

ANNUAL WATER QUALITY REPORT

Reporting Year 2021



Presented By
Milford Water Department

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

Este relatório contém a informação importante sobre sua água bebendo. Tenha-o por favor traduzido por um amigo ou por alguém que o compreende e o pode o traduzir para você.

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Quality First

Once again, we are proud to present our annual water quality report covering the period between January 1 and December 31, 2021. In a matter of only a few decades, drinking water has become exponentially safer and more reliable than at any other point in human history. Our exceptional staff continues to work hard every day—at all hours—to deliver the highest-quality drinking water without interruption. Although the challenges ahead are many, we feel that by relentlessly investing in customer outreach and education, new treatment technologies, system upgrades, and training, the payoff will be reliable, high-quality tap water delivered to you and your family.

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.

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>.

Where Does My Water Come From?

The Milford Water Department provides treated water from five different sources. Our Dilla Street facilities purify water from the Charles River, the Echo Lake Reservoir, the Dilla Street wells, and the Clark's Island wells. Our company also maintains a facility off Depot Street (currently undergoing major rehabilitation and construction to further improve the water quality in the system) that purifies water collected from five wells located along Godfrey Brook. All of our wells are constructed in sand-and-gravel aquifers with depths ranging from 22 to 52 feet. Due to this relatively shallow depth, it is critical that we protect our resources against contamination.

Our distribution system contains more than 100 miles of pipes, three water storage tanks, and three pumping stations that deliver approximately one billion gallons of water each year. Because none of our five sources of supply alone can provide the volume of water needed by our customers, each is used during different times of the year. One single source cannot usually be identified for each customer because we blend the water before purification and during delivery. We have the ability to obtain mutual aid from the towns of Bellingham, Holliston, Hopkinton, and Medway to meet any short-term water needs for our customers.

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 at www.epa.gov/safewater/lead.

QUESTIONS? For more information about this report, or for any questions relating to your drinking water, please call David L. Condrey, General Manager, at (508) 473-5110, or send an email to the department at milfordwater@milfordwater.com.

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.

Community Participation

You are invited to voice your concerns about your drinking water, customer service, and department projects at any time. Our office hours are Monday through Friday, 8:00 a.m. to 4:30 p.m. The Board of Water Commissioners meet monthly at the department offices on Dilla Street, and the public is welcome to attend. At these meetings, the general manager presents a department update, which includes all concerns raised by customers. Should you wish to speak during the meeting, please contact the general manager and make a request to be added to the next available meeting's agenda.

What are PFAS?

Per- and polyfluoroalkyl substances (PFAS) are a group of manufactured chemicals used worldwide since the 1950s to make fluoropolymer coatings and products that resist heat, oil, stains, grease, and water. During production and use, PFAS can migrate into the soil, water, and air. Most PFAS do not break down; they remain in the environment, ultimately finding their way into drinking water. Because of their widespread use and their persistence in the environment, PFAS are found all over the world at low levels. Some PFAS can build up in people and animals with repeated exposure over time.

The most commonly studied PFAS are perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS). PFOA and PFOS have been phased out of production and use in the United States, but other countries may still manufacture and use them.

Some products that may contain PFAS include:

- Some grease-resistant paper, fast food containers/wrappers, microwave popcorn bags, pizza boxes
- Nonstick cookware
- Stain-resistant coatings used on carpets, upholstery, and other fabrics
- Water-resistant clothing
- Personal care products (shampoo, dental floss) and cosmetics (nail polish, eye makeup)
- Cleaning products
- Paints, varnishes, and sealants

Even though recent efforts to remove PFAS have reduced the likelihood of exposure, some products may still contain them. If you have questions or concerns about products you use in your home, contact the Consumer Product Safety Commission at (800) 638-2772. For a more detailed discussion on PFAS, please visit <https://www.atsdr.cdc.gov/pfas/index.html>.

Source Water Assessment

As part of the Source Water Assessment Program (SWAP), the Massachusetts Department of Environmental Protection (MA DEP) conducted assessments of our drinking water sources in 2002 for the purpose of determining susceptibility of each drinking water source to potential contamination. The assessment susceptibility for Milford Water was reported to be high based on the presence of at least one high-threat land use within our protective areas. The complete SWAP report is available at the department office and online at <https://www.mass.gov/doc/central-region-source-water-assessment-protection-swap-program-reports-0/download>.

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 between January 1 and December 31, 2021, and we are pleased to report that your drinking water meets or exceeds all federal and state requirements. 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 are included, along with the year in which the sample was taken.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Barium (ppm)	2021	2	2	0.02	0.02–0.02	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chlorine (ppm)	2021	[4]	[4]	1.44	0.03–1.44	No	Water additive used to control microbes
Haloacetic Acids [HAAs]–Stage 2 (ppb)	2021	60	NA	32.0	1.3–32.0	No	By-product of drinking water disinfection
Nitrate (ppm)	2021	10	10	0.086	0.086–0.086	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Perchlorate (ppb)	2021	2	NA	0.33	0.33–0.33	No	Inorganic chemicals used as oxidizers in solid propellants for rockets, missiles, fireworks, and explosives
TTHMs [Total Trihalomethanes]–Stage 2 (ppb)	2021	80	NA	65.0	25.0–65.0	No	By-product of drinking water disinfection
Total Organic Carbon ¹ (ppm)	2021	TT	NA	2.7	1.8–2.7	No	Naturally present in the environment
Turbidity ² (NTU)	2021	TT	NA	1.11	0.05–1.11	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2021	TT = 95% of samples meet the limit	NA	98.72	NA	No	Soil runoff

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)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2019	1.3	1.3	0.211	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2019	15	0	2	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits

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.

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.

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.

OTHER REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
PFAS6 (ppt)	2021	20	NA	5.33	ND-5.33	No	Discharges and emissions from industrial and manufacturing sources and the use and disposal of products including moisture- and oil-resistant coatings on fabrics and other materials, firefighting foams

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chloride (ppm)	2021	250	NA	59	44-59	No	Runoff/leaching from natural deposits
Copper (ppm)	2021	1.0	NA	0.079	ND-0.079	No	Corrosion of household plumbing systems; Erosion of natural deposits
Iron (ppb)	2021	300	NA	130	ND-130	No	Leaching from natural deposits; Industrial wastes
Manganese ³ (ppb)	2021	50	NA	48	ND-48	No	Leaching from natural deposits
pH (units)	2021	6.5-8.5	NA	8.38	6.60-8.38	No	Naturally occurring
Total Dissolved Solids [TDS] (ppm)	2021	500	NA	140	68-140	No	Runoff/leaching from natural deposits
Zinc (ppm)	2021	5	NA	0.366	0.243-0.366	No	Runoff/leaching from natural deposits; Industrial wastes

UNREGULATED SUBSTANCES⁴

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Bromodichloromethane (ppb)	2021	11.1	11.1-11.1	By-product of drinking water disinfection
Chlorodibromomethane (ppb)	2021	2.5	2.5-2.5	By-product of drinking water disinfection
Chloroform (ppb)	2021	25.1	25.1-25.1	By-product of drinking water disinfection
Nickel (ppm)	05/12/2021	0.024	0.024-0.024	Naturally occurring
Sodium ⁵ (ppm)	05/12/2021	49	49-49	Naturally present in the environment; Stormwater runoff

OTHER UNREGULATED SUBSTANCES⁴

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Alkalinity (ppm)	11/23/2021	32	19-32	Naturally occurring
Calcium (ppm)	11/23/2021	7.55	6.99-7.55	Naturally occurring
Hardness (ppm)	11/23/2021	26	24.4-26	Naturally occurring
Magnesium (ppm)	11/23/2021	1.85	1.7-1.85	Naturally occurring
Perfluorobutanesulfonic Acid [PFBS] (ppt)	2021	3.18	ND-3.18	NA
Potassium (ppm)	11/23/2021	13	12-13	NA

¹The value reported under Amount Detected for TOC is the lowest ratio between percentage of TOC actually removed to the percentage of TOC required to be removed. A value of greater than 1 indicates that the water system is in compliance with TOC removal requirements. A value of less than 1 indicates a violation of the TOC removal requirements.

²Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system.

³Manganese is a naturally occurring mineral found in rocks, soil, groundwater, and surface water. It is necessary for proper nutrition and part of a healthy diet, but it can have undesirable effects on certain sensitive populations at elevated concentrations. MA DEP has set a health advisory limit for manganese at 300 ppb.

⁴Unregulated 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.

⁵Sodium-sensitive individuals, such as those experiencing hypertension, kidney failure, or congestive heart failure, should be aware of the levels of sodium in their drinking water where exposures are being carefully controlled.

