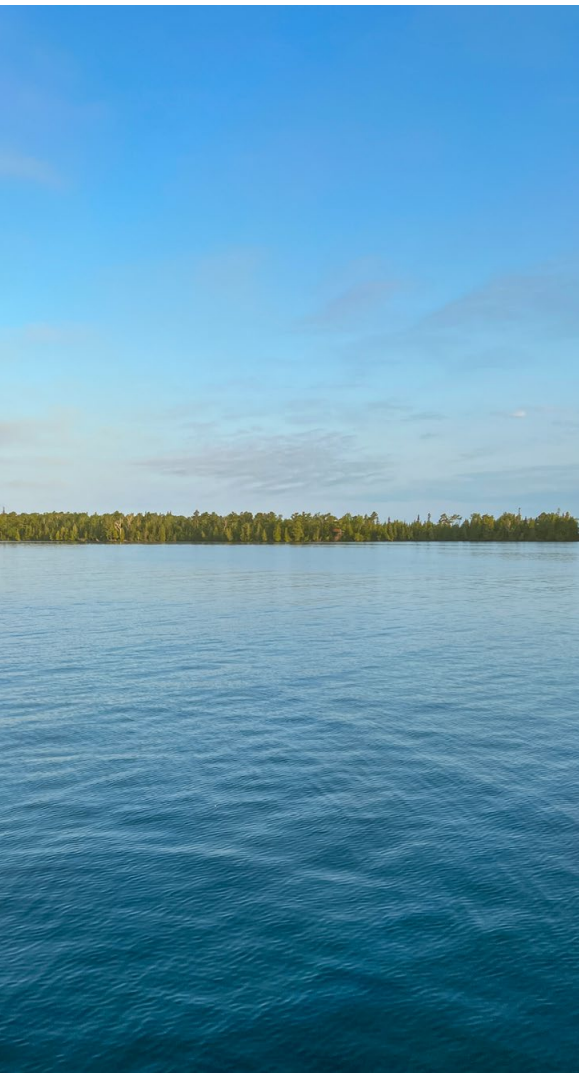
ANNUAL WATER QUALITY REPORT

Reporting Year 2024



Presented By
Veolia

PWS ID#: 2103000

Our Commitment

We are pleased to present to you this year's annual water quality report. This report is a snapshot of last year's water quality covering all testing performed between January 1 and December 31, 2024. Included are details about your sources of water, what it contains, and how it compares to standards set by regulatory agencies. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water and providing you with this information because informed customers are our best allies.

Source Water Assessment

DEP prepared a Source Water Assessment Program (SWAP) report for the water supply sources serving this system. The report assesses the susceptibility of each source of public water supplies. A susceptibility ranking of high was assigned to this system using information collected during the assessment by DEP. The plan is an assessment of the delineated area around our listed sources through which contaminants, if present, could migrate and reach our source water. It also includes an inventory of potential sources of contamination within the delineated area and a determination of the water supply's susceptibility to contamination by the identified potential sources. You can download a copy of the report at https://www.mass.gov/lists/source-water-assessment-and-protection-swap-program-documents

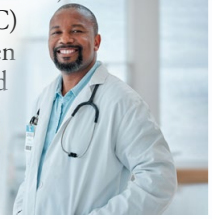
Level 1 Assessment Update

Coliforms are bacteria that are naturally present in the environment and 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 an assessment to identify and correct any problems that were found.

During the past year, we were required to conduct one Level 1 assessment. In addition, we were required to take three corrective actions, and we completed three of these actions.

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 can be particularly at risk from infections. These people should seek advice about drinking water from their health-care providers. U.S. Environmental Protection Agency (U.S. EPA)/Centers for Disease Control and Prevention (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) or epa.gov/safewater.



Opportunities for Public Participation

You may attend the Public Service Committee meetings. They are held every month before the city council meeting.

Source Water Description

Your drinking water comes from groundwater and surface water sources: Cowee Pond, Perley Brook, and Crystal Lake, all of which are located in Gardner. Water flows by gravity from Cowee Pond to Perley Brook and is then pumped to Crystal Lake. The Snake Pond well treatment facility is a groundwater source used to help with seasonal water demand.

The Crystal Lake water treatment facility continues to produce high-quality drinking water. The facility uses microfiltration membranes and has a total capacity of 4.5 million gallons per day. In 2024 600 million gallons of raw water was pumped from Crystal Lake and treated to produce 472 million gallons of finished water for the City of Gardner.

The Snake Pond well treatment facility continues to produce high-quality drinking water. This facility was upgraded and has been online since April 2006. It pumped 61 million gallons of raw water to produce 52 million gallons of finished water for the City of Gardner and has a capacity of 1.3 million gallons a day.

There are three aboveground drinking water storage tanks in the City of Gardner used to help ensure a safe, reliable supply of drinking water and provide fire protection. The capacity of these storage tanks is 4.75 million gallons.

Cryptosporidium in Drinking Water

Cryptosporidium is a microbial parasite found in surface water. Although filtration removes Cryptosporidium, the most commonly used methods cannot guarantee 100 percent removal. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Immunocompromised people are at greater risk of developing life-threatening illness. We encourage immunocompromised individuals to consult their doctor regarding precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

Questions?

For any questions relating to your drinking water, call Joseph Zadrozny, Project Manager, at (978) 630-8791.

Substances That Could Be in Water

In order to ensure that tap water is safe to drink, U.S. EPA and Massachusetts Department of Environmental Protection (DEP) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration and Massachusetts Department of Public Health regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

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.

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. 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.

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 perfluorooctanesulfonic 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 bit.ly/3Z5AMm8.

Treatment Train Description

Our water system makes every effort to provide safe and pure drinking water. To improve the quality of the water delivered to you, we treat it to remove several contaminants.

- We add sodium hypochlorite and ammonium sulfate to protect against microbial contaminants.
- We add polyaluminum chloride to help coagulate the dirt particles within the untreated water to help the microfiltration process.
- We filter the water to remove small particles and organisms such as sediment, algae, and bacteria.
- We add sodium fluoride to the water to aid in dental health.
- We add an inorganic phosphate blend for corrosion control to reduce lead and copper concentrations leaching out of your household plumbing.
- We add soda ash to adjust the pH of the water in the distribution system.

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 is included, along with the year in which the sample was taken.

We participated in the fifth stage of the U.S. EPA's Unregulated Contaminant Monitoring Rule (UCMR5) program by performing additional tests on our drinking water. UCMR5 sampling benefits the environment and public health by providing the U.S. EPA with data on the occurrence of contaminants suspected to be in drinking water to determine if U.S. EPA needs to introduce new regulatory standards to improve drinking water quality. Unregulated contaminant monitoring data is available to the public, so please feel free to contact us if you are interested in obtaining that information. If you would like more information on the U.S. EPA's Unregulated Contaminant Monitoring Rule, please call the Safe Drinking Water Hotline at (800) 426-4791.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Barium (ppm)	2024	2	2	0.012	0.012–0.012	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chlorine (ppm)	2024	[4]	[4]	1.76[1]	0.02–3.22	No	Water additive used to control microbes
Combined Radium (pCi/L)	2024	5	0	1.10	ND–1.10	No	Erosion of natural deposits
Fluoride (ppm)	2024	4[2]	4	0.65[1]	0.1–0.8	No	Water additive which promotes strong teeth
Haloacetic Acids [HAAs] (ppb)	2024	60	NA	25.62[1]	ND–42	No	By-product of drinking water disinfection
Nitrate (ppm)	2024	10	10	0.11	ND–0.11	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Perchlorate (ppb)	2024	2	NA	0.675	0.39–0.96	No	Inorganic chemicals used as oxidizers in solid propellants for rockets, missiles, fireworks, and explosives
PFAS6 (ppm)	2024	20	NA	2.28	2.17 - 2.38	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 firefighting foams
Total Organic Carbon [TOC] (ppm)	2024	TT	NA	2.6	2.1–3.1	No	Naturally present in the environment
TTHMs [total trihalomethanes] (ppb)	2024	80	NA	44.625[1]	35–57	No	By-product of drinking water disinfection
Turbidity[4] (NTU)	2024	TT	NA	0.12	NA	No	Soil runoff
Turbidity (lowest monthly percent of samples meeting limit)	2024	TT = 95% of samples meet the limit	NA	100	NA	No	Soil runoff

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.

Level 1 Assessment: 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.

LRAA (Locational Running Annual Average): The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters under the Stage 2 Disinfectants and Disinfection Byproducts Rule.

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.

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)	RANGE LOW-HIGH	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2024	1.3	1.3	0.103	ND–0.293	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2024	15	0	3	ND–70	1/30	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)	2022	200	NA	12	ND–12	No	Erosion of natural deposits; Residual from some surface water treatment processes
Chloride (ppm)	2023	250	NA	93	ND–93	No	Runoff/leaching from natural deposits
pH (units)	2023	6.5-8.5	NA	7.87	7.27–8.43	No	Naturally occurring
Total Dissolved Solids [TDS] (ppm)	2023	500	NA	80	ND–80	No	Runoff/leaching from natural deposits

UNREGULATED SUBSTANCES [5]

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Bromodichloromethane (ppb)	2024	9.64	4–12	Disinfection by-product
Chloroform (ppm)	2024	15.8	15.8–15.8	Disinfection by-product
Magnesium (ppm)	2023	1.94	1.94–1.94	Leaching from natural deposits
Perfluorohexanoic Acid [PFHxA] (ppm)	2024	0.983	ND–0.983	NA
Sodium (ppm)	2024	84	36–84	Natural sources; Runoff from use as salt on roadways; By-product of treatment process
Sulfate (ppm)	2023	19.5	19.5–19.5	Naturally occurring

Lead in Home Plumbing

Lead can cause serious health effects in people of all ages, especially pregnant people, infants (both formula-fed and breastfed),and young children. Lead in drinking water is primarily from materials and parts used in service lines and home plumbing. Gardner Water Department is responsible for providing high-quality drinking water and removing lead pipes but cannot control the variety of materials used in the plumbing in your home. Because lead levels may vary over time, lead exposure is possible even when your tap sampling results do not detect lead at one point in time.

You can help protect yourself and your family by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Using a filter certified by an American National Standards Institute-accredited certifier to reduce lead is effective in reducing lead exposures. Follow the instructions provided with the filter to ensure it is used properly. Use only cold water for drinking, cooking, and making baby formula. Boiling does not remove lead from water.

Before using tap water for drinking, cooking, or making baby formula, flush your pipes for several minutes. You can do this by running your tap, taking a shower, or doing laundry or a load of dishes. If you have a lead service line (LSL) or galvanized service line requiring replacement, you may need to flush your pipes for a longer period. If you are concerned about lead and wish to have your water tested, contact Gardner Water Department at (978) 630-8791. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at epa.gov/safewater/lead.

To address lead in drinking water, public water systems were required to develop and maintain an inventory of service line materials by October 16, 2024. Developing an inventory and identifying the location of LSLs is the first step for beginning LSL replacement and protecting public health. Please contact us if you would like more information about the inventory or any lead sampling that has been done.

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).

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.

[1] Results are LRAA or RAA.
[2] Fluoride also has an SMCL of 2.0 ppm.
[3] Coliform bacteria are naturally present in the environment and used as an indicator to detect for other potentially harmful bacteria.
[4] 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.
[6] 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.