

2023 Annual Drinking Water Quality Report

Patten Water Department

Patten, Maine
PWSID ME0091240

We're pleased to present to you our Annual Drinking Water Quality Report, also known as the Consumer Confidence Report. This report, a requirement of the 1996 amendments to the Safe Drinking Water Act, is designed to inform you about the quality water and services we deliver to you every day. 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.

WATER SOURCE

We draw our water from two wells, both drilled in 1977. Well #1, which is 265 feet, is located on the corner of Dearborn Street and Roger's Lane. Well #2, which is 161 feet, is located in the old grammar school parking lot. Our water requires no treatment. We maintain 180 connections that service a population of 450.

SOURCE WATER ASSESSMENT

The Maine Drinking Water Program (DWP) has evaluated all public water supplies as part of the Source Water Assessment Program (SWAP). The assessments included geology, hydrology, land uses, water testing information, and the extent of land ownership or protection by local ordinance to see how likely our drinking water source is to being contaminated by human activities in the future. Assessment results are available at public water suppliers, town offices, and the DWP. For more information about the SWAP, please contact the DWP at telephone 207-287-2070.

If you have any questions about this report or concerning your water system, please contact Kevin A. Noyes at telephone number 207-731-7860 or mailing address P.O. Box 260, Patten, ME 04765. We want our valued customers to be informed about their water system. If you want to learn more, please attend any of the regularly scheduled selectmen's meetings. They are held every other Tuesday at 6:30 p.m. at the Town Office.

WATER QUALITY

Patten Water Department routinely monitors for contaminants in your drinking water according to Federal and State laws. The following table shows any detection resulting from our monitoring for the period of January 1st to December 31st, 2023.

In 2023, due to efforts to protect the water supply, our system was granted a 'Synthetic Organics Waiver.' This is a three year exemption from the monitoring/reporting requirements for the following industrial chemical(s): herbicides, carbamate pesticides, toxaphene/chlordane/PCB and semivolatile organics. This waiver was granted due to the absence of these potential sources of contamination within a half mile radius of the water source.

The sources of drinking water include rivers, lakes, ponds and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and radioactive material and can pick up substances resulting from human or animal activity. All sources of drinking water are subject to potential contamination by substances that are naturally occurring or man-made. Contaminants that may be present in source water include:

Microbial contaminants, such as viruses and bacteria, may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

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

Pesticides and herbicides may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.

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

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

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

The table below lists all of the drinking water contaminants that were detected throughout water quality monitoring and testing. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk.

Patten Water Dept

TEST RESULTS					
Unless otherwise noted, testing was done in 2023.					
Contaminant	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Microbiological Contaminants					
Total Coliform Bacteria (Jan 2023)	3 positive	Highest monthly # of positive samples	0 positive	1 pos/mo or 5% (e.coli)	Naturally present in the environment.
Radioactive Contaminants					
Combined Radium (-226 & -228) (10/4/23)	1.8	pCi/L	0	5	Erosion of natural deposits.
Combined Uranium (4/24/23)	2.3	ppb	0	30	Erosion of natural deposits.
Radium-226 (10/4/23)	1.8	pCi/L	0	5	Erosion of natural deposits.
Synthetics					
Total PFAS (6 regulated) (10/4/23)	8.24	ppt	0	20	Man-made chemicals in a wide variety of consumer products and industrial applications. Stain- and water-resistant fabrics, carpeting, non-stick cookware, cleaning products and paints, Class B Firefighting foam (AFFF) foam and industrial processes.
Inorganic Contaminants					
Arsenic (4/24/23)	3.1	ppb	0	10	Erosion of natural deposits. Runoff from orchards, glass and electronics production wastes.
Barium (4/24/23)	0.0241	ppm	2	2	Discharge of drilling wastes. Discharge from metal refineries. Erosion of natural deposits.
Chromium (4/24/23)	1.7	ppb	100	100	Discharge from steel and pulp mills. Erosion of natural deposits
Copper* (1/1/21-12/31/23)	0.08 <i>Range (0.058-0.082)</i>	ppm	1.3	AL=1.3	Corrosion of household plumbing systems.
Fluoride (4/24/23)	0.06	ppm	4	4	Erosion of natural deposits. Water additive which promotes strong teeth. Discharge from fertilizer and aluminum factories.
Lead* (1/1/21-12/31/23)	2.4 <i>Range (0.74-2.4)</i>	ppb	0	AL=15	Corrosion of household plumbing systems.
Nitrate (4/24/23)	2.2	ppm	10	10	Runoff from fertilizer use. Leaching from septic tanks, sewage. Erosion of natural deposits.
* = Reported results are the 90 th percentile value (the value that 90% of all samples are less than).					

Note: The state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Not all contaminants are tested for every year due to monitoring waivers and therefore we must use the most recent round of sampling. Some of our data is more than one year old, however, is limited to no older than 5 years.

Definitions:

Action Level (AL) - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Locational Running Annual Average (LRAA) - A 12 month rolling average of all monthly or quarterly samples at specific sampling locations. Calculation of the RAA may contain data from the previous year.

Maximum Contaminant Level (MCL) - is 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) - 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.

Maximum Residual Disinfection Level (MRDL) - 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.

Maximum Residual Disinfection Level Goal (MRDLG) - 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.

Not Applicable (N/A) - Does not apply

Running Annual Average (RAA) - A 12 month rolling average of all monthly or quarterly samples at all locations. Calculations of the RAA may contain data from the previous year.

Secondary Maximum Contaminant Level (SMCL)

Treatment Technique (TT) - A required process intended to reduce the level of a contaminant in drinking water (e.g. treatment technique for turbidity).

Variances, Exemptions, and Waivers - State or EPA permission not to meet an MCL, a treatment technique or test for a given contaminant under certain conditions.

Units:

ppm = parts per million or milligrams per liter (mg/L)

ppb = parts per billion or micrograms per liter (µg/L)

pCi/L = picocuries per liter (a measure of radioactivity)

ppt = parts per trillion or nanograms per liter (ng/L)

pos = positive samples.

MFL = million fibers per liter

Notes:

Arsenic - While your drinking water may meet EPA's standard for Arsenic, if it contains between 5 to 10 ppb you should know that the standard balances the current understanding of arsenic's possible health effects against the costs of removing it from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems. Quarterly compliance is based on running annual average.

E. Coli - E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely-compromised immune systems.

Fluoride - For those systems that fluoridate, fluoride levels must be maintained between 0.5 to 1.2 ppm. The optimum level is 0.7 ppm.

Gross Alpha - Action level over 5 pCi/L requires testing for Radium 226 and 228. Action level over 15 pCi/L requires testing for Uranium. Compliance is based on Gross Alpha results minus Uranium results = Net Gross Alpha.

Lead/Copper - Action levels (AL) are measured at consumer's tap. 90% of the tests must be equal to or below the action level.

Nitrate - Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant you should ask advice from your health provider.

PFAS - The degree of risk depends on the level of chemicals and duration of exposure. Laboratory studies of animals exposed to high doses of PFAS have shown numerous negative effects such as issues with reproduction, growth and development, thyroid function, immune system, neurology, as well as injury to the liver. Research is still relatively new, and more needs to be done to fully assess exposure effects on the human body.

Radon - The State of Maine adopted a Maximum Exposure Guideline (MEG) for Radon in drinking water at 4000 pCi/L, effective 1/1/07. If Radon exceeds the MEG in water, treatment is recommended. It is also advisable to test indoor air for Radon.

Total Coliform Bacteria - Reported as the highest monthly number of positive samples, for water systems that take less than 40 samples per month.

TTHM/HAA5 - Total Trihalomethanes and Haloacetic Acids (TTHM and HAA5) are formed as a by-product of drinking water chlorination. This chemical reaction occurs when chlorine combines with naturally occurring organic matter in water. Compliance is based on running annual average.

IMPORTANT INFORMATION

Total Coliform Bacteria Level Assessments

Coliforms are bacteria that are naturally present in the environment and are 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 assessment(s) to identify problems and to correct any issues that were found during these assessments.

A Level 1 Assessment is an investigation of the water system designed to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system. During the past year, we triggered Level One assessment(s) that was/were escalated to a Level Two assessment (see below).

A Level 2 Assessment is a more detailed investigation of the water system designed to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred or why our water system continues to show total coliform bacteria on multiple occasions even after completing a Level 1 Assessment. During the past year, we were required to conduct 1 Level Two assessment(s). We completed 1 Level Two assessment(s). Based on the assessment(s), we were required to take 2 corrective actions and we completed 2 of these actions.

VIOLATIONS

Violation Period	Violation Type
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7/2/2023 -	2C Violation - CORRECTIVE/EXPEDITED ACTIONS (RTCR) REVISED TOTAL COLIFORM RULE (RTCR)
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In 2023, based on information from a level assessment, we were required to take corrective actions to address identified issues. We failed to complete the necessary corrective actions.

All 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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

For most people, the health benefits of drinking plenty of water outweigh any possible health risk from these contaminants. However, 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 about drinking water from their health care providers. EPA/Center of Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791) or at <https://www.epa.gov/ccr/forms/contact-us-about-consumer-confidence-reports>.

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 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 thirty (30) seconds to two (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>.

We, at Patten Water Department, work hard to provide top quality water to every tap. We ask that all our customers help us protect and preserve our drinking water resources, which are the heart of our community, our way of life, and our children's future. Please contact us with any questions. Thank you for working together for safe drinking water.