

# ANNUAL WATER QUALITY REPORT

Reporting Year 2022



*Presented By*  
**Hopkinton Water  
Department**



## Report Introduction

We are once again pleased to present our annual water quality report covering all testing performed between January 1 and December 31, 2022. As new challenges to our drinking water emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all our water users. Please remember that we are always available should you ever have any questions or concerns about your water.

If you have any questions about this report, or have any questions regarding your water utility, please contact Eric Carty, Hopkinton Department of Public Works, at (508) 497-9765.

## Water Treatment Process

Our water system makes every effort to provide you with safe and pure drinking water. To improve the quality of the water delivered to you, we treat for several contaminants. This includes a disinfectant to protect you against microbial contaminants and chemical treatment to reduce lead and copper concentrations. In addition to chemical treatment, water from the Howe Street WTF in Ashland is filtered. The department has completed the blending facility at Fruit Street to streamline treatment and blend out constituents such as iron and manganese. We are currently working on the installation of per- and polyfluoroalkyl substance (PFAS) filters at Well No. 6.

## Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) 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 or <http://water.epa.gov/drink/hotline>.

## Lead in Home Plumbing

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. We are responsible for providing high-quality drinking water, but we 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 two minutes before using water for drinking or cooking. If you are concerned about lead in your 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 or [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

## Source Water Assessment Protection

### What Is My System's Ranking?

A susceptibility ranking of moderate was assigned to this system using the information collected during the assessment by DEP.

### Where Can I See the Source Water Assessment Protection (SWAP) Report?

The complete SWAP report is available at the Hopkinton Water Department and online at <https://www.mass.gov/lists/source-water-assessment-and-protection-swap-program-documents#swap-reports-for-massachusetts-water-supplies->. For more information, call Eric Carty at (508) 497-9765.

The Ashland SWAP is now available at our office. This plan is an assessment of the delineated area around our listed sources through which contaminants, if present, could migrate and reach our source water. It also includes an inventory of potential sources of contamination within the delineated area and a determination of the water supply's susceptibility to contamination by the identified potential sources. According to the SWAP, our water system had a susceptibility rating of moderate. If you would like to review the SWAP, please feel free to contact our office during regular office hours at (508) 497-9765 or visit <https://www.mass.gov/lists/source-water-assessment-and-protection-swap-program-documents#swap-reports-for-massachusetts-water-supplies->.

We ask that you please be cognizant that any pesticides, herbicides, or chemical lawn care you use could potentially make their way into your water supply. Please use organic products, which are available at home improvement stores and Weston Nurseries.

We also ask that you refrain from storing oil, gasoline, paints, and other potential hazards in old containers or drums that may leak. If you have these items and need to dispose of them, please contact the Department of Public Works at (508) 497-9740. Each spring the department holds a hazardous waste collection, and these products can be disposed of properly during this time. We thank you for your assistance in preserving and protecting our precious water supplies. If you have any questions, please feel free to call our office.



## Substances That Could Be in Water

To ensure that tap water is safe to drink, the Department of Environmental Protection (DEP) and the U.S. Environmental Protection Agency (U.S. EPA) prescribe regulations limiting the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) and Massachusetts Department of Public Health (DPH) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material and can pick up substances resulting from the presence of animals or from human activity. Substances that may be present in source water include: Microbial Contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, or wildlife; Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming; Pesticides and Herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses; Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and which may also come from gas stations, urban stormwater runoff, and septic systems; Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

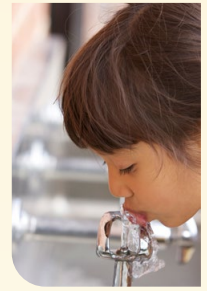
More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

## What's a Cross-Connection?

Cross-connections that contaminate drinking water distribution lines are a major concern. A cross-connection is formed at any point where a drinking water line connects to equipment (boilers), systems containing chemicals (air-conditioning systems, fire sprinkler systems, irrigation systems), or water sources of questionable quality. Cross-connection contamination can occur when the pressure in the equipment or system is greater than the pressure inside the drinking water line (backpressure). Contamination can also occur when the pressure in the drinking water line drops due to fairly routine occurrences (main breaks, heavy water demand), causing contaminants to be sucked out from the equipment and into the drinking water line (back-siphonage).

Outside water taps and garden hoses tend to be the most common sources of cross-connection contamination at home. The garden hose creates a hazard when submerged in a swimming pool or attached to a chemical sprayer for weed killing. Garden hoses that are left lying on the ground may be contaminated by fertilizers, cesspools, or garden chemicals. Improperly installed valves in your toilet could also be a source of cross-connection contamination.

Community water supplies are continuously jeopardized by cross-connections unless appropriate valves, known as backflow prevention devices, are installed and maintained. We have surveyed industrial, commercial, and institutional facilities in the service area to make sure that potential cross-connections are identified and eliminated or protected by a backflow preventer. We also inspect and test backflow preventers to make sure that they provide maximum protection. For more information on backflow prevention, contact the Safe Drinking Water Hotline at (800) 426-4791.



## Safeguard Your Drinking Water

Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides – they contain hazardous chemicals that can reach your drinking water source.
- Pick up after your pets.
- If you have your own septic system, properly maintain it to reduce leaching to water sources, or consider connecting to a public water system.
- Dispose of chemicals properly; take used motor oil to a recycling center.
- Volunteer in your community. Find a watershed or wellhead protection organization in your community and volunteer to help. If there are no active groups, consider starting one. Use U.S. EPA's Adopt Your Watershed to locate groups in your community.
- Organize a storm drain stenciling project with others in your neighborhood. Stencil a message next to the street drain reminding people: "Dump No Waste – Drains to River" or "Protect Your Water." Produce and distribute a flyer for households to remind residents that storm drains dump directly into your local water body.



## Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule, and the water we deliver must meet specific health standards. Here, we only show those substances that were detected in our water (a complete list of all our analytical results is available upon request). Remember that detecting a substance does not mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels.

Although *E. coli* was detected in an offline well, the water system is not in violation of the *E. coli* MCL.

The state recommends monitoring for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

REGULATED SUBSTANCES									
				Hopkinton Water Department		Ashland Water Department			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
2,4-D (ppm)	2022	70	70	0.235	ND–0.235	NA	NA	No	Runoff from herbicide used on row crops
Alpha Emitters (pCi/L)	2021	15	0	1.16	1.16–1.16	NA	NA	No	Erosion of natural deposits
Asbestos (MFL)	2021	7	7	0.19	0.19–0.19	NA	NA	No	Decay of asbestos cement water mains; erosion of natural deposits
Barium (ppm)	2021	2	2	0.03	0.02–0.03	NA	NA	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Bromate (ppb)	2022	10	0	NA	NA	1.7	ND–6.8	No	By-product of drinking water disinfection
Chloramines (ppm)	2022	[4]	[4]	NA	NA	1.3	ND–2.9	No	Water additive used to control microbes
Combined Radium (pCi/L)	2021	5	0	0.45	0.135–0.5	NA	NA	No	Erosion of natural deposits
Haloacetic Acids [HAAs]– Stage 1 (ppb)	2021	60	NA	4.93	2.26–4.93	20	14–25	No	By-product of drinking water disinfection
Nitrate (ppm)	2022	10	10	1.9	ND–1.9	0.08 <sup>2</sup>	0.05–0.12 <sup>2</sup>	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite (ppm)	2022	1	1	1.9	ND – 1.9	NA	NA	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
PFAS6 (ppt)	2022	20	NA	42	18.1–42	0.79	ND–3.16	Yes <sup>3</sup>	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
Tetrachloroethylene (ppb)	2022	5	0	NA	NA	1.6	ND–1.6	No	Discharge from factories and dry cleaners
Total Coliform Bacteria (positive samples)	2022	TT	NA	0	NA	0 <sup>2</sup>	NA	No	Naturally present in the environment
TTHMs [total trihalomethanes]– Stage 1 (ppb)	2022	80	NA	47.5	14–47.5	32 <sup>2</sup>	17–32 <sup>2</sup>	No	By-product of drinking water disinfection
Tap water samples were collected for lead and copper analyses from sample sites throughout the community									
				Hopkinton Water Department		Ashland Water Department			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL/ TOTAL SITES	AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2020	1.3	1.3	0.87	0/20	0.257 <sup>4</sup>	0/30 <sup>4</sup>	No	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	2020	15	0	0.005	0/20	3.7 <sup>4</sup>	0/30 <sup>4</sup>	No	Corrosion of household plumbing systems; erosion of natural deposits

SECONDARY SUBSTANCES									
				Hopkinton Water Department		Ashland Water Department			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Color (units)	2020	15	NA	5	ND-5	2.94 <sup>4</sup>	ND-14 <sup>4</sup>	No	Naturally occurring organic materials
Iron (ppb)	2022	300	NA	8700 <sup>5</sup>	ND - 8700 <sup>5</sup>	40	ND-100	No	Leaching from natural deposits; Industrial wastes
Manganese (ppb)	2022	50 <sup>6</sup>	NA	1.56 <sup>7</sup>	ND-1.56 <sup>7</sup>	20	ND-40	No	Leaching from natural deposits
pH (units)	2021	6.5-8.5	NA	NA	NA	7.58 <sup>4</sup>	7.3-7.87 <sup>4</sup>	No	Naturally occurring

UNREGULATED SUBSTANCES <sup>8</sup>									
				Hopkinton Water Department		Ashland Water Department			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE			
Bromodichloromethane (ppb)	2020	2.65	ND-2.65	NA	NA	NA			
Chlorodibromomethane (ppm)	2022	0.62	ND-0.62	NA	NA	NA			
Chloroform (ppb)	2022	0.52	ND-0.52	NA	NA	By-product of drinking water chlorination			
Naphthalene (ppm)	2022	0.76 <sup>9</sup>	ND-0.76 <sup>9</sup>	NA	NA	NA			
Sodium (ppm)	04/29/2021	42.8	ND-42.8	NA	NA	Natural sources; runoff from road salt; by-product of treatment			

<sup>1</sup> Sampled in 2018.  
<sup>2</sup> Sampled in 2021.  
<sup>3</sup> This is a Hopkinton Water Department violation only.  
<sup>4</sup> Sampled in 2022.  
<sup>5</sup> High level is from Well No. 5, which is only used in an emergency.  
<sup>6</sup> Manganese is a naturally occurring mineral found in rocks, soil, groundwater, and surface water. Manganese is necessary for proper nutrition and part of a healthy diet, but it can have undesirable effects on certain sensitive populations at elevated concentrations. U.S. EPA and DEP have established public health advisory levels for manganese to protect against concerns of potential neurological effects.  
<sup>7</sup> High level is from Well No. 2, which is only used in an emergency.  
<sup>8</sup> Unregulated contaminants are those for which the U.S. EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist U.S. EPA in determining their occurrence in drinking water and whether future regulation is warranted.  
<sup>9</sup> Hopkinton Water Department: This sample was exposed to mothballs in the building air.

## Definitions

**90th %ile:** Out of every 10 homes sampled, 9 were at or below this level. This number is compared to the Action Level to determine lead and copper compliance.

**AL (Action Level):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

**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.

**MFL (million fibers per liter):** A measure of the presence of asbestos fibers that are longer than 10 micrometers.

**MRDL (Maximum Residual Disinfectant Level):** The highest level of a disinfectant 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 benefits of the use of disinfectants to control microbial contaminants.

**NA:** Not applicable.

**ND (Not detected):** Indicates that the substance was not found by laboratory analysis.

**NTU (Nephelometric Turbidity Units):** Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

**pCi/L (picocuries per liter):** A measure of radioactivity.

**ppb (parts per billion):** One part substance per billion parts water (or micrograms per liter).

**ppm (parts per million):** One part substance per million parts water (or milligrams per liter).

**ppt (parts per trillion):** One part substance per trillion parts water (or nanograms per liter).

**SMCL (Secondary Maximum Contaminant Level):** These standards are developed to protect aesthetic qualities of drinking water and are not health based.

**TT (Treatment Technique):** A required process intended to reduce the level of a contaminant in drinking water.



## Where Does My Water Come From?

Our water system uses groundwater as its primary water source, in addition to water purchased from Ashland's Howe Street Water Treatment Facility (WTF). Our groundwater sources include the following eight wells.

SOURCE NAME	DEP SOURCE ID	SOURCE TYPE	LOCATION OF SOURCE
Fruit St. Well No. 1	2139000-01G	Groundwater	Off Fruit Street
Fruit St. Well No. 2	2139000-02G	Groundwater	Off Fruit Street
Fruit St. Well No. 3	2139000-03G	Groundwater	Off Fruit Street
Whitehall Well No. 4	2139000-04G	Groundwater	Off Donna Pass near Whitehall Reservoir
Whitehall Well No. 5	2139000-05G	Groundwater	Off Donna Pass near Whitehall Reservoir
Fruit St. Well No. 6	2139000-06G	Groundwater	Off Fruit Street
Well No. 7	2139000-07G	Groundwater	Off Alprilla Farm Road
Well No. 8	2139000-08G	Groundwater	Off Alprilla Farm Road
Ashland Treatment Plant		Groundwater	Howe Street Ashland

## Violation Information

We received notification that our system violated the 20 nanogram per liter (ng/L, or parts per trillion [ppt]) PFAS6 maximum contaminant level (MCL) during the compliance period. We are in the process of implementing treatment options to remove PFAS6. There is currently a bottled water rebate program for those in an affected category.

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.

