



Town of Franklin, Massachusetts 2023 Drinking Water Report

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Important Information About Drinking Water

All sources of drinking water (both tap water and bottled water), including rivers, lakes, streams, ponds, reservoirs, springs, and wells, contain some naturally occurring contaminants or substances. Because water is the universal solvent, it dissolves naturally occurring minerals and, in some cases, radioactive material, and it can pick up substances resulting from the presence of animal and human activity.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. **More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's (EPA) Safe Drinking Water Hotline at 800-426-4791.**

Removing all contaminants would be extremely expensive and in nearly all cases would not provide greater protection of health. To ensure that your water is safe to drink, the Massachusetts Department of Environmental Protection (MassDEP) and the EPA regulate the allowable amount of certain contaminants in the water provided by public water systems. The Food and Drug Administration (FDA) and the Massachusetts Department of Public Health regulations establish limits

for contaminants in bottled water that must provide the same protection for public health. This report provides you with information about the contaminants found naturally in your drinking water, the levels at which they are found, and the likely source of each contaminant.

Contaminants that can be present include:

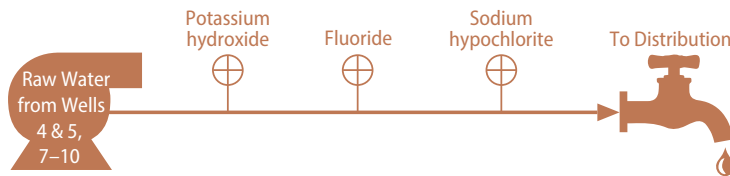
- **Microbial contaminants**, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- **Pesticides and herbicides**, which may come from a variety of sources, such as agriculture, urban stormwater runoff, and residential uses.
- **Inorganic contaminants**, such as salts and metals, which can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- **Organic chemical contaminants**, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- **Radioactive contaminants**, that can be naturally occurring or be the result of oil and gas production and mining activities.

Franklin's Drinking Water Sources

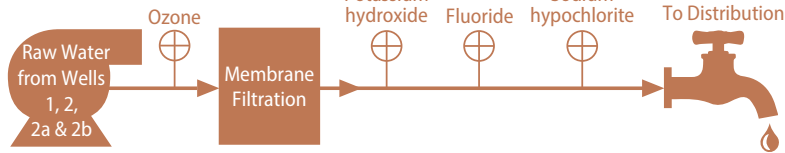
The Town of Franklin (Town) obtains its drinking water from 14 active groundwater supply wells and operates two water treatment plants (WTP), six booster pumping stations, six water storage tanks, 2,000 hydrants, 170 miles of water main, and more than 9,700 water services. Additionally, Franklin's water mains have interconnections with Bellingham, Medway, Wrentham, and Norfolk. During an emergency, Franklin could use these interconnections to maintain water pressure throughout the distribution system. The water system is operated by the Department of Public Works. Department personnel consist of a Superintendent, an Assistant Superintendent, and an 11 person crew.

Drinking Water Treatment Processes

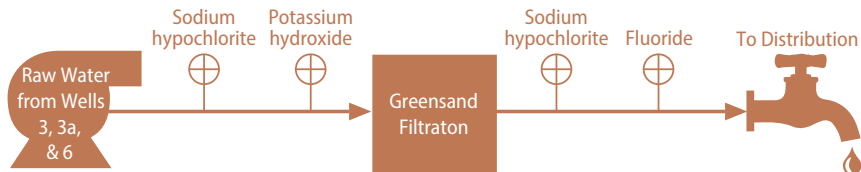
Well Sources without Filtration



Fisher Street WTP



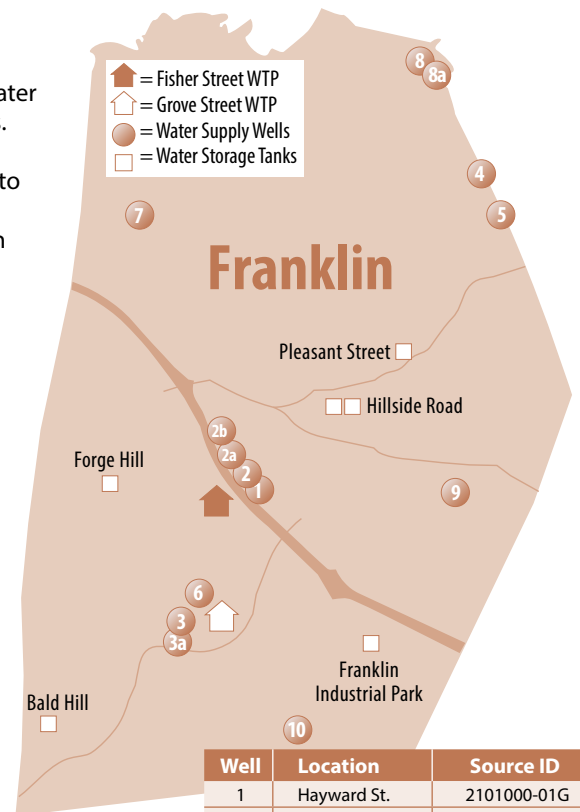
Grove Street WTP



Sodium hypochlorite (hypo) is added to disinfect water and ensure that microbes and other bacteria are killed. Hypo can also be added upstream of filtration to oxidize material in the water.

Potassium hydroxide is added to adjust pH and control corrosion of lead and copper household plumbing fixtures.

Fluoride is added to prevent tooth decay/cavities.



Well	Location	Source ID
1	Hayward St.	2101000-01G
2	Hayward St.	2101000-02G
2a	Hayward St.	2101000-011G
2b	Hayward St.	2101000-012G
3	Grove St.	2101000-03G
3a	Grove St.	2101000-13G
4	Miller St.	2101000-04G
5	Miller St.	2101000-05G
6	Grove St.	2101000-06G
7	Elizabeth Ave.	2101000-07G
8	Populatic St.	2101000-08G
8a	Populatic St.	2101000-14G
9	East Central St.	2101000-09G
10	Vine St.	2101000-10G

2023 Treated Water Quality Data Following are 17 substances detected in Franklin’s drinking water during 2023. Also listed are parameters that were not tested in 2023 as a result of a monitoring waiver but are required to be reported until the next round of testing is performed. In addition, not listed are around 100 other substances we tested for that were not detected during 2023.

Substance	Highest Detected Levels	Range of Detected Levels	Highest Level Allowed (MCL)	Ideal Goal (MCLG)	Source of Contamination
Regulated After Treatment					
Fluoride ^[1]	1 ppm	0.3 – 1 ppm	4 ppm	4 ppm	Water additive that promotes strong teeth
Nitrate	5.1 ppm	0.3 – 5.1 ppm	10 ppm	10 ppm	Runoff from fertilizer use; leaching from septic systems; erosion of natural deposits
Perchlorate	0.3 ppb	0.1 – 0.3 ppm	2 ppb	NA	Rocket propellants, fireworks, munitions, flares, blasting agents
PFAS6	17 ppt ^[2]	2.7 – 16.6 ppt	20 ppt	NA	‡ Discharges and emissions from industrial and manufacturing sources associated with the production or use of these PFAS, including production of moisture- and oil-resistant coatings on fabrics and other materials. Additional sources include the use and disposal of products containing these PFAS, such as firefighting foams.
Regulated in the Distribution System					
Chlorine (free)	0.8 ppm ^[3]	0.02 – 2.2 ppm ^[4]	4 ppm (MRDL)	4 ppm (MRDLG)	Water additive used to control microbes
Haloacetic Acids	22 ppb ^[3]	ND – 27.6 ppb	60 ppb	NA	Byproduct of drinking water chlorination
Total Trihalomethanes	44 ppb ^[3]	3.2 – 55 ppb	80 ppb	NA	Byproduct of drinking water disinfection
Regulated at Customer Tap					
Lead	3 ppb ^[5]	ND – 24 ppb	AL = 15 ppb	0	Corrosion of household plumbing systems
Copper	1.03 ppm ^[5]	ND – 1.33 ppm	AL = 1.3 ppm	1.3 ppm	Corrosion of household plumbing systems
Substance	Average Detected	Range of Detected Levels	SMCL	Effects Above the SMCL	
Secondary Contaminants					
Aluminum ^[6]	14 ppb	10 – 40 ppb	50 ppb	Colored water	
Iron	0.07 ppm	ND – 0.17 ppm	50 ppb	Taste and deposition on plumbing fixtures	
Manganese ^[7]	40 ppb	ND – 235 ppb	50 ppb	Taste and deposition on plumbing fixtures	
Substance	Average Detected	Range of Detected Levels	ORSG	Sources of Contamination	
Guideline Contaminants					
Chloroform	1.8 ppb	ND – 10.9 ppb	70 ppb	Byproduct of drinking water disinfection	
Sodium ^[6, 8]	27.8 ppm	Single sample	20 ppm	Discharge from the use and improper storage of sodium-containing de-icing compounds or in water-softening agents	
Substance	Average Detected	Range of Detected Levels	Date Collected	Sources of Contamination	
Unregulated Contaminants ^[9]					
Perfluorohexanoic Acid (PFHxA)	2.5 ppt	ND – 4.1 ppt	Various	Refer to ‡ above	
Perfluorobutanesulfonic Acid (PFBS)	2.6 ppt	ND – 4.3 ppt	Various	Refer to ‡ above	
Radon	967 pCi/L	Single Sample	1/24/23	Natural sources	
Hardness ^[10]	55.4 ppm	33.5 – 93.9 ppm	Various	Erosion of natural deposits	

Footnotes:

- [1] EPA’s MCL for fluoride is 4 ppm. Fluoride also has a secondary contaminant level (SMCL) of 2 ppm.
- [2] MassDEP requires that the single highest quarterly average be reported and notes that PFAS6 is a site-specific parameter that would not be averaged across sites.
- [3] Highest level detected is based on a running monthly or quarterly average of samples.
- [4] This range represents the individual results of all samples, rather than the averages.
- [5] Level shown indicates the 90th percentile, which is used to determine compliance with the Lead and Copper Rule and must be below the AL.
- [6] Results shown are from the most recent sampling in 2022.
- [7] EPA has established a lifetime health advisory (HA) of 300 ppb to protect against potential neurological effects, and 1-day and 10-day HA of 1.0 ppm for acute exposure. Manganese is naturally present in the environment.
- [8] Some people who drink water containing sodium at high concentrations for many years could experience an increase in blood pressure.
- [9] Unregulated contaminants are those for which EPA has not established drinking water standards.
- [10] Results shown are from most recent sampling in 2021. Franklin’s water is considered “soft” (hardness between 0 – 60 ppm) to “moderately hard” (hardness between 61 – 120 ppm).

Terms and Abbreviations	Definition
AL (Action Level)	– The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.
CU	– Color Unit.
MCL (Maximum Contaminant Level)	– The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
MCLG (Maximum Contaminant Level Goal)	– The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
MRDL (Maximum Residual Disinfectant Level)	– The highest level of a disinfectant (chlorine) allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
MRDLG (Maximum Residual Disinfectant Level Goal)	– The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the level of disinfectants required to control microbial contaminants.
ND	– Not detected.
NA	– Not available.
ORSG (Massachusetts Office of Research and Standards Guidelines)	: Guidance values developed by MassDEP ORS in absence of any other federal standards or guidance
pCi/L	– Picouries per liter is a measure of the radioactivity in water.
ppb (Part Per Billion or Micrograms per Liter [µg/L])	– One part per billion is the equivalent of \$1 in \$1,000,000,000.
ppm (Part Per Million or Milligrams per Liter [mg/L])	– One part per million is the equivalent of \$1 in \$1,000,000.
ppt (Part Per Trillion or Nanograms per Liter [ng/L])	– One part per trillion is the equivalent of \$1 in \$1,000,000,000,000.
SMCL (Secondary Maximum Contaminant Level)	– Concentration limit for a contaminant that may have aesthetic effects such as taste, odor, or staining.
90th percentile	– Out of every 10 homes, nine were at or below this level.

Vulnerability

Some people may be more vulnerable to contaminants than the general population. Immuno-compromised persons, such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some

elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care provider. EPA/ Centers for Disease Control and Prevention (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the **Safe Drinking Water Hotline at 800-426-4791**.

Understanding PFAS

Per- and polyfluoroalkyl substances (PFAS) are a large group of human-made organic chemicals that have been manufactured and used in a variety of industries around the globe, including in the United States, since the 1940s. PFAS are found in firefighting foams but also in a wide range of consumer products that people use daily, such as cookware, pizza boxes, and stain repellents. Some people who drink water containing these 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. 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 the water supply. MassDEP has enacted a standard of 20 parts per trillion

(ppt) for the sum of the following six PFAS (PFAS6) compounds: PFOS (perfluorooctanesulfonic acid), PFOA (perfluorooctanoic acid), PFNA (perfluorononanoic acid), PFHxS (perfluorohexanesulfonic acid), PFHpA (perfluoroheptanoic acid), and PFDA (perfluorodecanoic acid). A "part per trillion" is analogous to a grain of sand in an Olympic-sized swimming pool.



More information on PFAS and Franklin's drinking water can be found online at franklinma.gov/water-sewer-division/pages/and-poly-fluoroalkyl-substances-pfas-drinking-water.

Important Health Information

Nitrate: Nitrate in drinking water at levels above 10 parts per million (ppm) is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.

Lead: Since the inception of Franklin's corrosion control program in the early 1990s, lead and copper levels have remained well below the EPA action levels (AL). As shown in 2023 Treated Water Quality Data table, under "Regulated at Customer Tap," the most recent round of testing continued this pattern of compliance with lead and copper levels. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The Franklin Department of Public Works Water Division is responsible for providing high-quality drinking water, but it cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your drinking water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the [Safe Drinking Water Hotline at 800-426-4791](tel:800-426-4791) or at epa.gov/safewater/lead.

Cross-Connection Control Program

A cross connection is a connection between a drinking water pipe and a polluted source. The pollution can come from your own home. For example, to spray fertilizer on your lawn, you hook your hose up to the sprayer that contains the fertilizer. If the water pressure drops (for example, because of fire hydrant use in the town) when the hose is connected to the fertilizer, the fertilizer may be sucked back into the drinking water pipes through the hose. Using an attachment on your hose called a backflow-prevention device can prevent this problem.

The Franklin Water Department recommends the installation of backflow prevention devices, such as a low-cost hose bib vacuum breaker, for all inside and outside hose connections. You can purchase this tool at a hardware store or plumbing supply store. This is a great action for you to take to not only protect the water in your home but also help with the drinking water quality in your town!

Information on Fluoridation

Trace amounts of fluoride occur naturally in all water supplies. In many Massachusetts communities, the fluoride level is adjusted to approximately 0.7 ppm so that it is optimal for better oral health. More than 3.9 million people in 140 Massachusetts communities and 184 million people in the United States receive the health and economic benefits of fluoridation.

Additional Information and Updates

Water Service Line Inventory. The Franklin Public Works Department is undertaking a federally mandated survey of all customer service pipe materials. This program's goal is to identify lead components of the drinking water system. While there have been no identified instances of lead exceedances in the Town, we are mandated to identify and address any potential sources of lead that may exist. Please visit our website at lead-service-line-inventory-townoffranklin.hub.arcgis.com to determine whether you have a lead service line connecting the water distribution line in the street to your home.

Well 7 PFAS Treatment. In 2020, Well 7/7A had detections for four of six regulated PFAS. From December 2020 to January 2022, sampling results showed an overall increase in PFAS, with an exceedance of the Maximum Contaminant Level (MCL) occurring in January 2022. Through the Town's capital budget, money was allocated for the piloting and design of a new PFAS treatment facility adjacent to the existing building at the Well No. 7/7A site. The Town was listed on the 2023 Final Drinking Water State Revolving Fund (DWSRF) intended use plan to receive \$6.5 million. Because this project will be a PFAS treatment facility, it is eligible for an interest-free (0%) loan with additional principal loan forgiveness through the DWSRF program as a result of the 2021 Bipartisan Infrastructure Law (BIL). Construction of this project is expected to start in the summer of 2024.

Fisher Street WTP Upgrade. The Fisher Street WTP will require a replacement of the obsolete Koch membrane equipment in use at the plant. Replacement of the overall membrane system is expected to represent appreciable cost during 2025 through 2026. The Town reviewed its future options, namely, a replacement membrane-based system versus installation of a non-membrane treatment system featuring a pressure filtration system similar to the greensand filtration system at the Grove Street WTP. To improve the system reliability, enhance WTP safety of operations, reduce energy usage, and provide operational consistency, the Town chose to proceed with the pressure filtration system option. Through the Town's capital budget money has been allocated for Phase 1 and Phase 2 of the piloting and design for the upgrade. The 30% design estimated construction cost is \$25.7 million. The Town is on the 2024 Final DWSRF intended use plan to obtain low-interest loans and principal forgiveness on the total \$25.7 million dollar project. Similar to the Well 7 project, the Town is also eligible for 0% financing, depending on availability of funds, since the project includes PFAS remediation.

Do you have questions? For questions about this report and to learn more about the Town's water supply system, water quality, and other related information, [please contact Doug Martin, Water and Sewer Superintendent, at 508-520-4910](mailto:doug.martin@franklinma.gov). You may also attend the Town Council meetings, which are held two times per month on the second floor of the Municipal Building. **For more information about the Town Council meetings, visit franklinma.gov/town-council.**

Franklin Water Meets All Safety and Health Standards

We test our water regularly through a certified laboratory. During 2023, we collected thousands of water samples at the source and throughout the distribution system. These samples were tested for compliance with federal and state health standards. State and federal regulators routinely monitor our compliance and testing protocols to ensure we are delivering safe drinking water to our customers.



Water Leak Detection Survey

Conservation Technologies Inc. performed a leak detection survey on the entire Franklin water distribution system between November 11, 2023, and December 21, 2023. This survey covered 160 miles of distribution mains and detected six leaks. The estimated volume of loss from these leaks was 15.2 million gallons.

Monitoring Waivers

MassDEP reduced the monitoring requirements for inorganic chemicals (IOCs) for Wells 4, 5, 6, 8, and 9 and asbestos for all wells because these sources are not at risk of contamination. The last samples collected for these contaminants were taken in 2012 and 2011, respectively, and were found to meet all applicable EPA and MassDEP standards.

Source Water Assessment and Protection Program

The Source Water Assessment and Protection (SWAP) program assesses the susceptibility of public water supplies to contamination from land uses and activities within the recharge area of the water supply. Franklin's water supply consists of 13 wells, and their locations are shown in the figure on the cover page of this report. A susceptibility ranking of "high" was assigned to this system using the information collected during the assessment by MassDEP. A high ranking is given to any water supply that has at least one high-threat land use within the water supply protection area. Because Franklin has 10 high-threat land uses within the protection area, the town must be assigned a high susceptibility ranking. Potential sources of contamination within the water supply protection area are body shops, gas stations, furniture stripping and refinishing shops, paint shops, railroad tracks and yards, foundries or metal fabricators, fuel oil distributors, machine/metalworking shops, landfills and dumps, and large-quantity hazardous waste disposal locations.

This ranking does not mean that Franklin has poor water quality or will have poor water quality in the future. It only draws attention to various activities within the watershed that may be potential sources of contamination.

The SWAP then assesses what the town is doing to prevent contamination and recommends other measures that can be taken to further protect the sources. Some source protection measures Franklin has already implemented include maintaining tight security at the supply wells, protecting open space vital to water supply protection through an active land acquisition program, and having an aggressive Aquifer Protection Bylaw. **If you would like more information, the complete SWAP report is available at the Franklin Board of Health and online at mass.gov/doc/franklin-water-department-swap-report/download.**

For more information, contact Deacon Perrotta, Director of Operations, at 508-520-4910.

Franklin Department of Public Works

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POSTAL CUSTOMER
FRANKLIN, MA 02038

2023 Drinking Water Report Town of Franklin, Massachusetts Published May 2024

This report describes Franklin's drinking water sources and treated water quality for calendar year 2023 as well as the programs that protect the high quality of our water supply. The federal public right-to-know regulation mandates that community water suppliers provide specific treated water quality information to their customers annually. This report includes additional information beyond the minimum federal requirements to respond to typical questions our customers ask about Franklin's water system. Please share this information with other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses).