



2023 Consumer Confidence Report
Jaffrey Water Department
PWS EPA ID #1221010
www.townofjaffrey.com

Introduction

Like any responsible public water system, our mission is to deliver the best-quality drinking water and reliable service at the lowest, appropriate cost.

Aging infrastructure presents challenges to drinking water safety, and continuous improvement is needed to maintain the quality of life we desire for today and for the future.

As previously reported, the Department completed an asset management and planning study funded in part through a grant from the New Hampshire Department of Environmental Services (NHDES) which encompassed expanding the water system inventory; organizing and incorporating the water system geographic system (GIS) data and the Town's existing GIS data into a web-based GIS; updating the water distribution model; and, prioritizing water main improvement projects and a capital spending plan. Following the first major project which replaced aging water mains on Main Street, Mountain Road and Cross Street, the Town has completed the next major project replacing water mains on Squantum Road, Stratton Road, School Street and Aetna Street. This year we started work on Bryant Road and Sawtelle Road in preparation of paving.

The Cross Connection and Backflow Testing Program tested all 126 backflow prevention devices once or twice per year at local businesses, schools and municipal buildings in 2022.

This year we re-developed all of our well sites, and were hit with a drought so we were not able to flush all the fire hydrants in town like we usually do. Hydrants that were flushed were systematically picked based on their location in the system. Regular fire hydrant flushing keeps the drinking water fresh, removes iron and manganese within the distribution system, and allows our water operators a chance to make sure all the fire hydrants in Town are working properly.

The Department also regularly reconciles water produced to usage records to identify unaccounted water in the distribution system which was 12.93% in 2022. A full system leak detection was completed to reduce this number.

More information regarding water conservation can be found at www.epa.gov/watersense where tips are provided on saving water and protecting the environment by choosing Water Sense labeled products at home and business and by taking steps to save water every day.

These investments along with on-going operation and maintenance costs are supported by water users in Jaffrey and Rindge. When considering the high value we place on water, it is truly a bargain to have water service that protects public health, fights fires, supports businesses and the economy, and provides us with the high-quality of life we enjoy.

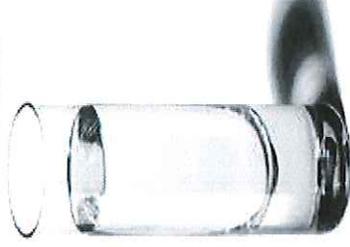
What is a Consumer Confidence Report?

The Consumer Confidence Report (CCR) details the quality of your drinking water, where it comes from, and where you can get more information. This annual report documents all detected primary and secondary drinking water parameters and compares them to their respective standards known as Maximum Contaminant Levels (MCLs).

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.

Contaminants that may be present in source water include:

NOW IT COMES WITH A LIST OF INGREDIENTS.



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

Inorganic contaminants, such as salts and metals, which 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, 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 can also come from gas stations, urban storm water runoff, and septic systems.

Radioactive contaminants, which 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, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. The US Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

What is the source of my drinking water?

The Jaffrey water system consists of over 41 miles of piping with over 1,500 service connections in Jaffrey and a portion of Rindge. In 2022, an average of 354,657 gallons of water was pumped daily from the four wells (two at Turnpike, one at Contoocook and one at Squantum) and stored in two storage tanks (Bullet and Poole). Water pumped from the groundwater supply receives three treatment applications: chlorine is added as a precautionary disinfectant, though it is not yet required by the State for our system; sodium hydroxide is added to adjust the pH of the naturally acidic groundwater to minimize the corrosion of metals in piping; and polyphosphate additive is used to minimize the staining effects of naturally occurring iron and manganese in the groundwater. Iron and Manganese are naturally found in our water and its effects are aesthetic only.

Why are contaminants in my water? Drinking water, including bottled water, may reasonably be expected to con-

tain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that 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.

Do I need to take special precautions? 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/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 at 1-800-426-4791.

Source Water Assessment Summary:

DES prepared drinking water source assessment reports for all public water systems in an effort to assess the vulnerability of each of the state's public water supply sources. Included in the report is a map of each source water protection area, a list of potential and known contamination sources, and a summary of available protection operations. The results of the assessment, prepared on December 11, 2000 are noted below:

- **Turnpike Road Well**, four (4) susceptibility factors were rated high, two (2) were rated medium, and (6) were rated low.
- **Contoocook Lake Well**, three (3) susceptibility factors were rated high, three (3) were rated medium, and six (6) were rated low.

Note: This information is over twenty-three years old and includes information that was current at the time the report was completed and doesn't reflect many improvements to the treatment and distribution systems. Therefore, some of the ratings might be different if updated to reflect current information. At the present time, DES has no plans to update this data. For more information, call the Department of Public Works at 603-532-6521 or visit the DES Drinking Water Source Assessment website at:

<https://www.des.nh.gov/climate-and-sustainability/conservation-mitigation-and-restoration/source-water-protection/assessment>

How can I get involved? For additional information regarding Jaffrey's water system, contact the Department of Public Works office at 603-532-6521 or by email at publicworks@townofjaffrey.com. Although we do not schedule meetings on a regular basis, the schedule for any public hearing for specific projects may be obtained by calling the Jaffrey DPW office. There are often updates on water projects presented to the Board of Selectmen at their regular meetings and also on the town's website at <http://www.townofjaffrey.com>

Violations and other information: There were NO drinking water violations in 2022.

Definitions:

Ambient Groundwater Quality Standard or AGQS: The maximum concentration levels for contaminants in groundwater that are established under RSA 485-C, the Groundwater Protection Act.

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

Level I Assessment: 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.

Level II Assessment: A very detailed study of the water system to identify potential problems and determine, if possible, why an E.coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

Maximum Contaminant Level or MCL: 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 or MCLG: 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 Disinfectant Level or 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 Disinfectant Level Goal or 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.

Treatment Technique or TT: A required process intended to reduce the level of a contaminant in drinking water.

Abbreviations

BDL: Below Detection Limit

mg/L: milligrams per Liter

NA: Not Applicable

ND: Not Detectable at testing limits

NTU: Nephelometric Turbidity Unit

pCi/L: picoCurie per Liter

ppb: parts per billion

ppm: parts per million

RAA: Running Annual Average

TTHM: Total Trihalomethanes

UCMR: Unregulated Contaminant Monitoring Rule

ug/L: micrograms per Liter

Drinking Water Contaminants:

Lead: 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. This water system is responsible for high quality drinking water, but cannot control the variety of materials used in your plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing cold water from your tap for at least 30 seconds before using water for drinking or cooking. Do not use hot water for drinking and 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://water.epa.gov/drink/info/lead/index.cfm>

2023 Report (2022 and earlier data)

LEAD AND COPPER

Contaminant (Units)	Action Level	90 th percentile sample value	Date	# of sites above AL	Violation Yes/NO	Likely Source of Contamination	Health Effects of Contaminant
Copper (ppm)	1.3	0.381	1/03/20	0	NO	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives	Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.
Lead (ppb)	15	0	11/03/20	0	NO	Corrosion of household plumbing systems, erosion of natural deposits	(15 ppb in more than 5%) Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (800-426-4791). (above 15 ppb) Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

DETECTED WATER QUALITY RESULTS

Contaminant (Units)	Level Detected*	MCL	MCLG	Violation YES/NO	Likely Source of Contamination	Health Effects of Contaminant
Radioactive Contaminants						
Compliance Gross Alpha (pCi/L)	Squantum 006 7/28/22 0.7	15	0	NO	Erosion of natural deposits	Certain minerals are radioactive and may emit a form of radiation know as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.
Uranium (ug/L)	Squantum 006 7/28/22 1	30	0	NO	Erosion of natural deposits	Some people who drink water containing uranium in excess of the MCL over many years may have an increased risk of getting cancer and kidney toxicity.
Combined Radium 226 + 228 (pCi/L)	Squantum 006 7/28/22 1.9	5	0	NO	Erosion of natural deposits	Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.

Inorganic Contaminants

Barium (ppm)	Contoocook 0.016 7/28/22	2	2	NO	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.
	Turnpike 001 0.020 5/10/22	2	2	NO		
	Squantum 006 0.002 4/20/21	2	2	NO		
Nitrate (as Nitrogen) (ppm)	Turnpike 005 1.1 3/14/22	10	10	NO	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	(5 ppm through 10ppm) 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 for advice from your health care provider. (Above 10 ppm) Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.

Volatile Organic Contaminants

Total Trihalomethanes (TTHM)	176 Nutting Rd 2.8 8/9/21	80	N/A	NO	By-product of drinking water chlorination	Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.
(Bromodichloro-methane Bromoform Dibromochloro-methane Chloroform) (ppb)	163 Mountain Rd 8.8 8/9/21	80	N/A	NO		

PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS) CONTAMINANTS

Contaminant (Units)	Level Detected	MCL	MCLG	Violation YES/NO	Likely Source of Contamination	Health Effects of Contaminant
Perfluorohexane sulfonic acid (PFHxS) (ppt)	Turnpike 005 2.64 Average	18	0	NO	Discharge from industrial processes, wastewater treatment, residuals from firefighting foam, runoff/leachate from landfills and septic systems	Some people who drink water containing perfluorohexane sulfonic acid (PFHxS) in excess of the MCL over many years could experience problems with their liver, endocrine system, or immune system, or may experience increased cholesterol levels. It may also lower a women's chance of getting pregnant.
	6.44 Range			NO		
	2/11/21-10/12/22					
Perfluorooctane sulfonic acid (PFOS) (ppt)	Turnpike 001 4.905 Average	15	0	NO	Discharge from industrial processes, wastewater treatment, residuals from firefighting foam, runoff/leachate from landfills and septic systems	Some people who drink water containing perfluorooctane sulfonic acid (PFOS) in excess of the MCL over many years could experience problems with their liver, endocrine system, or immune system, may experience increased cholesterol levels, and may have an increased risk of getting certain types of cancer. It may also lower a women's chance of getting pregnant.
	10.7 Range			NO		
	2/9/22-10/12/22					
Perfluorooctanoic acid (PFOA) (ppt)	Turnpike 005 8.95 Average	12	0	NO	Discharge from industrial processes, wastewater treatment, residuals from firefighting foam, runoff/leachate from landfills and septic systems	Some people who drink water containing perfluorooctanoic acid (PFOA) in excess of the MCL over many years could experience problems with their liver, endocrine system, or immune system, may experience increased cholesterol levels, and may have an increased risk of getting certain types of cancer. It may also lower a women's chance of getting pregnant.
	13.9 Range			NO		
	2/11/21-10/12/22					
Perfluorooctanoic acid (PFOA) (ppt)	Turnpike 001 0.60 Average	12	0	NO	Discharge from industrial processes, wastewater treatment, residuals from firefighting foam, runoff/leachate from landfills and septic systems	Some people who drink water containing perfluorooctanoic acid (PFOA) in excess of the MCL over many years could experience problems with their liver, endocrine system, or immune system, may experience increased cholesterol levels, and may have an increased risk of getting certain types of cancer. It may also lower a women's chance of getting pregnant.
	2.39 Range			NO		
	2/9/22-10/12/22					
Perfluorooctanoic acid (PFOA) (ppt)	Turnpike 005 1.46 Average	12	0	NO	Discharge from industrial processes, wastewater treatment, residuals from firefighting foam, runoff/leachate from landfills and septic systems	Some people who drink water containing perfluorooctanoic acid (PFOA) in excess of the MCL over many years could experience problems with their liver, endocrine system, or immune system, may experience increased cholesterol levels, and may have an increased risk of getting certain types of cancer. It may also lower a women's chance of getting pregnant.
	2.93 Range			NO		
	2/11/21-10/12/22					
Perfluorooctanoic acid (PFOA) (ppt)	Turnpike 001 1.77 Average	12	0	NO	Discharge from industrial processes, wastewater treatment, residuals from firefighting foam, runoff/leachate from landfills and septic systems	Some people who drink water containing perfluorooctanoic acid (PFOA) in excess of the MCL over many years could experience problems with their liver, endocrine system, or immune system, may experience increased cholesterol levels, and may have an increased risk of getting certain types of cancer. It may also lower a women's chance of getting pregnant.
	4.37 Range			NO		
	2/9/22-10/12/22					

SECONDARY CONTAMINANTS

Secondary MCLs (SMCL)	Level Detected	Date	Treatment technique (if any)	SMCL	Specific contaminant criteria and reason for monitoring
Chloride (ppm)	Contoocook 30.0	7/28/22	N/A	250	Wastewater, road salt, water softeners, corrosion
	Turnpike 001 52.0	5/10/22	N/A	250	
	Turnpike 005 86.5	2/11/21	N/A	250	
	Squantum 006 6.45	4/20/21	N/A	250	
Iron (ppm)	Turnpike 001 0.185	5/10/2022	N/A	N/A	Geological
	Contoocook 0.031	7/28/22			
	Contoocook 0.036	7/28/22	N/A	0.05	
	Turnpike 001 0.039	5/10/22	N/A	0.05	
Manganese (ppm)	Turnpike 005 0.024	2/11/21	N/A	0.05	Geological
	Squantum 006 0.001	4/20/21	N/A	0.05	
	Turnpike 001 0.001	5/10/22	N/A	Not established; reporting is required for detections	
	Contoocook 5.74	5/6/19	N/A	6.5-8.5	
Nickel (ppm)	Turnpike 001 6.18	5/10/22	N/A	6.5-8.5	Geological; electroplating, battery production, ceramics
	Turnpike 005 5.87	2/11/21	N/A	6.5-8.5	
	Squantum 006 6.39	4/20/21	N/A	6.5-8.5	
	Contoocook 5.74	5/6/19	N/A	6.5-8.5	
pH (su)	Turnpike 001 6.18	5/10/22	N/A	6.5-8.5	Precipitation and geology
	Turnpike 005 5.87	2/11/21	N/A	6.5-8.5	
	Squantum 006 6.39	4/20/21	N/A	6.5-8.5	
	Contoocook 5.74	5/6/19	N/A	6.5-8.5	

	We are required to regularly sample for sodium									
Sodium (ppm)	<p>Contoocook 12.5</p> <p>Turnpike 001 35.0</p> <p>Turnpike 005 40.0</p> <p>Squantum 006 4.6</p>	<p>7/28/22</p> <p>5/10/22</p> <p>2/11/21</p> <p>4/20/21</p>	<p>N/A</p> <p>N/A</p> <p>N/A</p> <p>N/A</p>	<p>250</p> <p>250</p> <p>250</p> <p>250</p>	<p>N/A</p> <p>N/A</p> <p>N/A</p> <p>N/A</p>	<p>250</p> <p>250</p> <p>250</p> <p>250</p>	<p>N/A</p> <p>N/A</p> <p>N/A</p> <p>N/A</p>	<p>250</p> <p>250</p> <p>250</p> <p>250</p>	<p>N/A</p> <p>N/A</p> <p>N/A</p> <p>N/A</p>	<p>Naturally occurring</p>
Sulfate (ppm)	<p>Contoocook 5.64</p> <p>Turnpike 001 6.7</p> <p>Turnpike 005 10.7</p> <p>Squantum 006 3.15</p>	<p>7/28/22</p> <p>5/10/22</p> <p>2/11/21</p> <p>4/20/21</p>	<p>N/A</p> <p>N/A</p> <p>N/A</p> <p>N/A</p>	<p>250</p> <p>250</p> <p>250</p> <p>250</p>	<p>N/A</p> <p>N/A</p> <p>N/A</p> <p>N/A</p>	<p>250</p> <p>250</p> <p>250</p> <p>250</p>	<p>N/A</p> <p>N/A</p> <p>N/A</p> <p>N/A</p>	<p>250</p> <p>250</p> <p>250</p> <p>250</p>	<p>N/A</p> <p>N/A</p> <p>N/A</p> <p>N/A</p>	<p>Naturally occurring</p>
Zinc (ppm)	<p>Turnpike 001 0.055 mg/l</p>	<p>5/6/19</p>	<p>N/A</p>	<p>5</p>	<p>N/A</p>	<p>5</p>	<p>N/A</p>	<p>5</p>	<p>N/A</p>	<p>Galvanized pipes</p>