

Somerset Water Department

2024 Drinking Water Quality Report PWS #4273000



THE QUALITY OF YOUR DRINKING WATER

We are pleased to present to you this year's Annual Drinking Water Quality Report. This report is designed to inform you about the water quality and services that we, the Somerset Water Department (SWD), delivered to you in 2024. Included are details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. Our goal is to provide you with a safe and dependable supply of drinking water.

If you have any questions about this report or concerning your water utility, please contact Christopher E. Wickman, Chief Operator and Plant Manager at (508) 674-4215. Furthermore, The Board of Water and Sewer Commissioners meets every other Wednesday at 4:00 PM at 3249 County Street and you are always welcome to attend. You can also visit our website at: <https://www.townofsomerset.org/344/Water-Department>

THE SOURCE OF YOUR DRINKING WATER

Somerset Water Department services the town of Somerset, a small area of Dighton and a few homes located in Swansea. The community is serviced by the Somerset Reservoir (#10390S) and its treatment plant (#10390) located in Somerset. Water to fill the reservoir comes from rainfall, the stream flow of the Labor in Vain Brook and is also pumped from a pump station on the Segreganset River in Dighton.

The town-owned land in Dighton and the Somerset Reservoir are protected by regulations in both communities from possible contamination. Testing the quality and quantity of our source water and monitoring land development around our sources ensures these supplies are safe and viable. The Massachusetts Department of Environmental Protection (MADEP) has prepared a Source Water Assessment Program (SWAP) Report for our water supply sources and has ranked the Dighton well as moderate and the Somerset Reservoir as high susceptibility public water supplies. The complete report is available at our website or by calling our office.

To improve the quality of the water delivered to you and meet state and federal requirements, we filter it to remove small particles and organisms and adjust pH to reduce corrosion to household plumbing. We then disinfect the water to protect against microbial contaminants and add fluoride to promote strong teeth and prevent dental decay. In 2024 we performed over 1,400 tests to ensure the water delivered to you meets regulatory standards and is safe and pure.

Throughout the 2024 season, The Town of Somerset Water Department participated in a program managed by The Massachusetts Department of Agriculture Resources (MDAR) to conduct voluntary testing and monitoring of raw public water supplies for glyphosate and its primary metabolite aminomethylphosphonic acid (AMPA). The active ingredient in herbicide products such as Roundup weed killer. To date, no glyphosate or AMPA (detection limit = 0.10 ppb) was detected in the raw water supply of the Somerset Reservoir.

Portuguese Language Statement

IMPORTANTE!!

Este relatório contém informação importante acerca da sua propria parabeber.

Água potável se nao compredeo que o relatório contem por favor contacte alguém que o possa ajudar a traducao.

The following pages summarize the regulatory standards, contaminants detected during our testing in 2024 and our programs and accomplishments in the past year. Thank you for your cooperation and support in approving and funding our efforts. Please contact us if you have any questions related to this report.

In September and December of 2019, 2020, 2021, and 2023, March of 2020, June of 2022, and January and July of 2023, Somerset Water Department violated a drinking water standard involving Total Trihalomethanes (TTHM) at three of our four sampling locations in part as a result of changing raw water quality and increase water age due to the closing of the Dynegy power station. SWD was issued an Administrative Consent Order (ACO #00004362) on 3/3/2018 by MADEP for this violation. SWD continues to work with MADEP and our engineering consultants on corrective actions to ensure compliance with the TTHM standard.

SUBSTANCES THAT WE TEST FOR INCLUDE:

MICROBIAL - such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

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

PESTICIDES & HERBICIDES - which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.

ORGANIC CHEMICAL - including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.

RADIOACTIVE - which can be naturally occurring or the result of oil and gas production and mining activities.

REGULATORY LIMITS

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

In order to ensure that tap water is safe to drink, the EPA and the MADEP prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. The EPA and DEP set limits, or Maximum Contaminant Levels (MCLs), for over 133 contaminants. 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.

The sources of drinking water (both tap 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.

MCL's are set at very stringent levels. The Maximum Contaminant Level Goal (MCLG) is set at a level where no health effects would be expected, and the MCL is set as close to that as possible, considering available technology and cost of treatment. **A person would have to drink two liters of water every day, as recommended by health professionals, at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.**

2024 TEST RESULTS - SOMERSET WATER DEPARTMENT

The table below lists all the drinking water contaminants that were **detected** during the 2024 calendar year from over 1,400 samples. The state requires us to monitor certain contaminants less than once per year because the concentration of these contaminants are not expected to vary significantly from year to year. In these cases, the most recent testing data is noted. The presence of these contaminants in the water does not necessarily indicate a health risk.

Regulated Contaminant Results

Inorganic Contaminants	Date Sampled	Violation Y/N	Level Detected		Unit Measurement	MCLG	MCL	Possible Source
			Highest	Range				
Asbestos	5/9/22	N	0.18	0.0 - 0.18	MFL	7	7	Decay of asbestos cement water mains; erosion of natural deposits
Barium	1/8/24	N	7.1	7.1	ppb	2000	2000	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride ^①	Monthly	N	1.0	0.0 - 1.05	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
① Fluoride also has a secondary maximum contaminant level (SMCL) of 0.7 - 1.0 ppm.								
Nitrate (as Nitrogen)	1/8/24	N	80	80	ppb	10,000	10,000	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits
PFAS6	4/30/24 & 10/8/24	N	4.71	4.44 - 4.71	ppt	20	20	Discharges and emissions from industrial and manufacturing sources associated with the production or use of these PFAS, including production of moisture and oil resistant coatings on fabrics and other materials. Additional sources include the use and disposal of products containing PFAS, such as fire-fighting foams
Total Organic Carbon	Quarterly	N	3.00	1.25 - 2.48	ppm	N/A	TT	Naturally present in the environment
Turbidity ^{②③}	Daily	N	0.18	0.07 - 0.23	NTU	N/A	1	Soil runoff
	Monthly	N	N/A	100%	%	N/A	≥95%	
② Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of water quality.								
③ Monthly turbidity compliance is related to a specific treatment technique (TT). Our system filters water so at least 95% of our monthly samples are below the regulatory turbidity limit.								
Disinfection Contaminants	Date Sampled	Violation Y/N	Level Detected		Unit Measurement	MCLG	MCL	Possible Source
			Highest	Range				
Chlorine	Daily	N	1.88	0.90 - 1.88	ppm	MRDLG=4	MRDL=4	Water additive used to control microbes
Haloacetic Acids (HAA5) ^⑤	Quarterly	N	Highest LRAA 54 Range: 23 - 49		ppb	N/A	60	Byproduct of drinking water chlorination
Total Trihalomethanes (TTHMs) ^{④⑤}	Quarterly	Y	Highest LRAA 74 Range: 25 - 71		ppb	0	80	Byproduct of drinking water chlorination
④ Some people who drink water containing TTHMs in excess of the MCL over many years may experience problems with their liver, kidneys or central nervous systems and may have an increase risk of getting cancer.								
⑤ Highest Running Annual Average (RAA) = highest running annual average of four consecutive quarters.								
Radioactive Contaminants	Date Sampled	Violation Y/N	Level Detected		Unit Measurement	MCLG	MCL	Possible Source
			Highest	Range				
Gross Alpha (minus uranium)	2/17/21	N	2.21	2.21	pCi/L	0	15	Erosion of natural deposits
Radium 226 & 228 (combined values)	2/17/21	N	0.698	0.643 - 0.698	pCi/L	0	5	Erosion of natural deposits

Unregulated Contaminant Results

The purpose of unregulated contaminant monitoring is to assist regulatory agencies in determining their occurrence in drinking water and whether future regulation is warranted.

Unregulated Contaminants	Date Sampled	Violation Y/N	Level Detected		Unit Measurement	SMCL	ORSG	Possible Source
			Highest	Range				
Sodium	1/8/24	N	20.9	20.9	ppm	0	0	Discharge from the use and improper storage of sodium-containing de-icing compounds or in water-softening agents
Unregulated Volatile Organic Contaminants	Date Sampled	Violation Y/N	Level Detected		Unit Measurement	MCLG	MCL	Possible Source
			Highest	Range				
Bromodichloromethane	10/29/24	N	5.7	5.7	ppb	0	70	Byproduct of drinking water chlorination
Chlorodibromomethane	10/29/24	N	.6	.6	ppb	0	70	Byproduct of drinking water chlorination
Chloroform	10/29/24	N	18.4	18.4	ppb	0	70	Byproduct of drinking water chlorination

Lead & Copper Results

Contaminants	Violation Y/N	90th Percentile	Number of Sites/ Number Exceeding AL	Unit	MCLG	Action Level	Possible Source
Copper ^⑥ (2024)	N	200	30/0	ppb	1300	1300	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead ^⑥ (2024)	N	3	30/0	ppb	0	15	Corrosion of household plumbing systems, erosion of natural deposits

^⑥ Reported results are the 90th percentile value (90% of all samples are less than the AL).

Secondary Contaminants Results

These water quality parameters are sampled annually, as recommended by the Massachusetts Department of Environmental Protection (MassDEP), but not required. The parameters are considered a nuisance because of aesthetic effects such as staining of fixtures and laundry and discoloration of the water supply.

Unregulated Contaminants	Date Sampled	Level Detected		Unit Measurement	SMCL	Possible Source	Health and/or Aesthetic Effects
		Highest	Range				
Aluminum	8/22/23	55	55	ppb	200	Residue from water treatment process; erosion of natural deposits	May produce colored water
Chloride	8/22/23	32.5	31.9 - 32.5	ppm	250	Runoff and leaching from natural deposits; seawater influence	May produce a salty taste
Manganese ^⑦	8/22/23	71.0	2.2 - 71.0	ppb	50	Natural sources as well as discharges from industrial uses	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 unpleasant bitter metallic taste, odor, and/or black-brown color

^⑦ EPA has established a lifetime Health Advisory (HA) of 3.0 mg/L and an acute HA at 1.0 mg/L.

pH	8/22/23	8.41	7.3 - 8.41	pH	6.5 - 8.5	Runoff and leaching from natural deposits; seawater influence	Low pH may produce a bitter metallic taste; corrosion High pH may produce a slippery feel; soda taste; deposits
Sulfate	8/22/23	5.8	5.8	ppm	250	Runoff and leaching from natural deposits; industrial wastes	May produce a salty taste
Total Dissolved Solids (TDS)	8/22/23	56	56	ppm	500	Runoff and leaching from natural deposits; seawater influence	May produce hardness; deposit; colored water; staining; salty taste

NOTES, UNITS & DEFINITIONS

N/D - Not detected N/A - Not applicable

Parts per Million (ppm) - One part per million corresponds to one minute in two years or a single penny in \$10,000

Parts per Billion (ppb) - One part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000

Parts per Trillion (ppt) - One part per trillion corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000

Treatment Technique (TT) - A required process intended to reduce the level of a contaminate in drinking water

Million Fibers per Liter (MFL) - A measure of the presence of asbestos fibers that are longer than 10 micrometers

Nephelometric Turbidity Unit (NTU) - The unit used to measure the turbidity of a fluid or the presence of suspended particles in water

Picocuries per Liter of Air (pCi/L) - Measures radioactivity in water; 2.22 disintegrations per minute of radioactive material per liter of air

Locational Running Annual Average (LRAA) - The average of all quarterly samples for the last year at each sample location

Action Level (AL) - The concentration of a contaminant which if exceeded, triggers treatment or other requirements which a water system must follow. A violation will occur only if the supplier fails to take corrective action

Maximum Contaminant Level (MCL) - 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

Maximum Contaminant Level Goal (MCLG) - The MCLG is 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

Massachusetts Office of Research & Standards Guideline (ORSG) - This is the concentration of a chemical in drinking water, at or below which, adverse health effects are unlikely to occur after chronic (lifetime) exposure. If exceeded, it serves as an indicator of the potential need for further action

SYSTEM UPGRADES AND IMPROVEMENTS

Our water system is routinely inspected by the Massachusetts Department of Environmental Protection (MADEP). MADEP inspects our system for its technical, financial, and managerial capacity to provide safe drinking water to you. To ensure that we provide the highest quality of water available, your water system is operated by Massachusetts certified operators who oversee the routine operations of our system. As part of our ongoing commitment to you, last year we upgraded some of the treatment facility process equipment, made improvements to the distribution system to reduce water age, and continue with our system-wide water meter replacement program.

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Monitoring Data for Unregulated Contaminants for Town of Somerset

As required by the US Environmental Protection Agency (EPA), our water system has sampled for a series of unregulated contaminants. Unregulated contaminants are those that don't yet have a drinking water standard set by the EPA. The purpose of monitoring for these contaminants is to help the EPA decide whether the contaminants should have a public health protection standard.

What should I do?

You do not have to do anything but as our customers you have a right to know that this data is available. You may share this information with other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, food establishments, medical facilities, and businesses).

For more information

For additional information on your water and the unregulated contaminants we sampled for or if you have any questions about your Consumer Confidence Report (CCR), please contact Christopher Wickman at 508-674-4215 or visit our office at 3249 County Street, Somerset, Massachusetts 02726 during normal business hours.

For information on the Unregulated Contaminant Monitoring Program, visit the Mass DEP website (<https://www.mass.gov/info-details/public-drinking-water-system-operations>) and navigate to Unregulated Contaminant Monitoring Program.

This notice is being sent to you by the Town of Somerset

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IMPORTANT INFORMATION

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, 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 from their health care providers. The EPA and the Centers for Disease Control (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 (800-426-4791).

Testing showed the amount of lead in our drinking water is below EPA allowed levels. 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.

Somerset 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>.

SWAP

What is SWAP? The Source Water Assessment & Protection Program (SWAP) assesses the susceptibility of public water supplies. What is my system's ranking? A susceptibility ranking of high was assigned to this system using the information collected during the assessment by the DEP. Where Can I See the SWAP Report? The complete SWAP Report is available at the DPW and online at:

<https://www.mass.gov/lists/source-water-assessment-and-protection-swap-program-documents#swap-reports-for-massachusetts-water-supplies->

WATER CONSERVATION

Please see our website for tips on how you can conserve water:

<https://www.townofsomerset.org/DocumentCenter/View/639/Conservation-of-Water-PDF>

CROSS CONNECTION CONTROL

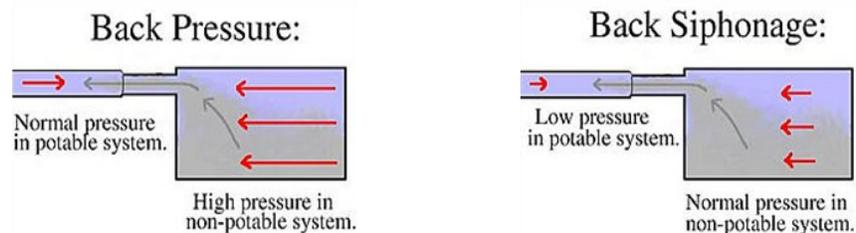
Somerset Water Department maintains a program to control cross connections in an effort to protect water quality.

What is a cross-connection?

A cross-connection occurs whenever the drinking water supply is or could be in contact with potential sources of pollution or contamination. Cross-connections exist in piping arrangements or equipment that allows the drinking water to come in contact with non-potable liquids, solids, or gases (hazardous to humans) in event of a backflow.

What is a backflow?

Backflow is the undesired reverse of the water flow in the drinking water distribution lines. This backward flow of water can occur when the pressure created by equipment or a system such as a boiler or air-conditioning is higher than the water pressure inside the water distribution line (back pressure), or when the pressure in the distribution line drops due to routine occurrences such as water main breaks or heavy water demand causing the water to flow backward inside the water distribution system (back siphonage). Backflow is a problem that many water consumers are unaware of, a problem that each and every water customer has a responsibility to help prevent.



What can I do to help prevent a cross-connection?

Without the proper protection something as simple as a garden hose has the potential to contaminate or pollute the drinking water lines in your house. In fact over half of the country's cross-connection incidents involve unprotected garden hoses. There are very simple steps that you as a drinking water user can take to prevent such hazards, they are:

- NEVER submerge a hose in soapy water buckets, pet watering containers, pool, tubs, sinks, drains, or chemicals.
- NEVER attached a hose to a garden sprayer without the proper backflow preventer.
- Buy and install a hose bibb vacuum breaker in any threaded water fixture. The installation can be as easy as attaching a garden hose to a spigot. This inexpensive device is available at most hardware stores and home-improvement centers.
- Identify and be aware of potential cross-connections to your water line.
- Buy appliances and equipment with backflow preventers.
- Buy and install backflow prevention devices or assemblies for all high and moderate hazard connections.

If you are the owner or manager of a property that is being used as a commercial, industrial, or institutional facility you must have your property's plumbing system surveyed for cross-connection by your water purveyor. If your property has NOT been surveyed for cross-connection, contact your water department to schedule a cross-connection survey.

What is a Cross Connection and what can I do about it?

A cross connection is a connection between a drinking water pipe and a polluted source. The pollution can come from your own home. For instance, you're going to spray fertilizer on your lawn. You hook up your hose to the sprayer that contains the fertilizer. If the water pressure drops at the same time you turn on the hose, the fertilizer may be sucked back into the drinking water pipes through the hose. This problem can be prevented by using an attachment on your hose called a backflow-prevention device.

PLEASE PASS IT ON

We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life, and our children's future. Please share this report with other people who drink this water, especially those who may not have received this notice directly. You can do this by posting this notice in a public place or distributing copies by hand or mail.