



# Pennichuck 2024 Consumer Confidence Report

## Nashua EPA # 1621010

### 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:

**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**, the EPA prescribes regulations which limit the amounts 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 two sources of water for the Nashua Core system, the Merrimack River, and the Pennichuck Brook. The third source is original 1852 Pennichuck Water Works at Supply Pond from spring. Treatment for a surface water treatment plant is to remove organic matter and other constituents found in surface water. Rapid mixing, coagulation, flocculation, sedimentation, and Granular Activated Carbon Filtration are the technologies and methods in accordance with federal and state standards. Water is disinfected using chlorine for primary disinfection and distribution system disinfection.

### Why are contaminants in my water?

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 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

NHDES prepared drinking water source assessment reports for all public water systems between 2000 and 2003 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 options. The results of the assessment prepared as noted below.

SourceName	Low	Medium	High	Date
Harris Pond Reservoir	6	3	2	07/05/2001
Merrimack River	2	4	5	10/25/2001
Supply Pond/Springs	6	3	2	07/05/2001

**Note:** Due to the time when the assessments were completed, some of the ratings might be different if updated to reflect current information. The complete Assessment Report is available for review. For more information, call **Matt Day** at 800-553-5191 or visit the [NHDES website](#).

### **How can I get involved?**

For more information about your drinking water, please call our laboratory at 800-553-5191 or send an email to [customer-service@pennichuck.com](mailto:customer-service@pennichuck.com). Although we do not have specific dates for public participation events or meetings, feel free to contact us with any questions you may have.

**Violations and Other Information:** We are pleased to report that your drinking water meets or exceeds all federal and state requirements.

### **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 at 1-800-426-4791 or at [US EPA Basic Information about Lead in Drinking Water](#).

**Sodium:** (2.5 ppb through 5 ppb) While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic 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. (Above 5 ppb) Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system and may have an increased risk of getting cancer.

**2023 Results**

	<b>Dated</b>	<b>90th Percentile</b>	<b>Action Level</b>	<b>MCLG</b>	<b># of Sites Sampled</b>	<b># Sites Above Action Level</b>	<b>Violation Yes/No</b>	<b>Typical Source of Contaminant</b>
Lead (ppb)	8/17/2023	0	15	0	63	0	No	Corrosion of household plumbing systems, erosion of natural deposits
Copper (ppm)	8/17/2023	0.188	1.3	1.3	63	0	No	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

**DISINFECTION BY-PRODUCTS**

	<b>Dated</b>	<b>Highest Detect</b>	<b>Range Detected</b>	<b>MCL</b>	<b>MCLG</b>	<b>Violation Yes/No</b>	<b>Typical Source of Contaminant</b>
Chlorine (ppm)	Weekly 2023	AVG 0.67	0.04-1.26	4 - MRDL	4 - MRDLG	No	Water additive used to control microbes
Haloacetic Acids (ppb)	Quarterly 2023	RAA 7.50	2.6-15	60	0	No	By-product of drinking water chlorination
Total Organic Carbon(ppm)	Monthly 2023	AVG 0.28	ND-0.83		0	No	Naturally present in the environment
Total Trihalomethanes (ppb)	Quarterly 2023	RAA 15.67	5.3-41	80	0	No	By-product of drinking water chlorination

**INORGANIC CONTAMINANTS**

	<b>Dated</b>	<b>Highest Detect</b>	<b>Range Detected</b>	<b>MCL</b>	<b>MCLG</b>	<b>Violation Yes/No</b>	<b>Typical Source of Contaminant</b>
Barium (ppm)	8/28/2023	0.0089	NA	2	2	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Nitrite (as Nitrogen) (ppm)	8/29/2023	0.20	NA	1	1	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

**Organic Chemical Contaminants**

	<b>Dated</b>	<b>Highest Detect</b>	<b>Range Detected</b>	<b>MCL</b>	<b>MCLG</b>	<b>Violation Yes/No</b>	<b>Typical Source of Contaminant</b>
Perfluorooctanoic acid (PFOA)	Quarterly 2023	RAA 3.20	ND-5.43	12	0	No	Discharge from industrial processes, wastewater treatment, residuals from firefighting foam, runoff/leachate from landfills and septic systems

<b>Turbidity</b>	<b>TT</b>	<b>Lowest Monthly % of Samples</b>	<b>Highest Detected Daily Value</b>	<b>Violation</b>	<b>Typical Source of Contaminant</b>
Daily Compliance (NTU)	5	-----	0.21 NTU December 31,2023	No	<b>Soil Off</b>
Monthly Compliance*	At least 100	100 % - All of the months of 2023	-----	No	<b>Soil Off</b>

Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of water quality.

\*Monthly turbidity compliance is related to a specific treatment technique (TT). Our system filters the water so at least 95% of our samples each month must be below the turbidity limits specified in the regulations.

<b>SECONDARY CONTAMINANTS</b>							
					<b>50 % AGQS (Ambient groundwater quality standard)</b>	<b>AGQS (Ambient groundwater quality standard)</b>	<b>Typical Source of Contaminant</b>
	<b>Dated</b>	<b>Level Detected</b>	<b>Treatment Technique</b>	<b>SMCL</b>			
Chloride (ppm)	8/28/2023	57	N/A	250	N/A	N/A	Wastewater, road salt, water softeners, corrosion
Hardness (ppm)	8/28/2023	10.7	N/A	N/A			Geological
Iron (ppm)	8/28/2023	0.015	Filtration	0.3	N/A	N/A	Geological
Manganese (ppm)	8/28/2023	0.0294	Filtration	0.05	0.15	0.3	Geological
Nickel (ppm)	8/28/2023	0.0038	N/A	N/A	0.005	0.01	Geological; electroplating, battery production, ceramics
pH	1/17/2023	7.38	N/A	6.5-8.5	N/A	N/A	Precipitation and geology
Sodium (ppm)	8/28/2023	34.5	N/A	100-250	N/A	N/A	Road salt, septic systems (salt from water softeners) We are required to regularly sample for sodium
Sulfate (ppm)	8/28/2023	4	N/A	250	250	500	Naturally occurring
Zinc (ppm)	8/28/2023	0.22	N/A	5	N/A	N/A	Galvanized pipes

**Secondary Maximum Contaminant Level or SMCL:** They identify acceptable concentrations of contaminants which cause unpleasant tastes, odors, or colors in the water

Pennichuck Water Works participated in the **5th stage of the U.S. EPA's Unregulated Contaminant Monitoring Rule (UCMR5)** program by performing additional tests on our drinking water. UCMR5, benefits the environment and public health by providing the EPA with data on the occurrence of contaminants suspected to be in drinking water, in order to determine if the EPA needs to introduce new regulatory standards to improve drinking water quality. Unregulated contaminants monitoring data are 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 Contaminants Monitoring Rule, please call the Safe Drinking Water Hotline at (800)426-4791.

Additional Testing	UMCR	Results	Range	Explain federal monitoring requirement
Lithium	2/13/23	ND	ND	The EPA does not currently have a health advisory for lithium in drinking water. However, the CCL program derived a health reference level (HRL) for screening purposes based on the EPA's provisional peer-reviewed toxicity value (PPRTV) assessment for lithium. The HRL is 10 µg/L.
Lithium	5/3/23	ND	ND	The EPA does not currently have a health advisory for lithium in drinking water. However, the CCL program derived a health reference level (HRL) for screening purposes based on the EPA's provisional peer-reviewed toxicity value (PPRTV) assessment for lithium. The HRL is 10 µg/L.
Lithium	8/7/23	ND	ND	The EPA does not currently have a health advisory for lithium in drinking water. However, the CCL program derived a health reference level (HRL) for screening purposes based on the EPA's provisional peer-reviewed toxicity value (PPRTV) assessment for lithium. The HRL is 10 µg/L.
Lithium	11/15/23	ND	ND	The EPA does not currently have a health advisory for lithium in drinking water. However, the CCL program derived a health reference level (HRL) for screening purposes based on the EPA's provisional peer-reviewed toxicity value (PPRTV) assessment for lithium. The HRL is 10 µg/L.
Perfluorinated and Polyfluorinated Alkyl (ppt)	2/13/23	ND	ND	The Safe Drinking Water Act was amended by Section 7311 of the Fiscal Year 2020 National Defense Authorization Act (NDAA) to require that the EPA include all PFAS in UCMR 5 for which a drinking water method has been validated, and that are not subject to a National Primary Drinking Water Regulation (NPDWR). Therefore, UCMR 5 includes all 29 PFAS that are within the scope of EPA Methods 533 and 537.1.
Perfluorinated and Polyfluorinated Alkyl (ppt)	5/3/23	ND	ND	The Safe Drinking Water Act was amended by Section 7311 of the Fiscal Year 2020 National Defense Authorization Act (NDAA) to require that the EPA include all PFAS in UCMR 5 for which a drinking water method has been validated, and that are not subject to a National Primary Drinking Water Regulation (NPDWR). Therefore, UCMR 5 includes all 29 PFAS that are within the scope of EPA Methods 533 and 537.1.
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If you are interested in examining the results, they are now available at the following location:

[www.epa.gov/dwucmr/occurrence-data-unregulated-contaminant-monitoring-rule](http://www.epa.gov/dwucmr/occurrence-data-unregulated-contaminant-monitoring-rule)

## 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 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.

**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.

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

## Abbreviations

**NA:** Not Applicable

**ND:** Not Detectable at testing limits

**pCi/L:** picoCurie per Liter

**ppm:** parts per million

**ppb:** parts per billion

**ppt:** parts per trillion

**RAA:** Running Annual Average

**90th Percentile** - Out of every 10 homes sampled, 9 were at or below this level

The most up to date information of **PFAS RESOURCES** can be found on the following NHDES websites:

NH PFAS Investigation

<https://www4.des.state.nh.us/nh-pfas-investigation/>

NH Department of Health and Human Services

<https://www.dhhs.nh.gov/dphs/pfcs/index.htm>



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