

ANNUAL WATER QUALITY REPORT

REPORTING YEAR 2019

Presented By
Milford Water Company



Our Mission Continues

We are once again pleased to present our annual water quality report covering all testing performed between January 1 and December 31, 2019. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal standards. We continually strive to adopt new methods for delivering the best-quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community outreach and education while continuing to serve the needs of all our water users. Thank you for allowing us the opportunity to serve both you and your family.

We encourage you to share your thoughts with us on the information contained in this report. After all, well-informed customers are our best allies. Should you ever have any questions or concerns, we are always available to assist you. Please visit our Web site for updates: www.milfordwater.com.

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

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 2 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.

Community Participation

You are invited to voice your concerns about your drinking water, customer service and company projects at any time. Our office hours are Monday through Friday, 8:00 a.m. to 5:00 p.m. The company's Board of Directors meet quarterly during the months of April, July, October, and January at the company's office on Dilla Street. At these meetings the manager presents a company review which include all concerns raised by customers.

Source Water Assessment

As part of the Source Water Assessment Program (SWAP), the Massachusetts Department of Environmental Protection 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 upon the presence of at least one high-threat land use within our protective areas. It is important to understand that this susceptibility rating does not imply poor water quality, only the system's potential to become contaminated within the assessment area. The complete SWAP report is available at the company's office and online at www.mass.gov/eea/docs/dep/water/drinking/swap/cero/swap-cero.pdf.

Where Does My Water Come From?

The Milford Water Company 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 feet to 52 feet. Due to this relatively shallow nature, 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 1 billion gallons of water each year. Because each of our five sources of supply cannot alone 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 every customer because we blend the water before purification and also during delivery. We have the ability to obtain mutual aid from the towns of Bellingham, Holliston, Hopkinton, and Medway for providing water to meet our short-term customer needs.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as those with cancer undergoing chemotherapy, those 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>.



Alarm Testing

On October 16, 2019, we received a Notice of Non-compliance (NON) from MassDEP for failing to properly test all alarms for critical chemicals on a quarterly basis. Though the alarms were working properly, they were not being tested as per 310 CMR 22.04(14)(b)4.c., which requires them to be manually tested quarterly. Actions were taken immediately which included testing all alarms and creating an SOP (Standard Operating Procedure) laying out the proper procedure with reporting requirements for the MONTHLY testing of all critical alarms.

Substances That Could Be in Water

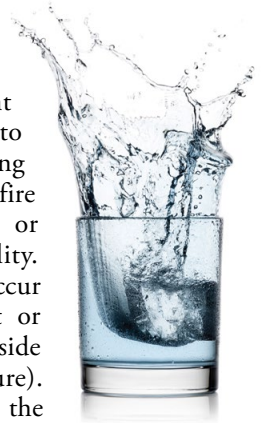
To ensure that tap water is safe to drink, the Department of Environmental Protection (MassDEP) and the U.S. Environmental Protection Agency (U.S. EPA) prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) and Massachusetts Department of Public Health (DPH) regulations establish limits for contaminants in bottled water that 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 (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 when 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.



Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule. The information in the data tables shows only those substances that were detected between January 1 and December 31, 2019. Remember that detecting a substance does not necessarily 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 often 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 which the sample was taken.

We participated in the 4th stage of the U.S. EPA's Unregulated Contaminant Monitoring Rule (UCMR4) program by performing additional tests on our drinking water. UCMR4 sampling benefits the environment and public health by providing the EPA with data on the occurrence of contaminants suspected to be in drinking water, in order to determine if the EPA needs to introduce new regulatory standards to improve drinking water quality. Unregulated contaminant monitoring data are 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)	2019	2	2	0.013	0.013–0.013	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chlorine (ppm)	2019	[4]	[4]	1.38	0.05–1.38	No	Water additive used to control microbes
Haloacetic Acids [HAAs] (ppb)	2019	60	NA	24.0	7.3–24.0	No	By-product of drinking water disinfection
Nitrate (ppm)	2019	10	10	0.473	0.0.473–0.473	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Perchlorate (ppb)	2019	2	NA	0.07	0.07–0.07	No	Inorganic chemicals used as oxidizers in solid propellants for rockets, missiles, fireworks, and explosives
TTHMs [Total Trihalomethanes] (ppb)	2019	80	NA	49.0	17.0–49.0	No	By-product of drinking water disinfection
Total Organic Carbon ¹ (ppm)	2019	TT	NA	2.4	2.0–2.4	No	Naturally present in the environment
Turbidity ² (NTU)	2019	TT	NA	1.99	0.06–1.99	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2019	TT = 95% of samples meet the limit	NA	99.93	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

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Manganese ³ (ppb)	2019	50	NA	17	ND–17	No	Leaching from natural deposits

¹ The value reported under Amount Detected for TOC is the lowest ratio between the 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.

² Turbidity 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.

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

⁴ Sodium-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.

⁵ Unregulated contaminants are those for which the U.S. EPA has not established drinking water standards. The purpose of monitoring unregulated contaminants is to assist the EPA in determining their occurrence in drinking water and whether future regulation is warranted.

⁶ Consumption of piperonyl butoxide in drinking water for many years at very high concentrations could result in effects on the liver and may possibly increase the risk of cancer.

⁷ Consumption of sumithrin in drinking water at very high concentrations could result in effects on the nervous system, including to the developing fetus, and may be irritating to the eyes and skin, but these effects are very unlikely as sumithrin in water breaks down very quickly.

UNREGULATED SUBSTANCES ⁵

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Bromodichloromethane (ppb)	2019	5.0	5.0–5.0	By-product of drinking water disinfection
Chlorodibromomethane (ppb)	2019	2.1	2.1–2.1	By-product of drinking water disinfection
Chloroform (ppb)	2019	9.7	9.7–9.7	By-product of drinking water disinfection
Nickel (ppm)	2019	0.020	0.020–0.020	A natural element of the earth's crust; therefore, small amounts found in food, water, soil, and air
Sodium ⁴ (ppm)	2019	11	11–11	Naturally present in the environment; storm water runoff

OTHER UNREGULATED SUBSTANCES ⁵

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Alkalinity (ppm)	2019	40	34–40	Naturally occurring
Bromochloroacetic Acid (ppb)	2019	3.5	1.6–3.5	NA
Bromodichloroacetic Acid (ppb)	2019	4.4	2.8–4.4	NA
Calcium (ppm)	2019	10.3	9.57–10.3	Naturally occurring
Chlorate (ppb)	2015	421.6	93.2–421.6	Agricultural defoliant or desiccant; Disinfection by-product; Used in the production of chlorine dioxide
Chlorodibromoacetic Acid (ppb)	2019	1.0	0.7–1.0	NA
Chromium (Total) (ppb)	2015	0.24	ND–0.24	Discharge from steel and pulp mills; Erosion of natural deposits
Chromium-6 (ppb)	2015	0.096	ND–0.096	Discharge from steel and pulp mills; Erosion of natural deposits
Cobalt (ppb)	2015	2.43	ND–2.43	Naturally occurring element found in the earth's crust; At low concentrations, found in some ground and surface waters
Dibromoacetic Acid (ppb)	2019	0.7	0.4–0.7	NA
Dichloroacetic Acid (ppb)	2019	8.8	0.3–8.8	NA
HAA5 (ppb)	2019	22.8	8.6–22.8	NA
HAA6Br (ppb)	2019	13.1	6.4–13.1	NA
HAA9 (ppb)	2019	35.2	14.9–35.2	NA
Hardness (ppm)	2019	36.0	33.6–36.0	Naturally occurring
Magnesium (ppm)	2019	2.51	2.30–2.51	Naturally occurring
Manganese (ppb)	2019	26.3	4.8–26.3	NA
Piperonyl butoxide ⁶ (ppm)	2019	0.042	0.0054–0.042	Deposition and run-off from pesticide application for mosquitoes
Potassium (ppm)	2019	24	21–24	NA
Strontium (ppb)	2015	115.1	55.16–115.1	Naturally occurring element; Historically, commercially used in the faceplate glass of cathode-ray tube televisions to block X-ray emissions
Sumithrin (d-Phenothrin) ⁷ (ppm)	2019	0.024	0.024–0.024	Deposition and run-off from pesticide application for mosquitoes
Trichloroacetic Acid (ppb)	2019	9.0	3.9–9.0	NA

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 that, if exceeded, triggers treatment or other requirements that a water system must follow.

LRAA (Locational Running Annual Average): The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters. Amount Detected values for TTHMs and HAAs are reported as the highest LRAAs.

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).

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

TON (Threshold Odor Number): A measure of odor in water.

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