

MATTAPOISETT WATER DEPARTMENT

PUBLIC WATER SYSTEM ID # 4173000

2021 DRINKING WATER

QUALITY REPORT

This is the annual water quality report of the Mattapoisett Water Department. This report is intended to provide you with important information about your drinking water. We know that you count on us for a safe and reliable supply of water every day and our goal is to provide the highest quality of service to you.

We want you, our customers to know that our drinking water meets Federal and State standards.

If you have any questions about this report please contact Henri H. Renauld, Superintendent at (508)-758-4161.

The Mattapoisett Water Department is operated under the direction of the Board of Water Commissioners. Their meetings are held at 9:00 am on the first and third Wednesday of each month in the Water Department Office at 19 County Road.

YOUR DRINKING WATER SOURCE

All the drinking water supplied to our customers is provided by ground water from four (4) municipal wells in the Mattapoisett River Valley Aquifer. The four wells are made up of the following: #6 Station-Well Field, located off Acushnet Road.#3 Station-Gravel Packed Well, located off Hereford Hill Road.#4 Station-Gravel Packed Well, located off Hereford Hill Road.#5 Station-Gravel Packed Well, located on Pumping Station Road, off Long Plain Road. Currently the average daily demand is 477,424 gallons per day, with a peak demand of 1,251,000 gallons per day. The wells are all within the Department of Environmental Protection Approved Mattapoisett River Aquifer Protection District and they are in the northwestern part of Town. Our department also owns the areas around the wells and

restricts any activity that could contaminate them. Mattapoisett also receives water from the Mattapoisett River Valley Water District Public Water Supply # 4173001. The District gets water from five additional groundwater wells in the Mattapoisett River Valley Aquifer. The water from the district as well as from the Town is P.H. adjusted for corrosion control. The district also has ultra-filtration and ozone for the removal of Iron and Manganese

Source Water Assessment and Protection (SWAP)

The source water assessment and protection program assess the susceptibility of the public water supplies to potential contamination by microbiological pathogens and chemicals. A susceptibility ranking of high was assigned to this system using the information collected during the assessment by the DEP. The complete SWAP report is available at the Water and Sewer Department at 19 County Road.

This report can also be accessed at the MassDEP website at www.mass.gov/dep/water/drinking/sourcewa.htm

WHAT CAN BE IN DRINKING WATER?

All sources of drinking water (both tap water and bottled water) including rivers, lakes, streams, ponds, reservoirs, springs and wells are subject to potential contamination that are naturally occurring or are man-made. Contaminants that can potentially be present in source water include:

Microbial Contaminants such as viruses and bacteria may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.

Organic Chemical Contaminants include synthetic and volatile organic chemicals that are by-products

of industrial processes and petroleum production, and can come from gas stations, urban storm water runoff and septic systems.

Inorganic Contaminants such as salts and metals can be naturally occurring or result from urban storm water runoff, industrial, or domestic wastewater discharges, oil and gas production, mining, and farming.

Pesticides and Herbicides may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.

Radioactive Contaminants can be naturally occurring or be the result of oil and gas production, and mining activities.

In order to ensure that tap water is safe to drink EPA and MassDEP prescribe regulations that limit the number of certain contaminants in the water provided by public water systems. FDA and MA Department of Public Health regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

All 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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at (1-800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, people who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and some infants can be particularly at risk from infection. These people should seek advice about drinking water from their healthcare providers. E.P.A./Center for Disease Control guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

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. The Mattapoisett Water Department is responsible for providing high quality drinking water but 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 or at <http://www.epa.gov/safewater/lead>.”

WATER QUALITY DATA FOR 2021

The table below shows only the substances that were detected in the Mattapoisett Drinking water. Additional testing for 56 volatile organic chemicals and 13 inorganic chemicals showed no detection of any of those chemicals. For a complete listing of all the possible contaminants that we are required to test for contact our Water Superintendent, Henri H. Renauld, at 508-758-4161 ext.203

Inorganic Contaminants	Highest Result or Average	Range Detected	MCL or MRDL	MCLG or MRDLG	Violation (Y/N)	Possible Sources
Nitrate (ppm)	0.45	ND – 0.45	10	10	N	Runoff from fertilizer use; leaching from septic tanks; natural deposits
Chloroform (ppb)	0.7 - 1.5	1.5	4	4	N	Erosion of natural deposits
Perchlorate (ppb)	0.08	0.012 – 0.08	2	--	N	Rocket propellants, fireworks, munitions, flares, blasting agents
Radioactive Contaminants						
Gross Alpha (pCi/l)	0.7	0 – 0.7	15	0	N	Erosion of natural deposits
Radium 226 & 228 (pCi/l)	0.23	0 – 0.23	5	0	N	Decay of natural and manmade deposits

Unregulated or Secondary	Average	Highest Result	SMCL Or ORSG	EPA Health Advisory	Possible Sources
Manganese (ppb)	114	114	50	300	Use of water containing manganese at concentrations above the Secondary MCL may result in aesthetic issues including the staining of laundry and plumbing fixtures and water with an unpleasant bitter metallic taste, odor and/or black/brown water.
Sodium (ppm)	40.8	40.8	20	--	Discharge from the use and improper storage of sodium-containing de-icing compounds or in water -softening agents.
Sulfate (ppm)	11.4	11.4	250	--	Erosion of natural deposits, industrial wastes.
Unregulated contaminants are those for which the U.S. EPA has not established drinking water standards. The purpose of unregulated contaminants monitoring is to assist U.S. EPA in determining their occurrence in drinking water and whether future regulated is warranted.					

*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 can have undesirable effects on certain sensitive populations at elevated concentrations. The United States Environmental Protection Agency (EPA) and MassDEP have set an aesthetics-based Secondary Maximum Contaminant Level (SMCL) for manganese of 50 ug/L (microgram per liter), or 50 parts per billion. In addition, MassDEP's Office of Research and Standards (ORS) has set a drinking water guideline for manganese (ORSG), which closely follows the EPA public health advisory for manganese. **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 EPA recommends that people drink water with manganese levels less than 300 ppb and over the short term, EPA recommends that people limit***

their consumption of water with levels over 1000 ppb, primarily due to concerns about possible neurological effects. Children younger than one year old should not be given water with manganese concentrations over 300 ppb, nor should formula for infants be made with that water for more than a total of ten days throughout the year. The ORSG differs from the 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. See EPA Drinking Water Health Advisory for manganese at: https://www.epa.gov/sites/production/files/2014-09/documents/support_cc1_magnese_dwreport_0.pdf and MassDEP Office of Research and Standards (ORSG) for manganese <http://www.mass.gov/eea/agencies/massdep/water/drinking/lead-and-other-contaminants-in-drinking-water.html#11>

Lead and Copper	90 TH percentile	Action Level	MCLG	# of sites sampled	# of sites above Action Level	Possible Source of Contamination
Lead (ppb)	0.5	15	0	20	0	Corrosion of household plumbing, Erosion of natural deposits
Copper (ppm)	0.28	1.3	1.3	20	0	Corrosion of household plumbing, Erosion of natural deposits. Leaching from wood preservatives.

Our system had a violation of water quality for the 2021 reporting period for total coliform

Bacteria	MCL / TT	MCLG	Value	Date	Violation (Y/N)	Possible Sources
<i>Total Coliform</i>	MCL/TT	0	4	9/14/21and10/5/21	N/Y	Naturally present in the environment

The Town of Mattapoissett detected *Total coliform* in the distribution system; the samples were TC+ collected on 9/14/21 and 10/5/21. More information about this situation is provided in the situation section below

Bacteria	MCL / TT	MCLG	Value	Date	Violation (Y/N)	Possible Sources
<i>E. coli</i>	MCL/TT	0	2	10/5/21	N/N	Human and animal fecal waste

The Town of Mattapoissett detected *E. coli* in the distribution system; the sample was collected in response to a TC+ routine sample collected on 10/5/21. More information about this situation is provided in the situation section below.

The Town of Mattapoisett experience two events in the months of September and October. The first event Total coliform was found to be present in 2 of the routine samples taken, the second event Total coliform and E-coli were found in 2 routine samples. These events were caused by a compromised well that tested positive for Total Coliform and E-coli pumping water into the main treatment facility. In accordance with D.E.P. a Unilateral Administrative Order (Boil Order) was put in place from 10/7/21 -10/15/21 at which time corrective actions were taken to mitigate the situation. There were no MCL violations since repeat samples on both occasions were found to be absent of any bacteria.

During the past year, we were required to conduct [1] Level 1 assessments. [1] Level 1 assessments were completed. In addition, we were required to take [1] corrective actions and we completed [1] of these actions

A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

During the past year, [1] Level 2 assessments were required to be completed for our water system. [1] Level 2 assessment were completed. In addition, we were required to take [3] corrective actions and we completed [3] of these actions.

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify any problems that were found during these assessment

E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short term effects such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems. We found E. coli bacteria, indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessments to identify problems and to correct any problems that were found during these assessments. We were required to complete a Level 2 assessment because we found E. coli in our water system. In addition, we were required to take [3] corrective actions and we completed [3] of these actions.

TERMS AND ABBREVIATIONS

Maximum Contamination Level or Mcl: The highest level of a contaminate allowed in drinking water. MCLs are set as close to the MCLGs (see below) as feasible using the best available treatment technology.

Maximum Contamination Level Goal or Mclg: 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.

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

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

ppm: Parts per Million or Milligrams per liter (mg/l)

ppb: Parts per Billion or Micrograms per liter (ug/l)

NR: Not regulated

ND: Non-Detectable at Testing Limit

pCi/l: Picocuries per liter (a measure of radiation)

ORSG Office of research and standards

SMCL Secondary maximum contaminate level

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 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 all industrial, commercial, and institutional facilities in the service area to make sure that all potential cross-connections are identified and eliminated or protected by a backflow preventer. We also inspect and test each backflow preventer to make sure that it is providing maximum protection.

For more information, review the Cross-Connection Control Manual from the U.S. EPA's Web site at <http://water.epa.gov/infrastructure/drinkingwater/pws/crossconnectioncontrol/index.cfm>. You can also call the Safe Drinking Water Hotline at (800) 426-4791.

Summer water saving tips

You can have a beautiful garden and lawn and still save a great deal of water by following these water saving tips.

- Water your garden and lawn only when it needs it rather than on a regular schedule.
- Water during cooler parts of the day to reduce the amount of evaporation.
- Don't water the driveway or street, align your sprinkler so the water falls on your lawn or garden not the paved surfaces.
- Know how to turn off your automatic sprinkler if it rains.
- Don't leave your hose unattended, it can pour out hundreds of gallons in just a few hours.
- Use mulch around trees and plants to minimize moisture loss while also discouraging weeds.
- Fix any leaks on toilets, hoses and faucets as soon as possible.

For additional water saving facts and ideas please contact or stop by our office at 19 County Road for more information also visit the Town Web-Page and look at Water and Sewer Department.

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