

2024 Consumer Confidence Report

Hi and Lo Estates

PWS # 0612140

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).

NOW IT COMES WITH A LIST OF INGREDIENTS.



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 per- and polyfluoroalkyl substances, synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production.

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 prescribe 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? Hi and Lo Estates obtains water from a single bedrock well and a seasonal interconnection from the Drew Woods System. Hi and Lo Well 4 located 334 feet northwest of the pump house is 600 feet deep and yields 35 gpm.

Treatment for well 4 (winter) consists of potassium permanganate followed by greensand filtration to remove iron and manganese, polyphosphate addition for corrosion control and ultraviolet light for disinfection.

Treatment (summer) Well 4 is discontinued and water is supply by an interconnection with the Drew Woods system. The Drew Woods system is a blend of 4 wells and water purchased from the Town of Derry. The source of Derry's water is the City of Manchester. Chloramination is used by the City of Manchester as a means of disinfection. Average daily water use is 10,386 gallons.

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 on 6/10/05 are noted below.

Source Name	Low	Med	High
Hi & Lo Estate Bedrock Well 4	7	3	2
Drew Woods Bedrock Well 4	7	4	1
Drew Woods Bedrock Well 5	8	3	1
Drew Woods Bedrock Well 6	9	2	1
Drew Woods Bedrock Well 7	8	3	1
Lake Massabesic	5	4	4
Merrimack River	2	4	5

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. Although we do not have specific dates for public participation events, feel free to contact us with any questions.

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](#).

Fluoride: Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or more may cause mottling of children’s teeth, usually in children less than nine years old. Mottling also known as dental fluorosis, may include brown staining and/or pitting of the teeth, and occurs only in developing teeth before they erupt from the gums.

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.

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

- NA:** Not Applicable
- ND:** Not Detectable at testing limits
- pCi/L:** picoCurie per Liter
- ppb:** parts per billion
- ppm:** parts per million
- ppt:** parts per trillion
- RAA:** Running Annual Average
- 90th Percentile** – Out of every 10 homes sampled, 9 were at or below this level

2023 Data

	Year Collected	90th Percentile	Action Level	MCLG	# of Sites Sampled	# Sites Above Action Level	Violation Yes/No	Typical Source of Contaminant
Lead (ppb)	7/13/21	0	15	0	6	0	No	Corrosion of household plumbing systems, erosion of natural deposits
Copper (ppm)	7/13/21	0.19	1.3	1.3	6	0	No	Corrosion of household plumbing systems, erosion of natural deposits; leaching from wood preservatives

Disinfectants and Disinfection By-Products								
Chlorine (ppm)*		Jun-Nov	0.08	ND-0.22	4-MRDL	4-MRDLG	No	Water additive used to control microbes
Chloramines (ppm)		Jun-Nov	0.47	ND-1.75	4	4	No	Water additive used to control microbes
Total Trihalomethanes (ppb)		7/13/22	1.9	NA	80	0	No	By-product of drinking water disinfection
Haloacetic Acids (ppb)		7/13/22	ND	NA	60	0	No	By-product of drinking water disinfection

* Chloramination as a means of disinfection when in seasonal interconnection mode (summer)

Hi & Lo Estates Water Quality

Inorganic Contaminants	Year Collected	Highest Detect	Range Detected	MCL	MCLG	Violation Yes/No	Typical Source of Contaminant
Arsenic (ppb)	1/12/21	1.1	NA	5	0	No	Erosion of natural deposits; runoff from orchards; run from glass and electronics production waste
Barium (ppm)	1/12/21	0.0435	NA	2	2	No	Discharge of drilling wastes; discharge from metal refineries; erosion or the natural deposits
Organic chemical contaminants							
Perfluorooctanoic acid (PFOA)(ppt)	12/5/23	6.57	NA	12	0	No	Discharge from industrial processes, wastewater treatment, residuals from firefighting foam, runoff/leachate from landfills and septic systems
Radiological Contaminants							
Radium 226 & 228 (pCi/L)	1/21/21	1+0.4	NA	5	0	No	Erosion of natural deposits
Uranium (Mass) (µg/L)	2/4/19	2.4	NA	30	0	No	Erosion of natural deposits

Secondary MCLs (SMCL)	Date	Level Detected	Treatment technique	SMCL	50 % AGQS (Ambient groundwater quality standard)	AGQS (Ambient groundwater quality standard)	Specific contaminant criteria and reason for monitoring
Chloride (ppm)	1/12/21	73	NA	250	NA	NA	Wastewater, road salt, water softeners, corrosion
Fluoride (ppm)	1/12/21	0.21	NA	2	2	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Hardness (ppm)	1/12/21	172	NA	NA			Geological
Iron (ppm)	1/12/21	0.035	NA	0.30	NA	NA	Geological
Manganese (ppm)	1/12/21	0.131	NA	0.05	0.15	0.3	Geological
Nickel (ppb)	1/12/21	0.0012	NA	NA	0.005	0.01	Geological; electroplating, battery production, ceramics
pH (SU)	1/12/21	7.80	NA	6.5-8.5	NA	NA	Precipitation and geology
Sodium (ppm)	1/12/21	18	NA	100-250	NA	NA	Road salt, septic systems (salt from water softeners) We are required to regularly sample for sodium
Sulfate (ppm)	1/12/21	34	NA	250	250	500	Naturally occurring
Zinc (ppm)	1/12/21	0.0053	NA	5	NA	NA	Galvanized pipes

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

Additional Tests	Date	Description of data requested	Treatment technique	Results (with units)	Specific contaminant criteria and reason for monitoring
Radon (pCi/L)	2/8/23 5/9/23 8/8/23 11/6/23	Well 4 Hi & Lo	AL (Action Level) 2000 (pCi/L)	3629 2756 753 714	Radon is a radioactive gas that you can't see, taste or smell. It can move up through the ground and into a home through cracks and holes in the foundation. Radon can also get into indoor air when released from tap water from showering, washing dishes, and other household activities. It is a known human carcinogen. Breathing radon can lead to lung cancer. Drinking water containing radon may cause an increased risk of stomach cancer.

Drew Woods Water Quality

Inorganic Contaminants	Year Collected	Detect	Range Detected	MCL	MCLG	Violation Yes/No	Typical Source of Contaminant
Arsenic (ppb)	Quarterly 2023	RAA 1.6	1.5-1.7	5	0	No	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium (ppm)	7/6/23	0.0130	NA	2	2	No	Discharge of drilling wastes; discharge from metal refineries; erosion or the natural deposits
Organic chemical contaminants							
Perfluorooctanoic acid (PFOA)(ppt)	1/11/21 4/12/21 7/15/21	3.24 4.40 4.91	3.24 – 4.91	12	0	No	Discharge from industrial processes, wastewater treatment, residuals from firefighting foam, runoff/leachate from landfills and septic systems

Secondary MCLs (SMCL)	Date	Level Detected	Treatment technique	SMCL	50 % AGQS (Ambient groundwater quality standard)	AGQS (Ambient groundwater quality standard)	Specific contaminant criteria and reason for monitoring
Chloride (ppm)	7/6/23	56	NA	250	N/A	N/A	Wastewater, road salt, water softeners, corrosion
Fluoride (ppm)	7/6/23	0.55	Fluorosilicic acid	2	2	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Hardness (ppm)	7/6/23	74.5	NA	NA	NA	NA	Geological
Iron (ppm)	7/6/23	0.030	NA	0.3	NA	NA	Geological
Manganese (ppm)	7/6/23	0.0617	NA	0.05	0.15	0.3	Geological
pH (SU)	7/6/23	7.39	Soda Ash	6.5-8.5	N/A	N/A	Precipitation and geology
Sodium (ppm)	7/6/23	36.9	NA	100-250	N/A	N/A	Road salt, septic systems (salt from water softeners) We are required to regularly sample for sodium
Sulfate (ppm)	7/6/23	24	NA	250	250	500	Naturally occurring
Zinc (ppm)	7/6/23	0.009	NA	5	NA	NA	Galvanized pipes

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

Drew Woods Water Quality

Additional Tests	Date	Description of data requested	Treatment technique	Results (with units)	Specific contaminant criteria and reason for monitoring
Radon (pCi/L)	2/7/23 5/9/23 8/15/23 11/13/23	Data from the seasonal inter-connect	aeration AL (Action Level) 2000 (pCi/L)	1327 (pCi/L) 1112 (pCi/L) 1025 (pCi/L) 1360 (pCi/L)	Radon is a radioactive gas that you can't see, taste or smell. It can move up through the ground and into a home through cracks and holes in the foundation. Radon can also get into indoor air when released from tap water from showering, washing dishes, and other household activities. It is a known human carcinogen. Breathing radon can lead to lung cancer. Drinking water containing radon may cause an increased risk of stomach cancer.

Derry interconnection Water Quality

Turbidity	TT	Lowest Monthly % of Samples	Highest Detected Daily Value	Violation Yes/No	Typical Source of Contaminant
Daily Compliance (NTU)	<1 NTU	-----	0.094 in 2023	No	Soil Runoff
Monthly Compliance*	At least 95%	100 % - All of the months of 2023	-----	No	
Turbidity is a measure of the cloudiness of the water. It is monitored by surface water systems because it is a good indicator of water quality and thus helps measure the effectiveness of the treatment process. High turbidity can hinder the effectiveness of disinfectants.					
*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.					

Lake Massabesic Water Treatment Plant

Inorganic Contaminants	Year Collected	Detect	Range Detected	MCL	MCLG	Violation Yes/No	Typical Source of Contaminant
Barium (ppm)	2023	0.011	0.0085-0.0135	2	2	No	Discharge of drilling wastes; discharge from metal refineries; erosion or the natural deposits
Organic chemical contaminants							
Perfluorooctanoic acid (PFOA)(ppt)	2023	4.68	NA	12	0	No	Discharge from industrial processes, wastewater treatment, residuals from firefighting foam, runoff/leachate from landfills and septic systems
Disinfectants and Disinfection By-Products							
Average							
Total Chlorine (ppm)	Monthly 2023	0.08	ND-0.22	4-MRDL	4-MRDLG	No	Water additive used to control microbes
Chloramines (ppm)	Monthly 2023	0.47	ND-1.75	4	4	No	Water additive used to control microbes
Nitrite-Chloraminated (ppm)	Monthly 2023	0.01	ND – 0.09	1	1	No	By-product of drinking water chlorination
Total Trihalomethanes (ppb)	Quarterly 2023	1.9	NA	80	0	No	By-product of drinking water disinfection
Haloacetic Acids (ppb)	Quarterly 2023	ND	NA	60	0	No	By-product of drinking water disinfection
Total Organic Carbon [TOC] (ppm)	Monthly 2023	1.76	1.48-2.06	TT	NA	No	Naturally present in the environment
The value reported under Amount Detected for TOC is the lowest ratio of percentage of TOC actually removed to percentage of TOC required to be removed. A value of greater than 1 indicates that the water system is in compliance with TOC removal requirements. A value of less than 1 indicates a violation of the TOC removal requirements.							

Secondary MCLs (SMCL)	Date	Level Detected	Treatment technique	SMCL	50 % AGQS (Ambient groundwater quality standard)	AGQS (Ambient groundwater quality standard)	Specific contaminant criteria and reason for monitoring
Chloride (ppm)	2023	49	NA	250	N/A	N/A	Wastewater, road salt, water softeners, corrosion
Fluoride (ppm)	2023	0.68	Fluorosilicic acid	2	2	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories

Manganese (ppm)	2023	0.007	NA	0.05	0.15	0.3	Geological
pH (SU)	2023	7.71	Soda Ash	6.5-8.5	N/A	N/A	Precipitation and geology
Sodium (ppm)	2023	50.7	NA	100-250	N/A	N/A	Road salt, septic systems (salt from water softeners) We are required to regularly sample for sodium
Sulfate (ppm)	2023	25.3	NA	250	250	500	Naturally occurring

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

Merrimack River Water Treatment Plant

Inorganic Contaminants	Year Collected	Detect	Range Detected	MCL	MCLG	Violation Yes/No	Typical Source of Contaminant
Barium (ppm)	2023	0.005	0.005-0.006	2	2	No	Discharge of drilling wastes; discharge from metal refineries; erosion or the natural deposits
Organic chemical contaminants							
Perfluorooctanoic acid (PFOA)(ppt)	2023	NA	NA	12	0	No	Discharge from industrial processes, wastewater treatment, residuals from firefighting foam, runoff/leachate from landfills and septic systems
Disinfectants and Disinfection By-Products Average							
Total Chlorine (ppm)	Monthly 2023	0.08	ND-0.22	4-MRDL	4-MRDLG	No	Water additive used to control microbes
Chloramines (ppm)	Monthly 2023	0.47	ND-1.75	4	4	No	Water additive used to control microbes
Nitrite-Chloraminated (ppm)	Monthly 2023	0.01	ND – 0.09	1	1	No	By-product of drinking water chlorination
Total Trihalomethanes (ppb)	Quarterly 2023	1.9	NA	80	0	No	By-product of drinking water disinfection
Haloacetic Acids (ppb)	Quarterly 2023	ND	NA	60	0	No	By-product of drinking water disinfection
Total Organic Carbon [TOC] (ppm)	Monthly 2023	0.70	ND-0.77	TT	NA	No	Naturally present in the environment
The value reported under Amount Detected for TOC is the lowest ratio of percentage of TOC actually removed to percentage of TOC required to be removed. A value of greater than 1 indicates that the water system is in compliance with TOC removal requirements. A value of less than 1 indicates a violation of the TOC removal requirements.							

Secondary MCLs (SMCL)	Date	Level Detected	Treatment technique	SMCL	50 % AGQS (Ambient groundwater quality standard)	AGQS (Ambient groundwater quality standard)	Specific contaminant criteria and reason for monitoring
Chloride (ppm)	2023	81	NA	250	N/A	N/A	Wastewater, road salt, water softeners, corrosion
Fluoride (ppm)	2023	0.52	Fluorosilicic acid	2	2	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Manganese (ppm)	2023	NA	NA	0.05	0.15	0.3	Geological
pH (SU)	2023	7.84	Soda Ash	6.5-8.5	N/A	N/A	Precipitation and geology
Sodium (ppm)	2023	47.9	NA	100-	N/A	N/A	Road salt, septic systems (salt from water softeners) We are required to

				250			regularly sample for sodium
Sulfate (ppm)	2023	6	NA	250	250	500	Naturally occurring

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