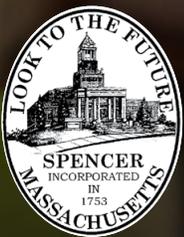


ANNUAL WATER QUALITY REPORT

Reporting Year 2022



Presented By
**Spencer Water
Department**



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.

Where Does My Water Come From?

Spencer Water Department customers are fortunate because they enjoy an abundant water supply from two sources. The Meadow Road Water Treatment Plant draws water from the 70-foot-deep, gravel-packed Meadow Road Well, which can yield up to 1.7 million gallons of water per day. The Meadow Road Water Treatment Plant was constructed in 1995 to draw from this underground water supply. Our second water source is Cranberry Brook Well, a 66-foot-deep, gravel-packed well that can yield up to 1.15 million gallons of water per day. Both of these sources feed through the distribution system to fill the 0.5-million-gallon storage tank on Highland Street, which serves the west side of town. The water is then pumped through a booster station from the Highland Street storage tank to the 1.5-million-gallon storage tank located behind David Prouty High School, which serves the east side of town. In 2022 we produced 140 million gallons of clean drinking water.



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.

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 micro-



bial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or <http://water.epa.gov/drink/hotline>.

QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please contact Chief Water Systems Operator Greg Karpowicz at (508) 885-7525.

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 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.



Water Conservation Tips

You can play a role in conserving water and save yourself money in the process by becoming conscious of the amount of water your household is using and looking for ways to use less whenever you can. It is not hard to conserve water. Here are a few tips:

- Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- Check your toilets for leaks by putting a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from an invisible toilet leak. Fix it and you save more than 30,000 gallons a year.
- Use your water meter to detect hidden leaks. Simply turn off all taps and water-using appliances. Then check the meter after 15 minutes. If it moved, you have a leak.



Community Participation

Our Water Commissioners meetings are held on the first Wednesday of each month at 5:00 p.m. at 3 Old Meadow Road, Spencer. Please call (508) 885-7525 in advance to be put on the agenda.



Water Treatment Process

The treatment process consists of a series of steps. First, raw water is drawn from our Meadow Road Well into the treatment plant, where chlorine bleach and potassium permanganate are added to oxidize iron and manganese. Next we add sodium hydroxide to the water to raise the pH level, which controls corrosion of our system pipes. Then the water is sent to six pressurized greensand filters, which remove iron and manganese. The water then travels to a 60,000-gallon clearwell tank and is ready to be delivered to the distribution system.

Our backup source, the Cranberry Brook Well, is located on South Spencer Road. We add sodium hydroxide to raise the pH of the water, which controls corrosion of our system pipes. Chlorine bleach is also injected for disinfection.

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
Chlorine (ppm)	2022	[4]	[4]	0.26 ¹	0.10–0.60	No	Water additive used to control microbes
Nitrate (ppm)	2022	10	10	3.46	0.156–3.46	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
PFAS6 (ppt)	2022	20	NA	2.10	2.00–2.10	No	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
TTHMs [total trihalomethanes]–Stage 2 (ppb)	2022	80	NA	28	NA	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)	2020	1.3	1.3	0.0565	0/20	No	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	2020	15	0	0.0029	1/20	No	Lead service lines; corrosion of household plumbing systems, including fittings and fixtures; erosion of natural deposits

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Iron (ppb)	2022	300	NA	159	87.3–159	No	Leaching from natural deposits; industrial wastes
Manganese (ppb)	2022	50	NA	38.9	8–38.9	No	Leaching from natural deposits

UNREGULATED SUBSTANCES²

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Bromodichloromethane (ppb)	2022	4.01	NA	NA
Bromoform (ppb)	2022	0.53	NA	NA
Chlorodibromomethane (ppb)	2022	3.76	NA	NA
Chloroform (ppb)	2022	2.82	NA	NA

¹Running annual average.

²Unregulated 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.

Source Water Assessment

DEP conducted assessments for all drinking water sources across the state. The purposes of the assessments were to determine the susceptibility of each drinking water source to potential contaminant sources and establish a relative susceptibility rating of high, moderate, or low for each source.

The assessment reported a susceptibility rating of high for both Spencer Water Department sources. This susceptibility rating does not imply poor water quality; rather, it signifies the system's potential to become contaminated. The complete source water assessment report is available for viewing at the Spencer Water Department, 3 Old Meadow Road.

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 www.epa.gov/safewater/lead.