ANNUAL WATER QUALITY REPORT

Reporting Year 2021

Presented By

Taunton DPW
Water Divsion

Este relatório contém informações importantes sobre a água potável. Ter alguém que traduzi-lo para você, ou falar com alguém que entende-lo.

PWS ID#: 4293000

Quality First

The Taunton Water Division proudly presents its annual water quality report for 2021. We remain committed to providing our consumers with the highest-quality water possible. Our exceptional staff continues to work hard every day to deliver drinking water without interruption. Although challenges exist, we feel that by investing in customer education, compliance with ever-evolving regulations, and system upgrades, the reward will be reliable tap water delivered to you and your family.

Where Does My Water Come From?

The drinking water supplied by our system comes from the Assawompset Pond Complex (Assawompset, Pocksha, Great Quittacus, Little Quittacus, and Long Ponds) and Elders Pond. All six reservoirs are located in Freetown, Lakeville, Middleborough, and Rochester, Massachusetts. Raw water from these ponds is treated at the Charles J. Rocheleau Water Filtration Plant located in Lakeville. The treated water is then pumped to the distribution system, where it is either delivered to our customers or sent to one of five storage facilities. The Prospect Hill Reservoir, East Taunton Elevated Storage Tank, the Lakeville Storage Tank, the Oakland Elevated Storage Tank, and the Myles Standish Industrial Park Elevated Storage Tank combined provide more than 25 million gallons of water storage. Our system has two interconnections to supply both the Village of North Dighton Water District and the Commonwealth of Massachusetts Bridgewater Correctional Complex with potable water. Our system also has potable water services in parts of Berkley, Lakeville, Middleborough, Norton, and Raynham.

> "When the well is dry, we know the worth of water."
>
> —*Benjamin Franklin*

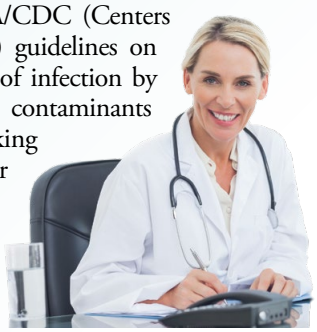
How Is My Water Treated?

The treatment process consists of multiple steps. Water is drawn from Elders Pond, the terminal reservoir of the water supply system. Caustic soda is added to raise the pH. Then carbon dioxide gas is added to combine with the caustic soda to increase the alkalinity of the water for improved corrosion control in the distribution system. A coagulant is added to cause small particles (called floc) to clump together, making them heavy enough to settle into a basin, from which the accumulated sediment is removed. The water is then filtered through five anthracite coal-and-sand filter beds to remove any remaining particles. The clear water exiting the filters is then run through a UV light system to help reduce the amount of additional disinfectant required. Chlorine is added to prevent waterborne diseases, and fluoride is added to help prevent tooth decay. Before leaving the treatment plant, a final application of caustic soda adjusts the pH to optimum levels for corrosion control, and ammonia is applied to produce chloramines, which provide a long-lasting disinfectant residual in the distribution system.

Important Health Information

Nitrate in drinking water at levels above 10 ppm is a health risk for infants younger than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask advice from your health care provider.

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.



Source Water Assessment and Protection Program

In September 2002, the Massachusetts Department of Environmental Protection completed a Source Water Assessment and Protection Program (SWAP) report for the City of Taunton's public water system. The Taunton Water System was assigned a susceptibility ranking of "high" based on potential pollution sources in our watershed. These threats include cranberry bogs, horse farms, transportation corridors, and septic systems/cesspools. We participate in several programs to protect our water supply, review and comment on all permitted activities within 400 feet of our source waters, and help patrol the APC for unauthorized use.

The SWAP report is available at the Taunton DPW Water Division, 90 Ingell Street, Taunton, and online at https://www.mass.gov/doc/southeast-region-source-water-assessment-protection-swap-program-reports/download.

Questions?

For more information about this report, or for any questions relating to your drinking water, please contact Michael Arruda, Water Superintendent, (508) 821-1045. You can also visit our website at www.taunton-ma.gov/dpw-water-division.

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.

The Benefits of Fluoridation

Our system adds fluoride at an optimal level averaging 0.7 part per million (ppm) to improve oral health in children. At this level, it is safe, odorless, colorless, and tasteless. There are over 3.9 million people in 140 Massachusetts water systems and 184 million people in the U.S. who receive the health and economic benefits of fluoridation.

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.

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.

Test Results

Our water is monitored for many different kinds of substances, and the water we deliver must meet specific health standards. The following table shows substances detected during 2021 sampling. A detection does not mean the water is unsafe to drink; we did not exceed any maximum contaminant levels set by MassDEP or U.S. EPA.

In 2021 MassDEP began regular monitoring for six per- and polyfluoroalkyl substances, commonly known as PFAS6. The Taunton Water Division was required to monitor for PFAS once per quarter in 2021. All results were well below the maximum contaminant level of 20 parts per trillion (ppt) for combined PFAS6 detections. Taunton will only be required to monitor for PFAS once per year going forward.

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
Chloramines (ppm)	2021	[4]	[4]	2.0	1.0–3.0	No	Water additive used to control microbes
Combined Radium (pCi/L)	2021	5	0	1.07	NA	No	Erosion of natural deposits
Fluoride (ppm)	2021	4	4	0.7	0.20–0.8	No	Water additive which promotes strong teeth
Haloacetic Acids [HAAs]–Stage 2 (ppb)	2021	60	NA	31.6	2.5–49	No	By-product of drinking water disinfection
Nitrate (ppm)	2021	10	10	7.31	NA	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Perchlorate (ppb)	2020	2	NA	0.09	0.09–0.09	No	Inorganic chemicals used as oxidizers in solid propellants for rockets, missiles, fireworks, and explosives
PFAS6 (ppt)	2021	20	NA	1.15	ND – 2.34	No	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 such as firefighting foams
TTHMs [Total Trihalomethanes]–Stage 2[1] (ppb)	2021	80	NA	39.6	21–83.6	No	By-product of drinking water disinfection
Turbidity[2] (NTU)	2021	TT	NA	0.25	0.01–0.25	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2021	TT = 95% of samples meet the limit	NA	100	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)	2020	1.3	1.3	0.08	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2020	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
Aluminum (ppb)	2021	200	NA	20	ND–40	No	Erosion of natural deposits; Residual from some surface water treatment processes
Chloride (ppm)	2021	250	NA	40.5	NA	No	Runoff/leaching from natural deposits
Color (units)	2021	15	NA	5	ND–10	No	Naturally occurring organic materials
Sulfate (ppm)	2021	250	NA	6.74	NA	No	Runoff/leaching from natural deposits; Industrial wastes
Total Dissolved Solids [TDS] (ppm)	2021	500	NA	128	NA	No	Runoff/leaching from natural deposits

UNREGULATED SUBSTANCES [3]

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Bromodichloromethane (ppb)	2021	3.8	NA	Disinfectant by-product; Marine microalgae
Chlorodibromomethane (ppb)	2021	0.5	NA	Disinfectant by-product; Chemical intermediate
Chloroform (ppb)	2021	8.6	NA	Disinfectant by-product; Chemical intermediate
Sodium (ppm)	2021	42.0	NA	Erosion of natural deposits; Soil runoff

OTHER UNREGULATED SUBSTANCES [3]

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Calcium (ppm)	2021	1.38	NA	Dissolves from limestone, marble, and other natural rock formations
Hardness (ppm)	2021	9.11	NA	Naturally occurring
Magnesium (ppm)	2021	1.38	NA	Minerals and sedimentary rock
Potassium (ppm)	2021	1.3	NA	Runoff from fertilizer

[1] A single result over the MCL does not trigger a violation. 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.

[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] 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.

Monitoring and Reporting Violation

Our water system violated a drinking water monitoring and reporting standard in 2021. Even though this was not an emergency, as our customers, you have a right to know what happened and what we did to correct the situation.

A required synthetic organic compound (SOC) sampling event was accidentally missed in the second quarter of 2021. SOCs are a class of human-made contaminants that may be present in water. Collectively, this group includes herbicides, pesticides, and other chemicals that come from agriculture, urban stormwater runoff, or industrial activities. The fourth-quarter SOC sampling event was completed on time. The missed SOC sampling event was made up in the first quarter of 2022, per arrangements with MassDEP. All results from both sampling events were under the state maximum contaminant levels. There were no negative quality or health effects as a result of the missed sampling event, and there is nothing you need to do at this time.

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.

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.