sheet for Communities and Questions and Answers: Drinking Water Health Advisories for PFOA, PFOS, GenX, PFBS FAQs.

4. What health effects are associated with exposure to PFAS6?

The MassDEP drinking water standard is based on studies of the six PFAS substances in laboratory animals and studies of exposed people. Overall, these studies indicate that exposure to sufficiently elevated levels of the six PFAS compounds may cause developmental effects in fetuses during pregnancy and in breastfed infants. Effects on the thyroid, the liver, kidneys, hormone levels and the immune system have also been reported. Some studies suggest a cancer risk may exist following long-term exposures to elevated levels of some of these compounds.

It is important to note that consuming water with PFAS6 above the drinking water standard does not mean that adverse effects will occur. The degree of risk depends on the level of the chemicals and the duration of exposure. The drinking water standard assumes that individuals drink only contaminated water, which typically overestimates exposure, and that they are also exposed to PFAS6 from sources beyond drinking water, such as food. To enhance safety, several uncertainty factors are additionally applied to account for differences between test animals and humans, and to account for differences between people. Scientists are still working to study and better understand the health risks posed by exposures to PFAS. If your water has been found to have PFAS6 and you have specific health concerns, you may wish to consult with your doctor.

5. How can I find out about contaminants in my drinking water?

If you get your water from a public water system, you should contact them for this information. For a contact list for all public water systems in the Commonwealth you may visit:
https://www.mass.gov/media/831461/download

For private well owners see the Per- and Polyfluoroalkyl Substances (PFAS) in Private Well Drinking Water Supplies FAQ for more information.

6. What options should be considered when PFAS6 in drinking water is above MassDEP's drinking

water standard?

- ✓ Sensitive subgroups, including pregnant or nursing women, infants and people diagnosed by their health care provider to have a compromised immune system, should consider using bottled water that has been tested for PFAS6, for their drinking water, cooking of foods that absorb water (like pasta) and to make infant formula. Bottled water that has been tested for PFAS6, or formula that does not require adding water, are alternatives.
- ✓ For older children and adults, the MMCL is applicable to a lifetime of consuming the water. For these groups, shorter duration exposures present less risk. However, if you are concerned about your exposure while steps are taken to assess and lower the PFAS6 concentration in your drinking water, use of bottled water that has been tested for PFAS6 will reduce your exposure.
- ✓ Water contaminated with PFAS6 can be treated by some home water treatment systems that are certified to remove PFAS6 by an independent testing group such as NSF, UL, or Water Quality Association. These may include point of entry (POE) systems, which treat all the water entering a home, or point of use (POU) devices, which treat water where it is used, such as at a faucet.
- ✓ In most situations the water can be safely used for washing and rinsing foods and washing dishes.
- ✓ For washing items that might go directly into your mouth, like dentures and pacifiers, only a small amount of water might be swallowed and the risk of experiencing adverse health effects is very low. You can minimize any risk by not using water with PFAS6 greater than the MMCL to wash such items.
- ✓ The water can be safely used by adults and older children for brushing teeth. However, use of bottled water should be considered for young children as they may swallow more water than adults when they brush their teeth. If you are concerned about your exposure, even though the risk is very low, you could use bottled water for these activities.
- ✓ Because PFAS are not well absorbed through the skin, routine showering or bathing are not a significant concern unless PFAS6 levels are very high. Shorter showers or baths, especially for children who may swallow water while playing in the bath, or for people with severe skin conditions (e.g. significant rashes) would limit any exposure from the water.
- ✓ For pets or companion animals, the health effects and levels of concern to mammalian species, like dogs, cats and farm animals, are likely to be similar to those for people. However, because these animals are different sizes, have different lifespans, and drink different amounts of water than people it's not possible to predict what health effects an animal may experience from drinking water long-term with PFAS6 concentrations greater than the MMCL. There is some evidence that birds may be more sensitive to PFAS6. There is little data on PFAS6 effects on other species like turtles, lizards, snakes and fish. As a precaution, if you have elevated levels of PFAS6 in your water, you may wish to consider using alternative water for your pets. If you have concerns, you may also want to consult with your veterinarian.
- ✓ For gardening or farming, certain plants may take up some PFAS6 from irrigation water and soil. Unfortunately, there is not enough scientific data to predict how much will end up in a specific crop. Since people eat a variety of foods, the risk from the occasional consumption of produce grown in soil or irrigated with water contaminated with PFAS6 is likely to be low. Families who grow a large fraction of their produce would experience higher potential exposures and should consider the following steps, which should help reduce PFAS6 exposures from gardening:
    - Maximize use of rainwater or water from another safe source for your garden.
    - Wash your produce in clean water after you harvest it.
    - Enhance your soil with clean compost rich in organic matter, which has been reported to

reduce PFAS uptake into plants.
- Use raised beds with clean soil.

- **NOTE ON BOILING WATER:** Boiling water will not destroy these chemicals and will increase their levels somewhat due to water evaporation.
- **NOTE ON BOTTLED WATER:** Bottled water should only be used if it has been tested. The Massachusetts Department of Public Health requires companies licensed to sell or distribute bottled water or carbonated non-alcoholic beverages to test for PFAS. See https://www.mass.gov/info-details/water-quality-standards-for-bottled-water-in-massachusetts#list-of-bottlers-
- **NOTE ON POU and POE TREATMENT DEVICES:** Point of Use (POU) and Point of Entry (POE) treatment devices are not specifically designed to meet Massachusetts' drinking water standard for PFAS6, there are systems that have been designed to meet the USEPA's former Health Advisory of 70 ng/L for the sum of PFOS and PFOA. Any treatment device you use should be certified to meet the National Sanitation Foundation (NSF) standard P473 to remove PFOS and PFOA compounds so that the sum of their concentrations is below 70 ng/L. **Please be aware that 70 ng/L is significantly greater than the MassDEP's drinking water standard of 20 ppt for the PFAS6 compounds.** Many of these treatment devices certified to meet NSF standard P473 will likely be able to reduce PFAS6 levels to well below 70 ppt, but there are no federal or state testing requirements for these treatment devices. If you chose to install a treatment device, you should check to see if the manufacturer has independently verifiable PFAS6 monitoring results demonstrating that the device can reduce PFAS6 below 20 ppt. See more detailed information on POU/POE treatment systems in the Private Well Factsheet at https://www.mass.gov/info- details/per-and-polyfluoroalkyl-substances-pfas-in-private-well-drinking-water-supplies-faq

7. Where can I get more information on PFAS?

MassDEP PFAS Information. https://www.mass.gov/info-details/per-and-polyfluoroalkyl-substances-pfas

Per- and Polyfluoroalkyl Substances (PFAS) in Private Well Drinking Water Supplies FAQ

Massachusetts Department of Public Health PFAS webpage: https://www.mass.gov/service-details/per-and-polyfluoroalkyl-substances-pfas-in-drinking-water

Interstate Technology and Regulatory Council (ITRC) PFAS resources.
https://www.itrcweb.org/Team/Public?teamID=78

Association of State Drinking Water Administrators PFAS webpage https://www.asdwa.org/pfas/

Information on EPA's Drinking Water Health Advisories for PFOS, PFOA, Ge and PFBS can be found at:
https://www.epa.gov/sdwa/drinking-water-health-advisories-pfoa-and-pfos

The Centers for Disease Control and Prevention's Public Health Statement for PFOS and PFOA can be found at:
https://www.atsdr.cdc.gov/pfas/index.html

8. Where can I find more information about Treatment Devices for PFAS?

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

NSF PFAS information: https://www.nsf.org/knowledge-library/perfluorooctanoic-acid-and-perfluorooctanesulfonic-acid-in-drinking-water

USEPA information on PFAS and treatment devices: https://www.epa.gov/sciencematters/reducingpfas-drinking-water-treatment-technologies and https://www.epa.gov/sciencematters/epa-researchers-investigate-effectiveness-point-usepoint-entry-systems-remove-and

UL information on PFAS and treatment devices: https://www.ul.com/offerings/testing-and-certification-water-filtration-products

The Water Quality Association information on PFAS, including treatment: https://www.wqa.org/Portals/0/WQ&A%20sheets/WaterQA%20PFAS.pdf

For further information on PFAS in drinking water, including possible health effects, you may contact the Massachusetts Department Environmental Protection, Drinking Water Program at program.director-dwp@state.ma.us or 617-292-5770