

# ANNUAL WATER QUALITY REPORT

Reporting Year 2024



***Presented By***  
**Maynard Water Division**

## Our Commitment

We are pleased to present to you this year's annual water quality report. This report is a snapshot of last year's water quality covering all testing performed between January 1 and December 31, 2024. Included are details about your source of water, what it contains, and how it compares to standards set by regulatory agencies. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources.

## Where Does My Water Come From?

Maynard's drinking water comes from six active groundwater sources. Three sources are 40 to 70 feet deep, constructed in sand-and-gravel deposits, located in the southern half of Maynard, and treated at the Green Meadow or Old Marlboro Road water treatment facilities. The remaining three sources are approximately 400 feet deep into bedrock, located in the northern half of Maynard, and treated at the Rockland Avenue treatment facility.



## Source Water Assessment

DEP has completed a Source Water Assessment and Protection (SWAP) report for our system. The SWAP report assesses the susceptibility of public water supplies to potential contamination by microbiological pathogens and chemicals. A high susceptibility ranking was assigned to our system. A source's susceptibility to contamination does not imply poor water quality. The report states the high vulnerability to contamination is due to the absence of hydrogeological barriers (e.g., clay) that can prevent contaminant migration. The complete SWAP report is available at [mass.gov/doc/maynard-dpw-water-division-swap-report/download](http://mass.gov/doc/maynard-dpw-water-division-swap-report/download).

## 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 can be particularly at risk from infections. These people should seek advice about drinking water from their health-care providers. U.S. Environmental Protection Agency (U.S. 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 or [epa.gov/safewater](http://epa.gov/safewater).



## Public Meetings

Any water supply concerns can be addressed in public at the select board meetings held on the first and third Tuesday of each month at 7:00 p.m. at Town Hall. Visit [townofmaynard-ma.gov](http://townofmaynard-ma.gov) for current news and updates.

## 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 (backsiphonage).

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.

## QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call Michael Hatch, Water/Sewer Division Superintendent, at (978) 897-1317.

## Substances That Could Be in Water

To ensure that tap water is safe to drink, U.S. EPA and the Massachusetts Department of Environmental Protection (DEP) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) and Massachusetts Department of Public Health regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

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.

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. 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.

## Water Treatment Process

All three water treatment facilities have greensand filters to remove iron and manganese and add chlorine for disinfection. Other chemicals that are added include potassium hydroxide, which is used to control corrosion in household plumbing, and potassium permanganate, which is used for its disinfectant properties and ability to remove naturally occurring metals such as iron and manganese. The Old Marlboro Road facility adds potassium permanganate and potassium hydroxide. The Rockland Avenue facility adds potassium permanganate and is also equipped with an air stripper to remove radon, a naturally occurring contaminant in bedrock wells. The Green Meadow facility adds potassium hydroxide and was recently upgraded with a recycling system that reclaims water used in the treatment process.



## Lead in Home Plumbing

Lead can cause serious health effects in people of all ages, especially pregnant people, infants (both formula-fed and breastfed), and young children. Lead in drinking water is primarily from materials and parts used in service lines and home plumbing. The Town of Maynard is responsible for providing high-quality drinking water and removing lead pipes but cannot control the variety of materials used in the plumbing in your home. Because lead levels may vary over time, lead exposure is possible even when your tap sampling results do not detect lead at one point in time. You can help protect yourself and your family by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Using a filter certified by an American National Standards Institute-accredited certifier to reduce lead is effective in reducing lead exposures. Follow the instructions provided with the filter to ensure it is used properly. Use only cold water for drinking, cooking, and making baby formula. Boiling does not remove lead from water.

Before using tap water for drinking, cooking, or making baby formula, flush your pipes for several minutes. You can do this by running your tap, taking a shower, or doing laundry or a load of dishes. If you have a lead or galvanized service line requiring replacement, you may need to flush your pipes for a longer period. If you are concerned about lead and wish to have your water tested, contact the Town of Maynard Water/Sewer Superintendent Michael Hatch at (978) 897-1317. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at [epa.gov/safewater/lead](http://epa.gov/safewater/lead).

To address lead in drinking water, public water systems were required to develop and maintain an inventory of service line materials by October 16, 2024. Developing an inventory and identifying the location of lead service lines (LSL) is the first step for beginning LSL replacement and protecting public health. The lead service inventory may be accessed by visiting [townofmaynard-ma.gov](http://townofmaynard-ma.gov). Please contact us if you would like more information about the inventory or any lead sampling that has been done at (978) 897-1317.

## 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.

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 is included, along with the year in which the sample was taken.

We participated in the fifth stage of the U.S. EPA's Unregulated Contaminant Monitoring Rule (UCMR5) program by performing additional tests on our drinking water. UCMR5 sampling benefits the environment and public health by providing the U.S. EPA with data on the occurrence of contaminants suspected to be in drinking water to determine if it needs to introduce new regulatory standards to improve drinking water quality. Unregulated contaminant monitoring data is available to the public, so please feel free to contact us if you are interested in obtaining that information. If you would like more information on the U.S. EPA's Unregulated Contaminant Monitoring Rule, please call the Safe Drinking Water Hotline at (800) 426-4791.

REGULATED SUBSTANCES							
Substance (Unit of Measure)	Year Sampled	MCL [MRDL]	MCLG [MRDLG]	Amount Detected	Range Low-High	Violation	Typical Source
Barium (ppm)	2024	2	2	0.022	NA	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chlorine (ppm)	2024	[4]	[4]	0.62	0.34–0.97	No	Water additive used to control microbes
Combined Radium (pCi/L)	2024	5	0	1.2	0.2–1.2	No	Erosion of natural deposits
Fluoride <sup>1</sup> (ppm)	2024	4	4	0.29	NA	No	Erosion of natural deposits; Maynard does not add any additional fluoride
Haloacetic Acids [HAAs] (ppb)	2024	60	NA	42	21–75	No	By-product of drinking water disinfection
Nitrate (ppm)	2024	10	10	0.54	ND–0.54	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Nitrite (ppm)	2024	1	1	0.12	0.059–0.12	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Perchlorate (ppb)	2024	2	NA	0.21	0.12–0.21	No	Inorganic chemicals used as oxidizers in solid propellants for rockets, missiles, fireworks, and explosives
PFAS6 (ppt)	2024	20	NA	12.66	5.28–18.5	No	Discharges and emissions from industrial and manufacturing sources associated with the production or use of water- and oil-resistant coatings on fabrics; Firefighting foams
Total Organic Carbon [TOC] (ppm)	2024	TT	NA	2.22	0.43–2.22	No	Naturally present in the environment
TTHMs [total trihalomethanes] (ppb)	2024	80 <sup>2</sup>	NA	69	43–84.5	No	By-product of drinking water disinfection

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

Substance (Unit of Measure)	Year Sampled	AL	MCLG	Amount Detected (90th %ile)	Range Low-High	Sites Above AL/Total Sites	Violation	Typical Source
Copper (ppm)	2024	1.3	1.3	0.126	ND–0.222	0/122	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2024	15	0	3.1	ND–11.7	0/122	No	Corrosion of household plumbing systems; Erosion of natural deposits

SECONDARY SUBSTANCES							
Substance (Unit of Measure)	Year Sampled	SMCL	MCLG	Amount Detected	Range Low-High	Violation	Typical Source
Iron (ppb)	2024	300	NA	297	ND–297	No	Leaching from natural deposits; Industrial wastes
Manganese (ppb)	2024	50 <sup>3</sup>	NA	611	ND–611	No	Leaching from natural deposits

## UNREGULATED SUBSTANCES<sup>4</sup>

Substance (Unit of Measure)	Year Sampled	Amount Detected	Range Low-High	Typical Source
Bromodichloromethane (ppb)	2024	11	1–11	By-product of drinking water chlorination
Bromoform (ppb)	2024	0.6	ND–0.6	By-product of drinking water chlorination
Chloroform (ppb)	2024	13	ND–13	By-product of drinking water chlorination
Dibromochloromethane (ppb)	2024	5.7	ND–5.7	By-product of drinking water chlorination
Perfluorohexanoic Acid [PFHxA] (ppt)	2024	3.7	NA	Discharges and emissions from industrial and manufacturing sources associated with the production or use of moisture- and oil-resistant coatings on fabrics and other materials; Use and disposal of products containing these PFAS, such as firefighting foams
Perfluorooctanoic Acid [PFOA] (ppt)	2024	4.8	NA	Discharges and emissions from industrial and manufacturing sources associated with the production or use of moisture- and oil-resistant coatings on fabrics and other materials; Use and disposal of products containing these PFAS, such as firefighting foams
Perfluoropentanoic Acid [PFPeA] (ppt)	2024	3.7	1.8–3.7	Discharges and emissions from industrial and manufacturing sources associated with the production or use of moisture- and oil-resistant coatings on fabrics and other materials; Use and disposal of products containing these PFAS, such as firefighting foams
Sodium (ppm)	2024	66.4	NA	Discharge from the use and improper storage of sodium-containing deicing compounds

<sup>1</sup>Fluoride has an SMCL of 2.0 ppm.

<sup>2</sup>Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system and may have an increased risk of getting cancer.

<sup>3</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. The U.S. EPA and DEP have set an aesthetics-based SMCL for manganese of 50 ppb. In addition, DEP's Office of Research and Standards has set a drinking water guideline for manganese (ORSG) that closely follows the U.S. EPA public health advisory. Drinking water may naturally have manganese, and when concentrations are greater than 50 ppb, the water may be discolored and taste bad. Over a lifetime, the U.S. EPA recommends that people limit their consumption of water with levels over 1,000 ppb, primarily due to concerns about possible neurological effects. Children up to one year of age should not be given water with manganese concentrations over 300 ppb, nor should formula for infants be made with that water for longer than 10 days. The ORSG differs from the U.S. EPA's health advisory because it expands the age group to which a lower manganese concentration applies from children less than six months of age to children up to one year of age to address concerns about children's susceptibility to manganese toxicity.

<sup>4</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 the U.S. EPA in determining their occurrence in drinking water and whether future regulation is warranted.

## 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.

**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.

**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.