

2023 Water Quality Report Vinalhaven Water District

PWSID# ME0091550



The Vinalhaven Water District is pleased to present a summary of the quality of the water provided to you during the past year. This report is consistent with the requirements of the Federal Safe Drinking Water Act, to report annually the details of where your water comes from, what it contains, and the risks that our water testing and treatment are designed to prevent.

Federal law allows water providers to make the annual water quality reports available online. Paper copies can be mailed to customers who request it. We will notify customers through our notification system, bill inserts, news releases, our website and social media any time a new water quality report has been posted to our website. If you have any questions about this report, please call us at 1-800-287-1643 or email customerservice@mainewater.com.

Sources of Supply: *Round Pond serves as the public water supply for Vinalhaven and offers an adequate supply of quality water for the VWD. Folly Pond is available for use in an emergency. Current water treatment includes filtration with bag filters, primary disinfection with Ultraviolet (UV) light, secondary disinfection with chlorine (sodium hypochlorite), pH adjustment using sodium carbonate and corrosion control using Orthophosphate. Certified operators further 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 on the surface of the land or through the ground, it can dissolve naturally occurring minerals and in some cases, 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 being contaminated by human activities in the future. Assessment results are available at town offices, public water supplies and the DWP (207.287.2070).

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, or wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban runoff, industrial or domestic wastewater discharge, oil and gas production, mining or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, storm water runoff, and residential uses.
- Organic chemicals contaminants, including synthetic and volatile organics, are byproducts 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 can be the results of oil or gas production or mining activities.

In order to ensure that tap water is acceptable for drinking, the U.S. Environmental Protection Agency (EPA) prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. FDA regulations established 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 at EPA's Safe Drinking Water Hotline website <https://www.epa.gov/ground-water-and-drinking-water/safe-drinking-water-hotline>.

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 website <https://www.epa.gov/ground-water-and-drinking-water/safe-drinking-water-hotline>.

Protecting Water Sources



Source water is untreated water from streams, rivers, lakes, or underground aquifers that is used to supply public drinking water. Preventing drinking water contamination at the source makes good public health sense, good economic sense, and good environmental sense. Most contaminants enter rivers, lakes and reservoirs from storm water runoff of streets, parking lots, golf courses, athletic fields, construction sites, farms and residential neighborhoods. You can be aware of the challenges of keeping drinking water safe and take an active role in protecting drinking water.

There are many ways that you can get involved in drinking water protection activities to prevent the contamination of groundwater and surface water sources:

- Restrict the use of lawn chemicals, especially before heavy rains.
- Dispose of pet or animal waste properly so that it does not wash into a nearby stream or storm drain.
- Inspect septic tanks every two years, and clean as needed. Make septic system repairs as soon as possible.
- Do not pour used motor oil on the ground or into storm drains. Contact your town for proper disposal of household chemicals.
- Report muddy runoff from construction sites to your town's zoning or wetland officials.

Educational Information on Lead & Copper



We believe it is important to provide you with information about the sources of lead and copper in drinking water and the health effects associated with them.

What is Lead?

Major Sources in Drinking Water: Corrosion of household plumbing systems; erosion of natural deposits.

Health Effects Statement: Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. 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 water containing lead in excess of the action level over many years could develop kidney problems or high blood pressure.

The Water District is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components in your home where they could potentially cause result in lead in your drinking water. If you are concerned about the potential for lead in your drinking water from in-home plumbing and fixtures, 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. This is important especially in cases where you may not have used your water over a period of several hours and water has been sitting in the pipes. You may also 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 (<https://www.epa.gov/ground-water-and-drinking-water/safe-drinking-water-hotline>) or www.epa.gov/safewater/lead Where needed, we have a comprehensive corrosion control program, to reduce risk of lead leaching from our customers' service line or internal plumbing. This includes pH monitoring and adjustment. We fully comply with EPA requirements regarding sampling for lead in drinking water.

What is Copper?

Major Sources in Drinking Water: Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

Health Effects Statement: 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. If you are concerned about elevated lead or copper levels, you may wish to have your water tested. Running your tap for 30 seconds to 2 minutes before use will significantly reduce the levels of lead and copper in the water. Additional information is available from the U.S. Environmental Protection Agency's Safe Drinking Water Hotline website <https://www.epa.gov/ground-water-and-drinking-water/safe-drinking-water-hotline>.

How is Lead & Copper corrosion controlled?

In September 2020, Vinalhaven Water District began treatment for corrosion control using a zinc orthophosphate chemical which will help to improve water quality. Orthophosphate chemicals are used widely throughout potable water and industrial water systems and successfully prevent lead from leaching from pipes as well as control iron, manganese and hardness. [The State of Maine Center for Disease Control, Drinking Water Program approved this chemical change.](#) For information on the levels of lead and copper detected in your drinking water system, please refer to the table in this water quality report.

Unregulated Contaminants: PFAS in Water Sources



PFAS (Per-and Polyfluoroalkyl substances) are a large group of man-made chemicals that have been manufactured and used around the world since the 1940s for many industrial and consumer purposes including the coating of fabrics, nonstick cookware, food packaging, and firefighting foam.

These chemicals can accumulate over time and have been found in both the environment and the human body. They do not break down easily in the environment or the human body and are sometimes called “forever chemicals”.

Of these chemicals, the most extensively produced and studied have been PFOA and PFOS.

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&snum=130>

The Water District is in full compliance with Maine Drinking Water Program (DWP) and United States Environmental Protection Agency (EPA) drinking water standards and the guidelines for risk assessment of all water sources and systems as well as all the monitoring and testing requirements under the Unregulated Contaminant Monitoring Rule (UCMR) to date.

Water Quality Data



The following table lists the contaminant levels that were detected 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. The Safe Drinking Water Act also allows monitoring waivers to reduce or eliminate certain monitoring requirements. In 2023, the District was granted a three year “Synthetic Organics Waiver” from monitoring/reporting requirements for the following industrial chemicals: Toxaphene/Chlordane/PCB, herbicides, Carbamate pesticides, 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.

Turbidity Levels: Turbidity is a measure of cloudiness or suspended colloidal matter (silt). Excessive turbidity can interfere with water disinfection. The standard for turbidity requires that 95% of all readings in each month be less than 1.0 NTU and that a single day maximum is less than 5 NTU. These standards were met in 2023. The maximum monthly high turbidity during 2023 was .89 NTU and occurred in July.

Microbiological Contaminants: During 2023, none of the 24 distribution system samples tested positive for coliform bacteria. Coliform bacteria are naturally present in the environment.

Noncompliance/Violations: Total Trihalomethanes (TTHM) MCL Violation

Chlorine, used for disinfection, combines with naturally occurring organic matter in water forming Haloacetic acids and Total trihalomethanes. The Maine Drinking Water Program (DWP) requires the District to monitor quarterly for Haloacetic acids and Total Trihalomethanes, and report results. The Maximum Contaminant Level (MCL) is based on the locational running annual average (LRAA) of four quarter's worth of sample data. In the fourth quarter of 2023, our water system exceeded the LRAA MCL for TTHM. TTHMs are formed as a by-product of drinking water chlorination. This chemical reaction occurs when chlorine combines with naturally occurring organic matter in water. The results of these tests revealed levels for TTHM more than the MCL of 80 ppb. We are in the process of exploring the various options to reduce TTHM in your water supply. Some people who drink water containing TTHM more than 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. Public notices were mailed to the District's customers on December 17 & 18, 2023.

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 and Radionuclides							
Barium, ppm	2023	N	0.0036	NA	2	2	Erosion of natural deposits

Disinfectants and Disinfection Byproducts -- Compliance for Haloacetic Acids and Total Trihalomethanes is based on a running annual average of quarterly samples. The range shows the highest and lowest result for individual samples during 2023.							
Residual chlorine, ppm	2023	N	0.09 avg.	.01 - .28	4	4	Water additive used to control microbes
VWD Office Haloacetic Acids (HAA5), ppb	2023	N	20	47-112	60	0	Byproduct of drinking water disinfection
Medical Office Total Trihalomethanes (TTHMs), ppb	2023	N	82	4-93	80	0	

Lead and Copper Results– Samples are from consumer’s taps. 90% of the tests must be equal to or below the action level for rule compliance.

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	2023	0.205	10	0	1.3	1.3	Corrosion of household plumbing
Lead, ppb	2023	1.5	10	0	15	0	

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

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 8/15/2023	Secondary MCL	Noticeable Effects above the MCL
Chloride, ppm	21	250	Salty taste
Sodium, ppm	18.4	No limit	Salty taste
pH	7.39	6.5 – 8.5	Neutral = 7
Iron, ppm	<0.1	0.3	Rust color; sediment; metallic taste; reddish orange staining
Manganese, ppm	0.0132	0.05	Black to brown color; black staining; bitter taste
Hardness, ppm	9.74 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)

Unregulated contaminants are those for which U.S. EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of these contaminants in drinking water and whether future regulation is warranted.

Parameter	Sampling Point	Test Results 7/26/2022	Sources in Drinking Water
Per & Poly- fluoroalkyl 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 PFAS.

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 Department of Health and Human Services recommend a level of 0.7 ppm. Fluoride levels must be maintained between 0.5 and 1.2 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.

ND: Not detected.

NTU: Nephelometric turbidity unit (cloudiness of water)

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 quarterly samples for the last year at all sample locations.

TTHM and HAA5: Total Trihalomethanes and Haloacetic Acids are formed as a byproduct of drinking water chlorination. This chemical reaction occurs when chlorine combines with naturally occurring organic matter in water.

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

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

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

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. This water is disinfected using chlorine, but it is not necessarily sterile. 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

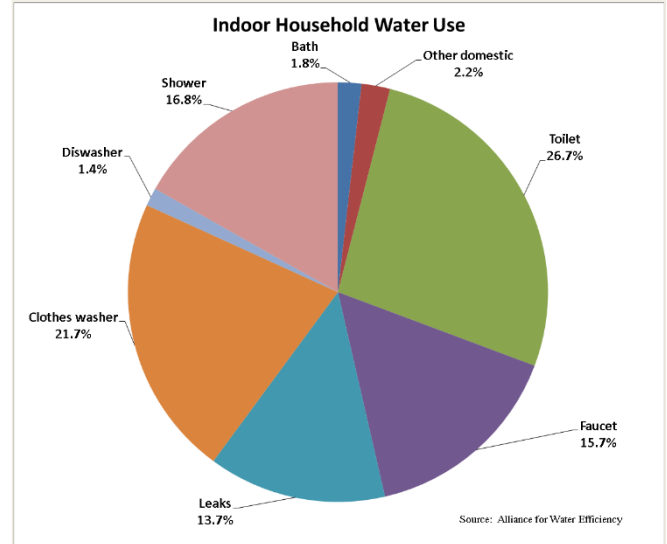
Water Conservation



Conserving water helps to ensure that we have an adequate supply of water for public health and safety, and reduces demands on the state's water resources. The typical residential home uses 125 gallons of water per day; you can play a role in conserving water by becoming conscious of the amount of water your household is using. Conserving can lower your water bill and may reduce your sewer bill.

Here are some things you can do to conserve:

- Repair leaking toilets - check for toilet leaks by putting a drop of food coloring in the tank. If the food coloring seeps into the bowl without flushing, there is a leak.
- Consider installing a low-flow 1.6 gallon per flush toilet.
- Don't use toilets as a wastebasket.
- Fix leaking fixtures.
- Run full loads in the dishwasher.
- Set the water level in the washing machine to match the amount of clothes being washed.
- Water lawns and gardens in the early morning.
- Use mulch around plants and shrubs.
- Use a bucket rather than a running hose to wash cars.



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