

January 1 through December 31, 2022

2022 Water Quality Report
Berwick Water Department
PWSID# ME0090150
www.berwickmaine.org

About Your Drinking Water

Berwick Water Department (BWD) is pleased to provide you with its 2022 Consumer Confidence Report for the Berwick water system (public water supply ID# ME0090150), which contains important information about your drinking water. The report summarizes the quality of water BWD provided in 2022 including details about water sources, what the water at your tap contains, and how it compares to standards set by regulatory agencies.

Although this report lists only those regulated substances that were detected in your water, we test for more than what is reported. This report is only a summary of our activities during 2022. If you have any questions about the information in this report, please call 1-800-287-1643.

Sources of Supply

SFWD uses the Salmon Falls River, a surface water supply. Certified operators ensure the quality of the water and that all primary and secondary drinking water regulations are met.

Sources of drinking water include rivers, lakes, ponds, and wells. As water flows either on the surface or through the ground, it dissolves naturally occurring minerals and radioactive material and can also accumulate substances resulting from human and animal activity. The Maine Drinking Water Program (DWP) has evaluated all public water supplies as part of the Source Water Protection Program. 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. The source overall has a low to moderate risk of significant contamination. Assessment results are available at town offices, public water suppliers, and from the DWP (207.287.2070).

Contaminants that may be present in source water include:

- (A) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- (B) Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban storm runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- (C) Pesticides and herbicides, which may come from a variety of sources such as agriculture, stormwater runoff, and residential uses.
- (D) Organic chemical contaminants, including synthetic and volatile organics, are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
- (E) 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 acceptable for drinking, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

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 (EPA) Safe Drinking Water Hotline (800.426.4791).

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 (800.426.4791).

The following table lists the level of regulated contaminants that were detected for the year 2022 in your water system. The Safe Drinking Water Act allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

Turbidity Levels: Turbidity is a measure of cloudiness or suspended colloidal matter (silt). Excessive turbidity can interfere with water disinfection. Filtration started at the Berwick Water Plant in 1998. The standard for turbidity is that 95% of all readings in each month are less than 1.0 NTU and a single day maximum is less than 5 NTU. These standards were met in 2022. The maximum monthly high turbidity during 2022 was 0.30 NTU which occurred in April and June.

Microbiological Contaminants: During 2022, none of the 36 distribution system samples tested positive for coliform bacteria.

Violation Period & Violation Type

7/1/2022 - 71 Violation - CCR REPORT CONSUMER CONFIDENCE RULE - As a community public water system, we are required to provide a consumer confidence report to our customers on an annual basis. The consumer confidence report provides customers with information regarding the source and quality of the drinking water supplied to them as well as information on any violations that occurred during that time period. In 2022, we failed to certify that our consumer confidence report was provided to our customers. To correct this issue, the Town of Berwick as sent the Drinking Water Program the required certification.

10/4/2022 - 10/7/2022 12 Violation - QUALIFIED OPERATOR FAILURE DBP STAGE 1 - In 2022, we failed to meet the requirements of the US Environmental Protection Agency and the State of Maine Rules Relating to Drinking Water. We failed to place the direct supervision of our water surface system under the responsible charge of an operator(s) holding a valid certification equal to or greater than the classification of the treatment system and/or distribution system as required by 40CFR141.70(c) and 10-144 CMR 231 (1)(C).

10/1/2022 - 12/31/2022 27 Violation - MONITORING, ROUTINE (DBP), MAJOR TOTAL HALOACETIC ACIDS (HAA5) DIST SYS - We are required to monitor our drinking water for specific contaminants on a quarterly basis and in specific months. Results of regular monitoring indicate whether or not our drinking water meets health standards. During 2022, our samples 4th quarter samples were not sampled in the correct month which is October rather, samples were collected in November.

10/1/2022 - 12/31/2022 27 Violation - MONITORING, ROUTINE (DBP), MAJOR TTHM DIST SYS - We are required to monitor our drinking water for specific contaminants on a regular basis. Results of regular monitoring indicate whether or not our drinking water meets health standards. During 2022, our samples 4th quarter samples were not sampled in the correct month which is October rather, samples were collected in November.

National Primary Drinking Water Contaminants

Legally enforceable primary standards and treatment techniques that apply to public water systems

Compounds	Test Date	Violation Y / N	Detection Value	Range of Detection	Federal/State Standard		Major Sources in Drinking Water
					MCL/MRDL	MCLG/MRDLG	
Inorganics							
Fluoride, ppm	2022	N	0.74	0.51 - 0.74	4	4	Water additive which promotes strong teeth
Nitrate, ppm	2022	N	<1	NA	10	10	Runoff from fertilizer use
Barium, ppm	2022	N	<0.001	NA	2	2	Erosion of natural deposits

Disinfectants and Disinfection Byproducts -- Compliance for Haloacetic Acids and Total Trihalomethanes is based on the highest quarterly value of yearly running averages. The range shows the highest and lowest result for individual

samples during 2022.							
Residual chlorine, ppm	2022	N	0.97 avg.	0.31 – 1.90	4	4	Water additive used to control microbes
Haloacetic Acids (HAA5), ppb Pine Hill Tank	2022	N	39.5	5.3 - 72	60	NA	Byproducts of drinking water disinfection
Total Trihalomethanes (TTHMs), ppb 108 Rochester St	2022	N	64.3	35.7- 122	80	NA	

Lead and Copper	Test Date	90th Percentile	Total Number of Samples	Samples Exceeding Action Level	Federal/State Standard		Major Sources in Drinking Water
					Action Level	MCLG	
Copper, ppm	June 1 – Sept 30, 2021	0.090		0	1.3	1.3	Corrosion of household plumbing
Lead, ppb	June 1 – Sept 30, 2021	<1		0	15	0	Corrosion of household plumbing

For more Lead & Copper data: <https://www.maine.gov/water-quality/lead-test-results>

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. SFWD is 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 30 seconds to 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>.

You can reduce the levels of lead and copper in your drinking water. When your water has been sitting for several hours, you can minimize the potential for lead and copper exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. Check and clean your faucet's aerators regularly as materials can accumulate in faucet aerators. If you have a filter on your faucet, follow manufacturer's recommendations for maintenance and replacement.

All other regulated drinking water contaminants were below detection levels.

National Secondary Drinking Water Contaminants

Non-enforceable guidelines regulating contaminants that may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor, or color) in drinking water.

Parameter	Test Results 6/8/2022	Secondary MCL	Noticeable Effects above the MCL
Chloride, ppm	36	250	Salty taste
Sodium, ppm	33	No limit	Salty taste
pH	8.08	6.5 – 8.5	Neutral = 7
Iron, ppm	<0.01	0.3	Rust color; sediment; metallic taste; reddish orange staining
Manganese, ppm	0.023	0.05	Black to brown color; black staining; bitter taste
Hardness, ppm	16 Very Soft	No limit	Scaly residues; soaps that don't lather

Unregulated Water Contaminants

Contaminants that are suspected to be present in drinking water and do not have health-based standards set under the Safe Drinking Water Act (SDWA)

Parameter	Sampling Point	Test Results 4/19/2022	Sources in Drinking Water
Per & Poly-fluoroalkal Substances (6 PFAs) (ppt)	Treated Water	Not Detected	By-product of industrial process and consumer products

PFAS are not regulated under the Safe Drinking Water Act (SDWA) and therefore have no federally-established Maximum Contaminant Level (MCL) that would require action such as treatment to remove these compounds from drinking water. EPA has established a Health Advisory of 70 parts per trillion (ppt), combined, for two PFAS compounds: perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS).

PFOA and PFOS are fluorinated organic chemicals that are part of a larger group of chemicals referred to as perfluoroalkyl substances (PFASs). PFOA and PFOS have been the most extensively produced and studied of these chemicals. They have been used to make carpets, clothing, fabrics for furniture, paper packaging for food and other materials (e.g., cookware) that are resistant to water, grease or stains. They are also used for firefighting at airfields and in several industrial processes.

To provide Americans, including the most sensitive populations, with a margin of protection from a lifetime of exposure to PFOA and PFOS from drinking water, EPA established the health advisory levels at **70 parts per trillion**. The EPA's health advisories are based on the best available peer-reviewed studies of the effects of PFOA and PFOS on laboratory animals (rats and mice) and were also informed by epidemiological studies of human populations that have been exposed to PFASs.

At this time, the United States Environmental Protection Agency (EPA) and states across the country are working to develop appropriate standards for these chemicals in drinking water. In 2021, the State of Maine passed LD 129 mandating that Public Water Systems test the treated drinking water for PFAS in 2022.

To see the document copy this link to your browser

<http://www.mainelegislature.org/legis/bills/getPDF.asp?paper=SP0064&item=3&num=130>

Notes:

Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements.

Fluoride: Fluoride may help prevent tooth decay if administered properly to children, but can be harmful in excess. US Dept of Health and Human Services recommends a level of 0.7 ppm.

Maximum Contaminant Level (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. Some levels are based on a running annual average.

Maximum Contaminant Level Goal (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 (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 (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.

NA: Not applicable.

NTU: Nephelometric turbidity unit (cloudiness of water)

Turbidity: Monitored as a measure of treatment efficiency for removal of particles

Picocuries/Liter, pCi/L: A unit of concentration for radioactive contaminants.

ppb: A unit of concentration equal to one part per billion. Equal to micrograms per liter (ug/L).

ppm: A unit of concentration equal to one part per million. Equal to milligrams per liter (mg/L).

ppt: A unit of concentration equal to one part per trillion. Equal to nanograms per liter (ng/L).

PWSID: Public water supply identification number.

Running Annual Average (RAA): The average of all monthly or quarterly samples for the last year at all sample locations. The average detection value is the highest running quarterly average value obtained for all four quarters.

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.

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 cost 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.

Our water systems are designed and operated to deliver water to our customers' plumbing systems that complies with state and federal drinking water standards. Customers' plumbing, including treatment devices, might remove, introduce or increase contaminants in tap water. All customers, and in particular operators of facilities like hotels and institutions serving susceptible populations (like hospitals and nursing homes), should properly operate and maintain the plumbing systems in these facilities. You can obtain additional information from the EPA's Safe Drinking Water Hotline at 800.426.4791.



WATER CONSERVATION

Conserving water helps ensure that we have an adequate supply of water for public health and safety and reduces demands on the state's water resources. A typical household uses 15,000 gallons of water per quarter, or 60,000 gallons a year. YOU can play a role in conserving water by being conscious about the amount of water your household is using.

Here are some ways to conserve.
Find more on our social media handles:



REPAIR leaky toilets

Check for leaks by putting food coloring in the tank; if the food coloring seeps into the bowl without flushing, there is a leak.

Potential Savings: 73,000 gallons/year



CONSIDER a low flow toilet

Modern toilets use just 1.6 gallons per flush, versus older models using 3.5 gallons per flush.

Potential Savings: 15,000 gallons/year



RUN full loads in the washer & dishwasher

Go ahead and fill 'er up! Full loads of laundry and dishes save water AND energy.

Potential Savings: 3,400 gallons/year



COVER UP - your pool

Pool covers not only keep out leaves and debris, they reduce up to 95% of evaporation.

Potential Savings: 20,000+ gallons/year



WATER EARLY, not often

Lawns develop short root systems when watered every day. Water just once or twice a week in the morning to maximize root health and avoid water loss from evaporation

Potential Savings: 6,750 gallons per watering day avoided for every .25 acres of lawn



TURN OFF the tap

Running water during toothbrushing, shaving and washing dishes all adds up; turn off the tap when you don't need the water

Potential Savings: 3,000 gallons/year through toothbrushing alone

Maine Water is committed to preserving our environment for generations to come. Conserving open spaces and drinking water sources through:

Protection of WATERSHED LANDS

WATER CONSERVATION education and programs

INFRASTRUCTURE INVESTMENTS to reduce system water loss

SUSTAINABLE DESIGN of buildings and facilities