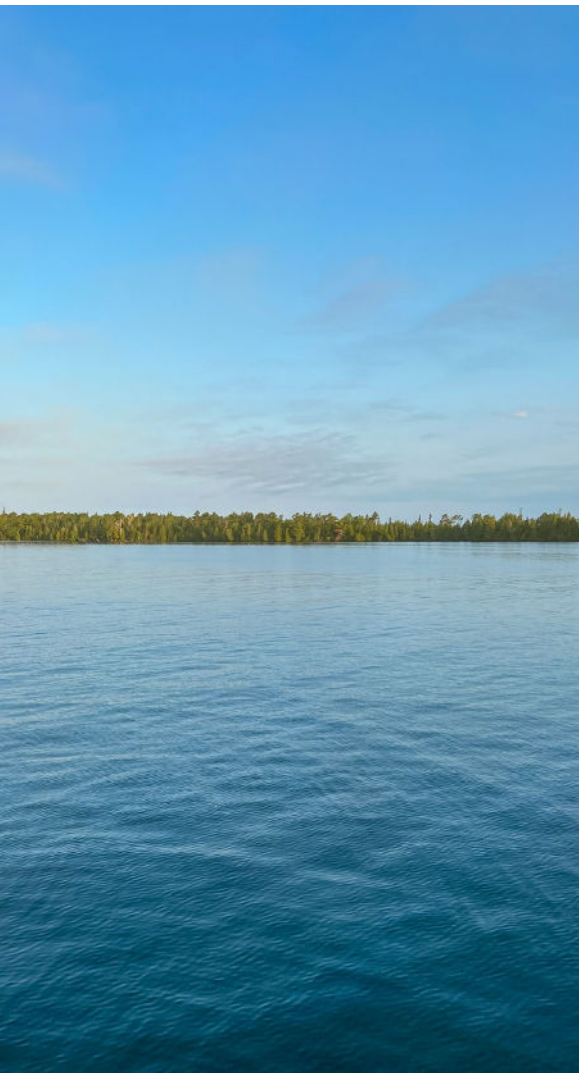
ANNUAL WATER QUALITY REPORT

Reporting Year 2024



Presented By

Groveland Water & Sewer Department

PWS ID#: 3116000

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.

Where Does My Water Come From?

The Town of Groveland is served by a groundwater supply consisting of three gravel-packed wells. Well 1 is located at 462 Main Street, Well 3 is located behind the Pines Recreation Area, and Well 4 is located further down the river from Well 3. Wells 1 and 3 are serviced by vertical turbine pumps that draw water from 50 feet below the surface. The pumps are connected by long shafts to the drive motors, which are housed in the building above the wells. Well 4 uses a submersible pump composed of a sealed motor and pump mounted underwater 35 feet down in the well. Each well can run independently of the others. Groveland's water is distributed through a network of approximately 36.5 miles of water mains ranging from 2 to 12 inches in diameter. There are currently 1,952 active services connected to our system.

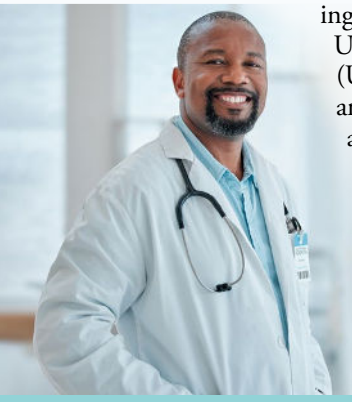
> **"Thousands have lived without love, not one without water."**
> *–W.H. Auden*

Community Participation

You are invited to participate in our public meetings to discuss your drinking water and public water system. We meet once a month on a Monday night, typically at Town Hall. The meeting agenda is posted in advance at grovelandma.com.

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.



Water Treatment Process

The treatment process consists of a series of steps. First, raw water is drawn from our sources, and then inline chemical treatment (no filtration) is performed. Computer-controlled metering pumps are used to administer the chemicals, and chemistry is monitored by inline analyzers 24/7. Our treatment operators monitor the system daily and confirm the treatment goals.

Sodium hydroxide is added to make the water less corrosive by raising the pH. Corrosive (acidic) water can leach lead and copper out of piping and plumbing fixtures. We raise the system pH to an average of 7.6, just above the neutral level of 7.0. This is high enough to keep the lead and copper from dissolving very much and still keep most of the iron and manganese in solution.

Fluoride is added to the water as sodium fluoride to fight dental cavities. Both sodium and fluoride occur naturally in small amounts in the groundwater in this area. Natural fluoride occurs at a range of 0.05 to 0.10 part per million (ppm). The fluoride is added to achieve a target dose of 0.70 ppm to help build stronger, more cavity-resistant teeth for all who drink the water in their developmental years.

Calcium hypochlorite is added to maintain a disinfection residual at an average of 0.17 ppm throughout the distribution system. A target dose range of 0.50 ppm has been established to achieve this residual.

The Benefits of Fluoridation

Fluoride is naturally occurring in many water supplies in trace amounts. In our system, the fluoride level is adjusted to an optimal level averaging 0.7 ppm to improve oral health and prevent tooth decay. At this level, it is safe, odorless, colorless, and tasteless. There are over 4 million people in Massachusetts water systems and 184 million people in the U.S. who receive the health and economic benefits of fluoridation.

Questions?

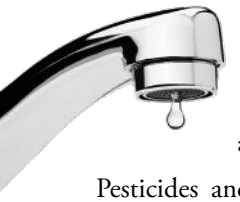
For questions relating to your drinking water, please call the Groveland Water Department office at (978) 556-7220 and ask to speak with Colin Stokes.

Substances That Could Be in Water

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.

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.

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. Groveland 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 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 Colin Stokes at (978) 556-7220. 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 lead service lines (LSL) is the first step for beginning LSL replacement and protecting public health. The lead service inventory may be found at our office. Please contact us if you would like more information about the inventory or any lead sampling that has been done.

Source Water Assessment

A Source Water Assessment Plan (SWAP) is now available at our office. This 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.

According to the SWAP, our water system had a susceptibility rating of medium. If you would like to review the SWAP, please feel free to contact our office during regular business hours.

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 it 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
Arsenic (ppb)	2024	10	0	1.3	ND–1.3	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2024	2	2	0.023	0.011–0.023	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chlorine (ppm)	2024	[4]	[4]	0.42	0.03–0.80	No	Water additive used to control microbes
Fluoride (ppm)	2024	4[1]	4	0.5	0.5–0.6	No	Water additive which promotes strong teeth
Haloacetic Acids [HAAs] (ppb)	2024	60	NA	ND	NA	No	By-product of drinking water disinfection
Nitrate (ppm)	2024	10	10	1.49	0.37–1.49	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Perchlorate (ppb)	2024	2	NA	0.13	ND–0.13	No	Inorganic chemicals used as oxidizers in solid propellants for rockets, missiles, fireworks, and explosives
PFAS6 (ppt)	2024	20	NA	11.98	3.48–22.3	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 containing these PFAS, such as firefighting foams
TTHMs [total trihalomethanes] (ppb)	2024	80	NA	24[2]	20–24	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)	RANGE LOW-HIGH	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2024	1.3	1.3	0.1	0.01–0.152	0/20	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2024	15	0	ND	ND–3.7	0/20	No	Corrosion of household plumbing systems; Erosion of natural deposits

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.

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.

TON (Threshold Odor Number): A measure of odor in water.

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chloride (ppm)	2023	250	NA	131	27.5–131	No	Runoff/leaching from natural deposits
Iron (ppb)	2023	300	NA	473	109–473	No	Leaching from natural deposits; Industrial wastes
Manganese (ppb)	2024	50[3]	NA	112	75–156	No	Leaching from natural deposits
Odor (TON)	2023	3	NA	1.3	1.3–1.3	No	Naturally occurring organic materials
pH (units)	2024	6.5-8.5	NA	7.75	7.5–8.1	No	Naturally occurring
Sulfate (ppm)	2023	250	NA	13.5	12.8–13.5	No	Runoff/leaching from natural deposits; Industrial wastes
Total Dissolved Solids [TDS] (ppm)	2023	500	NA	340	170–340	No	Runoff/leaching from natural deposits
Zinc (ppm)	2023	5	NA	0.005	ND–0.005	No	Runoff/leaching from natural deposits; Industrial wastes

UNREGULATED SUBSTANCES [4]

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Perfluorobutanesulfonic Acid [PFBS] (ppt)	2024	2.06	1.17–3.48	NA
Perfluoroheptanoic Acid [PFHpA] (ppt)	2024	4.1	4.1–4.1	NA
Perfluorohexanesulfonic Acid [PFHxS] (ppt)	2024	1.86	0.448–3.48	NA
Perfluorohexanoic Acid [PFHxA] (ppt)	2024	4.8	4.8–4.8	NA
Perfluorononanoic Acid [PFNA] (ppt)	2024	1.45	ND–1.77	NA
Perfluorooctanesulfonate Acid [PFOS] (ppt)	2024	2.22	0.746–4.38	NA
Perfluorooctanoic Acid [PFOA] (ppt)	2024	4.02	1.74–6.3	NA
Perfluoropentanoic Acid [PFPeA] (ppt)	2024	7.3	7.3–7.3	NA
Sodium (ppm)	2024	117	31.5–117	Naturally occurring

[1] Fluoride has an SMCL of 2.0 ppm.

[2] Regulations dictate how we report our results. When only two samples are required for a specific contaminant, the higher of the two sample results must be reported under Amount Detected. When more than two samples are taken, the amount detected is an average of the results.

[3] Manganese is a naturally occurring mineral found in rocks, soil, groundwater, and surface water. Manganese is necessary for proper nutrition and part of a healthy diet, but it can have undesirable effects on certain sensitive populations at elevated concentrations. U.S. EPA and DEP have established public health advisory levels for manganese to protect against concerns of potential neurological effects.

[4] 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 the U.S. EPA in determining their occurrence in drinking water and whether future regulation is warranted.

Water Conservation Tips

You can play a role in conserving water and saving yourself money in the process by becoming conscious of the amount of water your household is using and by 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.