ANNUAL WATER QUALITY REPORT

Reporting Year 2022

Presented By

Webster Water Department

Town Of Webster
Massachusetts
Est. 1832

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

PWS ID#: 2316000

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, 2022. 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 education while continuing to serve the needs of all our water users. Please remember that we are always available should you ever have any questions or concerns about your water.

Community Participation

As a customer of the Webster Water Department, you have the right to participate in decisions concerning your drinking water. The water commissioners meet on the first Thursday of each month and post agendas and meeting minutes, as required by law. Any concerns can be addressed through the Board of Selectmen or the Webster Water Department.

If you have any questions about this report, or if you would like additional copies, please contact the Webster Water Department at (508) 949-3861. Our office hours are 7:00 a.m. to 3:00 p.m., Monday through Friday. We are located at 38 Hill Street in Webster. Please visit http://www.webster-ma.gov for information and forms.

If there is an emergency after hours, please call the Webster Police Department at (508) 943-1212.

> "Thousands have lived without love, not one without water."
>
> —W.H. Auden

Where Does My Water Come From?

The town receives its water from seven gravel-packed groundwater wells. Five of these wells are located at Pump Station #1 on Memorial Beach Drive; water from these is blended with water from the well at Pump Station #2 and sent to the treatment plant on Memorial Beach Drive.

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.

Source Water Assessment and Protection

We are all concerned about the quality of water we drink. Drinking water wells may be threatened by many potential contaminant sources, including stormwater runoff, road salting, and improper disposal of hazardous materials. Webster's citizens and local officials can work together to better protect our drinking water sources.

Massachusetts DEP has completed a Source Water Assessment and Protection (SWAP) report for the Webster Water Department. The complete report is available at the Webster Water Department or online at www.mass.gov/eea/docs/dep/water/drinking/swap/cero/2316000.pdf. It contains important information on land uses and potential threats within the protected areas of our wells. Webster's susceptibility ranking was determined by DEP to be high, which means we need to be extra vigilant in monitoring or restricting activities that might contaminate our water supply.

The SWAP information can be used to set priorities, target inspections, focus education efforts, and develop a long-term drinking water source protection plan. The report also includes recommendations related to residential land uses, transportation corridors, hazardous materials storage and use, oil or hazardous material contamination sites, wastewater treatment plants, and wellhead protection planning. The Webster Water Department has been commended by DEP for taking an active role in promoting source protection measures in our water supply areas.

We can help protect these vital resources by continuing education efforts with the schools, business community, and general public. Citizens can also help protect our water supply by proper maintenance of septic systems. You can help by pumping out your septic system every two years, not using septic system cleaners, and never dumping hazardous substances down septic or storm drains. For additional information, or to offer suggestions or ideas to generate public awareness, please call the Webster Water Department at (508) 949-3861.

QUESTIONS? For more information about this report, or for any questions relating to your drinking water, please call Thomas Cutler, Water Department Superintendent, at (508) 949-3861.

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 http://bit.ly/3Z5AMm8.

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.

Violation Information

Samples collected on July 21 and August 3, 2022, reported a number of per- and polyfluoroalkyl substances (collectively called PFAS6) at levels of 26.1 and 30.3 nanograms per liter (ng/L), respectively, at Bigelow Well 03G-FW. Exceedance of the maximum contaminant level (MCL) has been determined from the third quarter 2022 results, which average 28.2 ng/L. Compliance with the PFAS6 MCL is calculated as a quarterly average based on the total number of samples collected during the period. The location where elevated levels of PFAS6 were reported is one of two treatment plants that supply drinking water to our system.

PFAS6 levels were reported below the MCL at our other location (Memorial Beach Water Treatment Plant), and the site with the exceedance (Bigelow Well) remains out of service in emergency standby mode. This well was previously removed from service on September 15, 2021; however, it was necessary to return it to service between May 15 and August 10, 2022, to allow repair of a mechanical issue at our main water treatment facility. Once the repairs were completed, the well was again removed from service and will remain in standby mode for emergencies only while we plan permanent PFAS treatment.

Some people who drink water containing these PFAS in excess of the MCL may experience certain adverse effects. These could include effects on the liver, blood, immune system, thyroid, and fetal development. These PFAS may also elevate the risk of certain cancers.

How Is My Water Treated?


Memorial Beach WTP

The treatment plant at Memorial Beach consists of a state-of-the-art greensand water filtration system that removes iron and manganese from raw water at Station 1 & 2. Pump Station #3 is located on Bigelow Road.

Each station is equipped with a sodium hypochlorite feed system for disinfection and potassium hydroxide for pH and corrosion control. Once the water is treated at each station, it goes directly to the distribution system, which consists of 73 miles of water main, one booster station, and two water storage tanks. The Park Road elevated tank has a capacity of 1 million gallons, and the underground Rawson Road tank has a capacity of 1.65 million gallons. Together, these facilities provide an average of 1.36 million gallons of water per day to 5,236 customers.

Q&A

What type of container is best for storing water?
Consumer Reports has consistently advised that glass or BPA-free plastics such as polyethylene are the safest choices. To be on the safe side, do not use any container with markings on the recycle symbol showing 7PC (that's code for BPA). You could also consider using stainless steel or aluminum with BPA-free liners.

How much emergency water should I keep?
Typically, one gallon per person per day is recommended. For a family of four, that would be 12 gallons for three days. Humans can survive without food for one month, but they can only survive one week without water.

How long can I store drinking water?
The disinfectant in drinking water will eventually dissipate, even in a closed container. If that container housed bacteria prior to filling up with the tap water, the bacteria may continue to grow once the disinfectant has dissipated. Some experts believe that water can be stored up to six months before needing to be replaced. Refrigeration will help slow the bacterial growth.

How long does it take a water supplier to produce one glass of treated drinking water?
It can take up to 45 minutes to produce a single glass of drinking water.

How many community water systems are there in the U.S.?
About 53,000 public water systems across the United States process 34 billion gallons of water per day for home and commercial use. Eighty-five percent of the population is served by these systems.

Which household activity wastes the most water?
Most people would say the majority of water use comes from showering or washing dishes; however, toilet flushing is by far the largest single use of water in a home (accounting for 40 percent of total water use). Toilets use about 4 to 6 gallons per flush, so consider an ultra-low-flow (ULF) toilet, which requires only 1.5 gallons.

Safeguard Your Drinking Water

Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides – they contain hazardous chemicals that can reach your drinking water source.
- Pick up after your pets.
- If you have your own septic system, properly maintain it to reduce leaching to water sources, or consider connecting to a public water system.
- Dispose of chemicals properly; take used motor oil to a recycling center.
- Volunteer in your community. Find a watershed or wellhead protection organization in your community and volunteer to help. If there are no active groups, consider starting one. Use U.S. EPA's Adopt Your Watershed to locate groups in your community.
- Organize a storm drain stenciling project with others in your neighborhood. Stencil a message next to the street drain reminding people "Dump No Waste – Drains to River" or "Protect Your Water." Produce and distribute a flyer for households to remind residents that storm drains dump directly into your local water body.

Lead in Home Plumbing

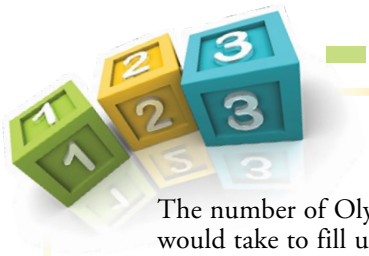
If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. We are responsible for providing high-quality drinking water, but 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.

Think before You Flush!

Flushing unused or expired medicines can be harmful to your drinking water. Properly disposing of unused or expired medication helps protect you and the environment. Keep medications out of our waterways by disposing responsibly. To find a convenient drop-off location near you, please visit https://bit.ly/3IeRyXy.

Maintenance Update

The department completed water main replacement on Nelson, Whitcomb, and Lincoln Streets and started replacing the water main, fire hydrants, and water services on Lake Street. We also continued routine maintenance on gate valves, fire hydrants, leak repair, and water meters.



BY THE NUMBERS

800 TRILLION — The number of Olympic-sized swimming pools it would take to fill up all of Earth's water.

1 — The average cost in cents for about 5 gallons of water supplied to a home in the U.S.

99 — The percent of Earth's water that is salty or otherwise undrinkable, or locked away and unavailable in ice caps and glaciers.

50 — The average daily number of gallons of total home water use for each person in the U.S.

71 — The percent of Earth's surface that is covered by water.

330 MILLION — The amount of water on Earth in cubic miles.

75 — The percent of the human brain that contains water.

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 (a complete list of all our analytical results is available upon request). 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
Alpha Emitters (pCi/L)	2021	15	0	ND	NA	No	Erosion of natural deposits
Arsenic (ppb)	2021	10	0	4.0	ND–4.0	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2021	2	2	0.0119	0.00982–0.0119	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chlorine (ppm)	2022	[4]	[4]	0.67 avg.	0.14–1.27	No	Water additive used to control microbes
Combined Radium (pCi/L)	2021	5	0	0.439 avg.	0.0279–0.804	No	Erosion of natural deposits
***E. coli* [at the groundwater source]** (# positive samples)	2022	NA	0	0	NA	No	Human and animal fecal waste in untreated groundwater
Haloacetic Acids [HAAs]–Stage 2 (ppb)	2022	60	NA	5.70	5.40–5.70	No	By-product of drinking water disinfection
Nitrate (ppm)	2022	10	10	1.79	0.27–1.79	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Nitrite (ppm)	2021	1	1	<0.0100	NA	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Perchlorate (ppb)	2022	2	NA	ND	NA	No	Inorganic chemicals used as oxidizers in solid propellants for rockets, missiles, fireworks, and explosives
PFAS6 (ppt)	2022	20	NA	28.2 Q3 avg.	4.6–31.0	Yes[1]	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 these PFAS, such as firefighting foams.
Total Coliform Bacteria (# positive samples)	2022	TT	NA	0	NA	No	Naturally present in the environment
TTHMs [total trihalomethanes]–Stage 2 (ppb)	2022	80	NA	42.0	19.0–42.0	No	By-product of drinking water disinfection

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)	2022	1.3	1.3	0.054	0/61	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2022	15	0	3.6	2/61	No	Lead service lines; Corrosion of household plumbing systems, including fittings and fixtures; Erosion of natural deposits

[1] Third-quarter MCL violation on finished water at Bigelow Well 03G-FW.

[2] 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.

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	MCLG	AVERAGE AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chloride (ppm)	2022	250	NA	58.4	49.8–66.9	No	Runoff/leaching from natural deposits
Copper (ppm)	2022	1.0	NA	0.01195	0.0112–0.0127	No	Corrosion of household plumbing systems; Erosion of natural deposits
Iron (ppb)	2022	300	NA	<50	ND–50	No	Leaching from natural deposits; Industrial wastes
Manganese (ppb)	2022	50	NA	2.78	2.09–3.96	No	Leaching from natural deposits
pH (units)	2022	6.5-8.5	NA	7.685	6.96–8.46	No	Naturally occurring (finished water)
Sulfate (ppm)	2022	250	NA	9.31	6.72–11.9	No	Runoff/leaching from natural deposits; Industrial wastes
Total Dissolved Solids [TDS] (ppm)	2022	500	NA	200	181.0–219.0	No	Runoff/leaching from natural deposits
Zinc (ppm)	2022	5	NA	0.0067	ND–0.0134	No	Runoff/leaching from natural deposits; Industrial wastes

UNREGULATED SUBSTANCES [2]

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AVERAGE AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Bromodichloromethane (ppb)	2022	5.273	1.690–13.300	By-product of drinking water disinfection
Chlorodibromomethane (ppb)	2022	1.890	0.860–2.060	By-product of drinking water disinfection
Perfluorobutanesulfonic Acid [PFBS] (ppt)	2022	2.06	0.77–4.43	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 these PFAS, such as firefighting foams.
Perfluorohexanesulfonic Acid [PFHxS] (ppt)	2022	1.32	0.62–2.61	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 these PFAS, such as firefighting foams.
Perfluorononanoic Acid [PFNA] (ppt)	2022	0.95	0.614–2.060	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 these PFAS, such as firefighting foams.
Perfluorooctanesulfonate Acid [PFOS] (ppt)	2022	3.82	1.39–8.72	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 these PFAS, such as firefighting foams.
Perfluorooctanoic Acid [PFOA] (ppt)	2022	5.53	0.66–14.50	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 these PFAS, such as firefighting foams.
Sodium (ppm)	4/28/22 & 5/26/22	31.8	25.1–38.5	Naturally occurring; Runoff from road salt
Sulfate (ppm)	2022	9.31	6.72–11.9	Naturally occurring

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.

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.